

**Health Status Indicators
for Pennsylvania Counties
and Health Districts
2008/09 Report**

Bureau of Health Statistics and Research
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Preface

This publication of health status indicators for Pennsylvania counties and Department of Health Districts was prepared by the Bureau of Health Statistics and Research of the Pennsylvania Department of Health. The indicators were developed by the Centers for Disease Control and Prevention in response to Objective 22.1 of *Healthy People 2000*. They are to be used for assessing and comparing the health status of state and local areas.

We encourage the use of the statistics in these reports to assess, compare and track local health status. Additional statistics (see Appendix) that can be used to calculate the indicators at the minor civil division level are also available from the Bureau upon request.

The format of the report includes presentation of available county and health district data of the latest multiple or single-year period available for each indicator. In addition, county outline state maps with the results of significance testing for most of the indicators are also presented. The testing indicated which county and health district indicators were significantly higher or lower than the state figures and which state indicators were significantly higher or lower than the United States figures. The formulas used in the significance testing appear in the Technical Notes section in the back of this report. This analysis should provide an additional perspective for users of the indicators. All of the data shown in this report are available in either Microsoft Excel or PDF format. Please note that the data presented in this report may not match county data previously released for the indicators due to differences in the definitions for some of the indicators or updates of selected files.

If any of the data provided in this report or upon special request are used in any publication or release, please include the following statement:

These data were supplied by the Bureau of Health Statistics and Research, Pennsylvania Department of Health. The Department specifically disclaims responsibility for any analyses, interpretation or conclusions.

The Bureau of Health Statistics and Research welcomes comments and suggestions on the content and format of this report. Staff is available to answer any questions regarding this report. Please address all comments, questions, requests for data, etc. to:

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INTRODUCTION

In July 1991, the Centers for Disease Control and Prevention (CDC), in collaboration with the National Center for Health Statistics (NCHS), released a set of Health Status Indicators to serve as baseline measurements of health status outcome and/or factors that put individuals at increased risk of disease or premature death. These indicators were developed by a CDC Health Status Indicators Consensus Work Group in response to Objective 22.1 as contained in *Healthy People 2000: National Health Promotion and Disease Prevention Objectives for the Nation*, which established multiple goals and objectives for improving the health of Americans by the end of the decade. Specifically, Objective 22.1 is to “develop a set of health status indicators appropriate for Federal, State and local health agencies and establish use of the set in at least 40 states.”

The Consensus Work Group identified 18 health status indicators that were adopted by NCHS and CDC. The 18 indicators are divided into two types – health status or risk indicators. The 13 indicators of health status include eight indicators of total and cause-specific mortality rates (age-adjusted and crude), an infant mortality rate and four indicators of selected morbidity rates (AIDS, measles, tuberculosis and syphilis). The five indicators of risk include three involving natality statistics (prevalence of low birth weight, adolescent mothers and no prenatal care in first trimester of pregnancy); one indicator of childhood poverty; and one on air quality. As previously stated, the 18 indicators were created to represent a general overview of a community's health, and the data needed to monitor them should be readily available at major geographic levels. CDC and NCHS are encouraging all States and local agencies to use these indicators to assess community health and track their progress.

CONTENT of the REPORT

Average annual (three-year summary) rates and annual rates/percentages for 17 of the 18 health status indicators are presented for the United States, Pennsylvania, each of the 67 counties in the state and for the six Department of Health Districts (district data are not shown for the poverty and work-related injury death indicators). Data for the indicator on air quality are not included since there is no data source with complete data by county.

County outline state maps also appear with the county tables, depicting the results of significance testing for many of the indicators. The most recent Pennsylvania data used in this report are for 2006. Indicators updated with 2007 data will appear in the 2009/10 edition of this report. The United States data shown in this report may not be as recent as state or local level data.

In the Spring, 1992 edition of *Healthy People 2000 Statistical Notes* published by the National Center for Health Statistics (NCHS), national data for the indicators as well as for some subcomponents of the indicators were first released. Age-adjusted mortality rates for heart disease and stroke were listed as major subcomponents of the indicator for cardiovascular disease. They also appear in this report. Racial and Hispanic data for the natality and infant death indicators were also listed in the NCHS report as major subcomponents, because of the considerable statistical variation among these groups. Blacks and Hispanics tend to have higher percentages of low birth weight, teen mothers and no prenatal care in the first trimester, as well as higher infant death rates. Black data for the infant death and birth indicators are, therefore, also shown in this report for Pennsylvania, Philadelphia City/County and seven other counties: Allegheny, Bucks, Chester, Dauphin, Delaware, Erie and Montgomery. A large majority of the state's Black residents live in these eight counties. Data on Hispanic origin have only been collected on birth and death certificates in Pennsylvania since 1989 and are included for the state and seven counties (Berks, Chester, Lancaster, Lehigh, Montgomery, Northampton and Philadelphia), where a large segment of the Hispanic population in the state reside. Starting with the 2002 report, data for Asian/Pacific Islanders are shown for birth and three-year infant death statistics. Data for Asians are shown for Pennsylvania and four counties: Allegheny, Delaware, Montgomery and Philadelphia. The criteria for choosing which counties had racial or Hispanic data was a 2000 U.S. Census population of 15,000 or more Blacks, Hispanics or Asians, as well as at least 200 births to Black, Hispanic or Asian/Pacific Islander mothers. Data on Whites appear for the state and the twelve counties that also have Black, Asian/Pacific Islander and/or Hispanic data shown in this report. Racial (except for Asian/Pacific Islander) and Hispanic data appear for all six Department of Health Districts.

Three-year summary or average annual age-adjusted death rates (using the 2000 U.S. standard million population) are presented in this report due to the unreliability of rates based on small numbers of annual events. Pennsylvania has many rural counties with small populations and very few or no deaths per year for some of the causes that appear in this report. Annual numbers of live births by county are much higher than the annual numbers of deaths. Therefore, the percentages based on one year of live births can be presented with more confidence in their reliability.

USE of the REPORT

It should be noted that the health status indicators were not intended to correspond to the Healthy People 2010 objectives. They are meant to be a separate set of health data items for assessing and comparing health status, as opposed to tracking progress in achieving objectives. Some of the indicators do appear as a unit of measurement for a 2010 objective; some indicators are similar to but are not exactly the same measurement used in a 2010 objective; and some indicators do not appear in any 2010 objective.

Through the release of this report, the Bureau of Health Statistics and Research hopes to encourage the use of these indicators for assessing, comparing and tracking local health status. All of the data shown in this report are available in Microsoft Excel or PDF format.

ADDITIONAL STATISTICS (for Cities, Boroughs and Townships)

Additional birth and death data at the minor civil division level (city, borough and township) are available upon request from the Bureau of Health Statistics and Research. Most of the figures are five-year summary data that can be used to calculate the indicators at these local levels. Five-year summary figures are used, due to very small annual numbers of events for many minor civil divisions in the state. A complete list of the additional statistics available is included in the Appendix at the back of this report. Five-year summary data have been updated annually, starting with the period 1986-1990, so that running averages can be calculated and used for trend analysis.

Additional three-year summary natality data by race (White and Black) for selected cities and boroughs in the state are also available upon request, as well as three-year summary Hispanic birth data for selected cities and boroughs. The cities and boroughs with Black or Hispanic data are those that had a 2000 U.S. Census population of 20,000 or more and had at least 100 Hispanic or Black annual births among residents.

County and Health District Data:

Data Tables, Significance Testing or Comparison Results, and County Outline Maps by Health Status Indicators

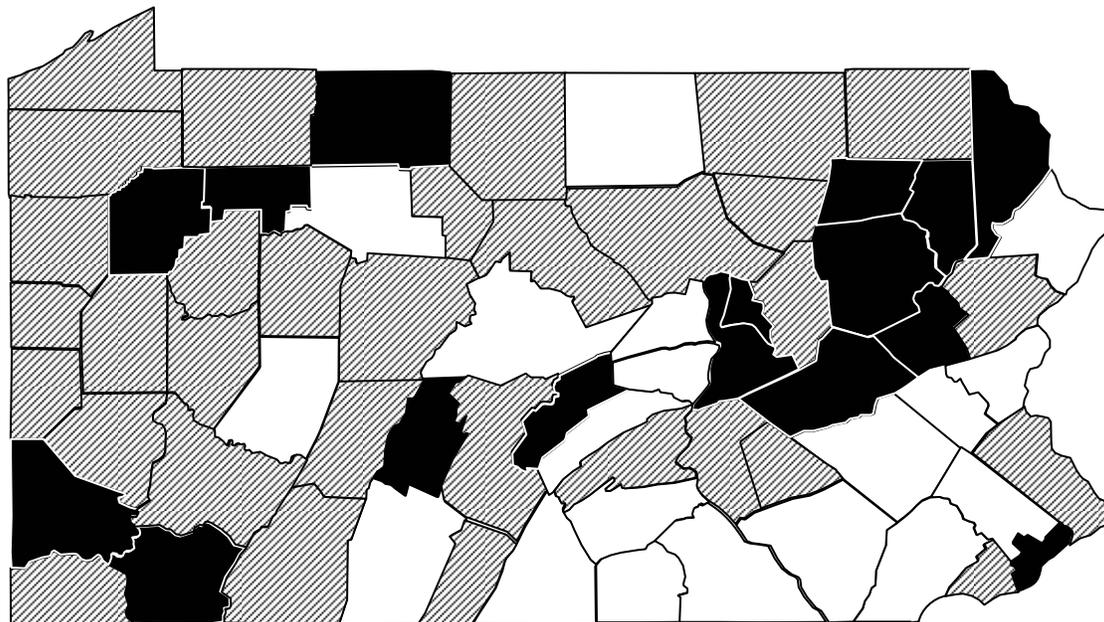
The latest multiple or single-year numbers and rates or ratios for health status indicators by county and by Pennsylvania Department of Health District are presented in summary data table format.

For many of the summary data tables, we have also included 95 percent confidence bounds and the results of comparison or significance testing of the rates or ratios for each county, health district and the state. We compared each county or health district rate or ratio to the state and also compared the state rate or ratio to the United States figure to determine if age-adjusted death rates could be considered substantially different or other rates/percentages significantly higher or lower. County outline maps are also shown along with the county data tables to geographically display the results of the comparisons.

In order to understand the qualifications of the data presented and how the analyses were conducted, it is important to refer to the footnotes as they appear on each page. Also, review the Technical Notes section (pages 30-33) for a complete discussion of data sources, definitions of terms, age-adjusted rates, the reliability of rates and the formulas used in the comparative analyses.

Average Annual Age-Adjusted Death Rates for All Causes, 2004-2006

All Causes	No.	Rate	CI (95%)	All Causes	No.	Rate	CI (95%)
Adams	2,643	811.9	780.95-842.85 -	Lancaster	13,217	820.4	806.41-834.39 -
Allegheny	43,347	849.9	841.90-857.90	Lawrence	3,359	841.5	813.04-869.96
Armstrong	2,507	865.8	831.91-899.69	Lebanon	4,039	858.1	831.64-884.56
Beaver	6,273	843.2	822.33-864.07	Lehigh	9,310	791.6	775.52-807.68 -
Bedford	1,484	785.6	745.63-825.57 -	Luzerne	12,456	912.4	896.38-928.42 +
Berks	10,587	792.5	777.40-807.60 -	Lycoming	3,693	838.3	811.26-865.34
Blair	4,758	956.1	928.93-983.27 +	McKean	1,580	918.9	873.59-964.21 +
Bradford	1,987	865.2	827.16-903.24	Mercer	4,091	840.3	814.55-866.05
Bucks	15,162	836.1	822.79-849.41	Mifflin	1,612	893.2	849.60-936.80 +
Butler	5,323	830.7	808.38-853.02	Monroe	3,549	834.5	807.04-861.96
Cambria	5,623	856.0	833.63-878.37	Montgomery	21,262	783.6	773.07-794.13 -
Cameron	224	869.3	755.46-983.14	Montour	699	987.9	914.66-1,061.14 +
Carbon	2,336	966.3	927.11-1,005.49 +	Northampton	7,809	764.7	747.74-781.66 -
Centre	2,583	747.7	718.86-776.54 -	Northumberland	3,562	896.9	867.45-926.35 +
Chester	10,103	769.3	754.30-784.30 -	Perry	1,187	870.8	821.26-920.34
Clarion	1,280	844.1	797.86-890.34	Philadelphia	46,492	975.8	966.93-984.67 +
Clearfield	2,768	849.3	817.66-880.94	Pike	1,078	628.4	590.89-665.91 -
Clinton	1,220	882.9	833.36-932.44	Potter	609	860.4	792.06-928.74
Columbia	1,994	829.1	792.71-865.49	Schuylkill	6,141	959.0	935.01-982.99 +
Crawford	2,785	849.7	818.14-881.26	Snyder	952	754.8	706.85-802.75 -
Cumberland	6,248	823.6	803.18-844.02 -	Somerset	2,761	842.7	811.27-874.13
Dauphin	7,193	834.5	815.21-853.79	Sullivan	301	928.7	823.78-1,033.62
Delaware	16,627	839.9	827.13-852.67	Susquehanna	1,354	854.1	808.61-899.59
Elk	1,067	781.2	734.33-828.07 -	Tioga	1,242	770.8	727.93-813.67 -
Erie	8,071	837.9	819.62-856.18	Union	1,093	782.8	736.39-829.21 -
Fayette	5,253	869.1	845.60-892.60 +	Venango	1,955	913.5	873.01-953.99 +
Forest	231	984.8	857.80-1,111.80 +	Warren	1,402	845.4	801.15-889.65
Franklin	3,895	771.7	747.46-795.94 -	Washington	7,238	878.3	858.07-898.53 +
Fulton	403	802.4	724.06-880.74	Wayne	1,794	941.6	898.03-985.17 +
Greene	1,223	852.4	804.63-900.17	Westmoreland	12,887	841.5	826.97-856.03
Huntingdon	1,323	841.9	796.53-887.27	Wyoming	827	941.3	877.14-1,005.46 +
Indiana	2,607	785.7	755.54-815.86 -	York	10,288	801.6	786.11-817.09 -
Jefferson	1,607	860.8	818.71-902.89				
Juniata	655	784.5	724.42-844.58 -	Pennsylvania	379,509	845.3	842.61-847.99 +
Lackawanna	8,280	909.1	889.52-928.68 +	United States (2006)	2,425,901	776.4	775.42-777.38



RATE Significantly lower than the state Not significantly higher or lower than the state Significantly higher than the state

NOTE: A+ or - after the confidence interval (CI) denotes if the county rate was significantly higher or lower than the state rate. No + or - after a CI denotes no significant difference. Pennsylvania data were compared to U.S. data. CIs and comparison results were not calculated and shown for rates based on less than 20 events. See Technical Notes.

Average Annual Age-Adjusted Death Rates for Selected Causes, 2004-2006

Cardiovascular				Diseases of Heart			
Disease	No.	Rate	CI (95%)	Disease	No.	Rate	CI (95%)
Adams	1,049	317.9	298.66-337.14 +	Adams	856	259.3	241.93-276.67 +
Allegheny	15,761	296.2	291.58-300.82	Allegheny	12,425	234.2	230.08-238.32 +
Armstrong	858	285.1	266.02-304.18	Armstrong	661	220.3	203.51-237.09
Beaver	2,274	295.4	283.26-307.54	Beaver	1,810	235.4	224.56-246.24
Bedford	600	311.3	286.39-336.21	Bedford	436	226.2	204.97-247.43
Berks	3,935	290.3	281.23-299.37	Berks	2,910	214.8	207.00-222.60 -
Blair	1,832	358.0	341.61-374.39 +	Blair	1,456	285.0	270.36-299.64 +
Bradford	730	314.0	291.22-336.78	Bradford	583	251.2	230.81-271.59 +
Bucks	4,881	277.3	269.52-285.08 -	Bucks	3,609	204.7	198.02-211.38 -
Butler	1,994	302.8	289.51-316.09	Butler	1,552	235.5	223.78-247.22
Cambria	2,135	308.8	295.70-321.90	Cambria	1,671	242.2	230.59-253.81 +
Cameron	82	304.8	238.83-370.77	Cameron	63	235.5	177.35-293.65
Carbon	855	347.0	323.74-370.26 +	Carbon	664	269.8	249.28-290.32 +
Centre	941	276.3	258.65-293.95 -	Centre	713	208.4	193.10-223.70 -
Chester	3,584	279.3	270.16-288.44 -	Chester	2,820	219.7	211.59-227.81 -
Clarion	474	303.3	276.00-330.60	Clarion	370	237.8	213.57-262.03
Clearfield	1,085	323.7	304.44-342.96 +	Clearfield	868	259.5	242.24-276.76 +
Clinton	506	359.8	328.45-391.15 +	Clinton	395	281.4	253.65-309.15 +
Columbia	823	335.0	312.11-357.89 +	Columbia	662	269.4	248.88-289.92 +
Crawford	975	291.3	273.02-309.58	Crawford	733	219.0	203.15-234.85
Cumberland	2,312	304.1	291.70-316.50	Cumberland	1,786	234.7	223.81-245.59
Dauphin	2,559	293.3	281.94-304.66	Dauphin	1,960	224.7	214.75-234.65
Delaware	5,977	293.3	285.86-300.74	Delaware	4,534	222.8	216.31-229.29 -
Elk	367	258.9	232.41-285.39 -	Elk	266	187.2	164.70-209.70 -
Erie	2,821	287.9	277.28-298.52	Erie	2,173	221.9	212.57-231.23
Fayette	2,018	321.3	307.28-335.32 +	Fayette	1,568	250.6	238.20-263.00 +
Forest	90	370.0	293.56-446.44	Forest	68	278.9	212.61-345.19
Franklin	1,336	261.0	247.00-275.00 -	Franklin	1,000	195.1	183.01-207.19 -
Fulton	123	241.1	198.49-283.71 -	Fulton	98	192.6	154.47-230.73
Greene	453	307.3	279.00-335.60	Greene	379	256.7	230.86-282.54 +
Huntingdon	493	310.9	283.46-338.34	Huntingdon	395	248.8	224.26-273.34
Indiana	922	269.8	252.38-287.22 -	Indiana	731	214.2	198.67-229.73
Jefferson	665	348.2	321.73-374.67 +	Jefferson	474	249.0	226.58-271.42
Juniata	232	270.4	235.60-305.20	Juniata	176	204.9	174.63-235.17
Lackawanna	3,402	356.8	344.81-368.79 +	Lackawanna	2,765	290.6	279.77-301.43 +
Lancaster	4,535	279.9	271.75-288.05 -	Lancaster	3,404	210.2	203.14-217.26 -
Lawrence	1,241	297.0	280.48-313.52	Lawrence	959	230.8	216.19-245.41
Lebanon	1,467	308.0	292.24-323.76	Lebanon	1,155	242.5	228.51-256.49
Lehigh	3,086	257.0	247.93-266.07 -	Lehigh	2,386	198.7	190.73-206.67 -
Luzerne	4,995	343.7	334.17-353.23 +	Luzerne	3,911	269.4	260.96-277.84 +
Lycoming	1,319	294.5	278.61-310.39	Lycoming	993	222.2	208.38-236.02
McKean	619	348.5	321.05-375.95 +	McKean	439	248.3	225.07-271.53
Mercer	1,516	300.0	284.90-315.10	Mercer	1,194	237.3	223.84-250.76
Mifflin	595	319.9	294.20-345.60	Mifflin	472	254.3	231.36-277.24 +
Monroe	1,157	280.7	264.53-296.87	Monroe	883	212.0	198.02-225.98 -
Montgomery	7,262	264.4	258.32-270.48 -	Montgomery	5,274	192.1	186.92-197.28 -
Montour	245	337.2	294.98-379.42	Montour	182	250.2	213.85-286.55
Northampton	2,810	269.3	259.34-279.26 -	Northampton	2,195	210.2	201.41-218.99 -
Northumberland	1,396	338.0	320.27-355.73 +	Northumberland	1,145	278.8	262.65-294.95 +
Perry	403	297.5	268.45-326.55	Perry	322	236.3	210.49-262.11
Philadelphia	15,616	317.9	312.91-322.89 +	Philadelphia	12,180	248.6	244.18-253.02 +
Pike	337	203.0	181.33-224.67 -	Pike	265	158.0	138.98-177.02 -
Potter	210	285.0	246.45-323.55	Potter	161	220.5	186.44-254.56
Schuylkill	2,430	362.5	348.09-376.91 +	Schuylkill	1,927	288.2	275.33-301.07 +
Snyder	358	282.2	252.97-311.43	Snyder	270	213.3	187.86-238.74
Somerset	997	295.0	276.69-313.31	Somerset	815	241.5	224.92-258.08
Sullivan	121	359.6	295.53-423.67	Sullivan	89	263.1	208.44-317.76
Susquehanna	554	338.9	310.68-367.12 +	Susquehanna	461	282.7	256.89-308.51 +
Tioga	441	262.2	237.73-286.67 -	Tioga	341	203.0	181.45-224.55 -
Union	409	289.5	261.44-317.56	Union	312	220.9	196.39-245.41
Venango	723	332.0	307.80-356.20 +	Venango	543	249.2	228.24-270.16
Warren	553	327.1	299.84-354.36 +	Warren	418	247.0	223.32-270.68
Washington	2,423	285.4	274.04-296.76	Washington	1,879	221.8	211.77-231.83
Wayne	683	350.5	324.21-376.79 +	Wayne	525	268.5	245.53-291.47 +
Westmoreland	4,749	301.9	293.31-310.49	Westmoreland	3,697	235.4	227.81-242.99
Wyoming	295	340.2	301.38-379.02 +	Wyoming	223	255.9	222.31-289.49
York	3,491	273.0	263.94-282.06 -	York	2,723	212.3	204.33-220.27 -
Pennsylvania	136,180	296.1	294.53-297.67 +	Pennsylvania	105,373	229.4	228.01-230.79 +
United States (2006)	821,494	260.5	259.94-261.06	United States (2006)	629,191	199.4	198.91-199.89

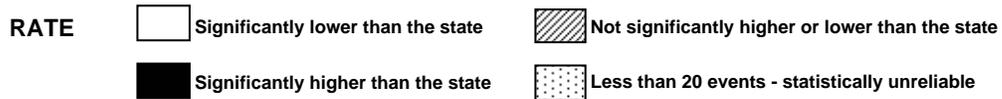
NOTE: A+ or - after the confidence interval (CI) denotes if the county rate was significantly higher or lower than the state rate. No + or - after a CI denotes no significant difference. State data were compared to U.S. data. CIs were not calculated for rates based on less than 20 events. See Technical Notes.

Average Annual Age-Adjusted Death Rates for Selected Causes, 2004-2006

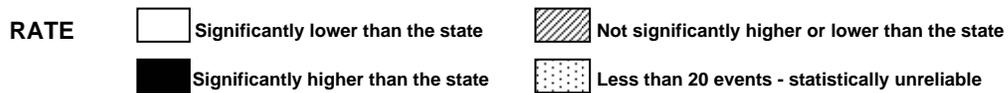
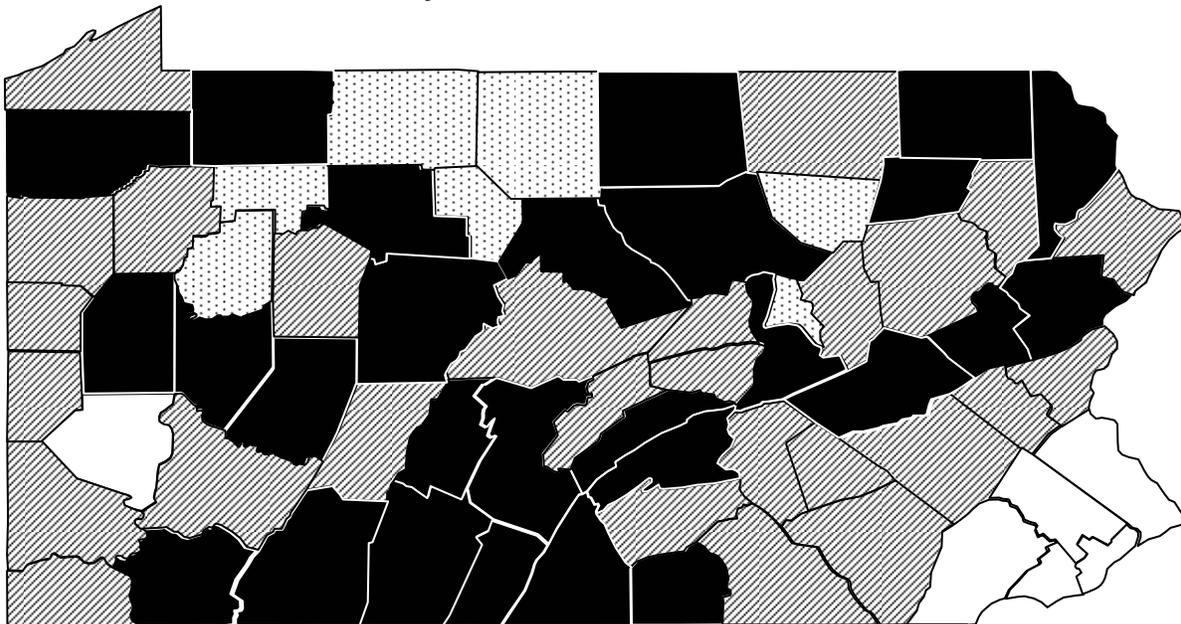
Stroke				Motor Vehicle Accidents			
	No.	Rate	CI (95%)		No.	Rate	CI (95%)
Adams	146	44.4	37.20-51.60	Adams	66	21.5	16.31-26.69 +
Allegheny	2,528	46.9	45.07-48.73	Allegheny	308	7.9	7.02-8.78 -
Armstrong	148	48.4	40.60-56.20	Armstrong	47	23.3	16.64-29.96 +
Beaver	336	43.2	38.58-47.82 -	Beaver	68	12.5	9.53-15.47
Bedford	137	71.1	59.19-83.01 +	Bedford	38	25.9	17.66-34.14 +
Berks	801	59.0	54.91-63.09 +	Berks	172	14.4	12.25-16.55
Blair	288	56.1	49.62-62.58 +	Blair	69	17.9	13.68-22.12 +
Bradford	97	41.5	33.24-49.76	Bradford	28	15.4	9.70-21.10
Bucks	926	53.2	49.77-56.63 +	Bucks	180	9.9	8.45-11.35 -
Butler	346	52.5	46.97-58.03	Butler	87	15.9	12.56-19.24 +
Cambria	286	41.2	36.43-45.97 -	Cambria	64	13.7	10.34-17.06
Cameron	12	45.4		Cameron	4	14.7	
Carbon	115	46.8	38.25-55.35	Carbon	43	22.1	15.49-28.71 +
Centre	160	47.8	40.39-55.21	Centre	52	13.8	10.05-17.55
Chester	566	44.2	40.56-47.84 -	Chester	138	9.9	8.25-11.55 -
Clarion	70	44.5	34.08-54.92	Clarion	18	14.3	
Clearfield	152	45.1	37.93-52.27	Clearfield	53	20.9	15.27-26.53 +
Clinton	90	63.6	50.46-76.74 +	Clinton	29	24.5	15.58-33.42 +
Columbia	128	52.1	43.07-61.13	Columbia	36	17.5	11.78-23.22
Crawford	185	55.4	47.42-63.38	Crawford	54	19.2	14.08-24.32 +
Cumberland	414	54.6	49.34-59.86 +	Cumberland	86	12.2	9.62-14.78
Dauphin	400	46.0	41.49-50.51	Dauphin	99	12.8	10.28-15.32
Delaware	1,112	54.3	51.11-57.49 +	Delaware	110	6.3	5.12-7.48 -
Elk	76	53.6	41.55-65.65	Elk	27	26.6	16.57-36.63 +
Erie	487	49.5	45.10-53.90	Erie	93	10.9	8.68-13.12
Fayette	313	49.2	43.75-54.65	Fayette	89	20.0	15.84-24.16 +
Forest	15	62.5		Forest	4	25.5	
Franklin	248	48.6	42.55-54.65	Franklin	77	17.9	13.90-21.90 +
Fulton	19	37.2		Fulton	20	45.8	25.73-65.87 +
Greene	57	38.5	28.51-48.49 -	Greene	21	16.6	9.50-23.70
Huntingdon	76	48.3	37.44-59.16	Huntingdon	35	24.9	16.65-33.15 +
Indiana	138	40.1	33.41-46.79 -	Indiana	42	18.1	12.63-23.57 +
Jefferson	124	64.5	53.15-75.85 +	Jefferson	21	14.2	8.13-20.27
Juniata	37	43.6	29.55-57.65	Juniata	26	36.6	22.53-50.67 +
Lackawanna	460	48.0	43.61-52.39	Lackawanna	75	11.8	9.13-14.47
Lancaster	858	52.9	49.36-56.44 +	Lancaster	196	13.2	11.35-15.05
Lawrence	193	45.0	38.65-51.35	Lawrence	38	13.5	9.21-17.79
Lebanon	217	45.8	39.71-51.89	Lebanon	51	12.8	9.29-16.31
Lehigh	526	43.9	40.15-47.65 -	Lehigh	118	11.6	9.51-13.69
Luzerne	598	41.4	38.08-44.72 -	Luzerne	134	14.2	11.80-16.60
Lycoming	243	53.8	47.04-60.56	Lycoming	64	16.6	12.53-20.67 +
McKean	85	47.6	37.48-57.72	McKean	19	14.0	
Mercer	239	46.4	40.52-52.28	Mercer	59	16.2	12.07-20.33
Mifflin	99	52.9	42.48-63.32	Mifflin	25	17.8	10.82-24.78
Monroe	172	43.0	36.57-49.43	Monroe	117	24.0	19.65-28.35 +
Montgomery	1,510	54.9	52.13-57.67 +	Montgomery	199	8.6	7.41-9.79 -
Montour	50	68.6	49.59-87.61 +	Montour	13	24.6	
Northampton	410	39.6	35.77-43.43 -	Northampton	108	11.8	9.57-14.03
Northumberland	199	46.7	40.21-53.19	Northumberland	56	20.5	15.13-25.87 +
Perry	58	44.5	33.05-55.95	Perry	32	24.4	15.95-32.85 +
Philadelphia	2,552	51.3	49.31-53.29 +	Philadelphia	353	7.8	6.99-8.61 -
Pike	53	32.9	24.04-41.76 -	Pike	26	16.1	9.91-22.29
Potter	34	44.6	29.61-59.59	Potter	10	20.1	
Schuylkill	357	52.1	46.70-57.50	Schuylkill	109	23.6	19.17-28.03 +
Snyder	62	48.6	36.50-60.70	Snyder	24	20.8	12.48-29.12
Somerset	139	40.7	33.93-47.47 -	Somerset	53	22.0	16.08-27.92 +
Sullivan	24	70.5	42.29-98.71	Sullivan	5	22.7	
Susquehanna	64	38.4	28.99-47.81 -	Susquehanna	33	25.0	16.47-33.53 +
Tioga	77	45.9	35.65-56.15	Tioga	32	24.1	15.75-32.45 +
Union	62	43.9	32.97-54.83	Union	27	19.4	12.08-26.72
Venango	135	61.9	51.46-72.34 +	Venango	32	19.1	12.48-25.72
Warren	106	62.8	50.84-74.76 +	Warren	26	21.2	13.05-29.35 +
Washington	387	45.3	40.79-49.81	Washington	66	10.8	8.19-13.41
Wayne	106	55.4	44.85-65.95	Wayne	41	28.9	20.05-37.75 +
Westmoreland	714	45.1	41.79-48.41 -	Westmoreland	161	14.2	12.01-16.39
Wyoming	49	57.5	41.40-73.60	Wyoming	20	23.2	13.03-33.37 +
York	534	42.2	38.62-45.78 -	York	176	14.5	12.36-16.64
Pennsylvania	22,405	48.6	47.96-49.24 +	Pennsylvania	4,802	12.5	12.15-12.85 -
United States (2006)	137,265	43.6	43.37-43.83	United States (2006)	44,572	14.7	14.56-14.84

NOTE: A+ or - after the confidence interval (CI) denotes if the county rate was significantly higher or lower than the state rate. No + or - after a CI denotes no significant difference. State data were compared to U.S. data. CIs were not calculated for rates based on less than 20 events. See Technical Notes.

Average Annual Age-Adjusted Death Rates - Stroke Pennsylvania Residents, 2004-2006



Average Annual Age-Adjusted Death Rates - Motor Vehicle Accidents Pennsylvania Residents, 2004-2006



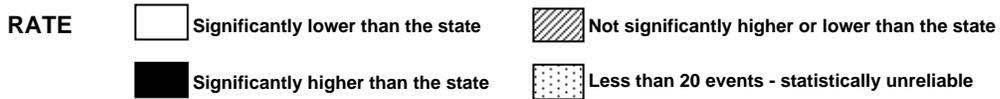
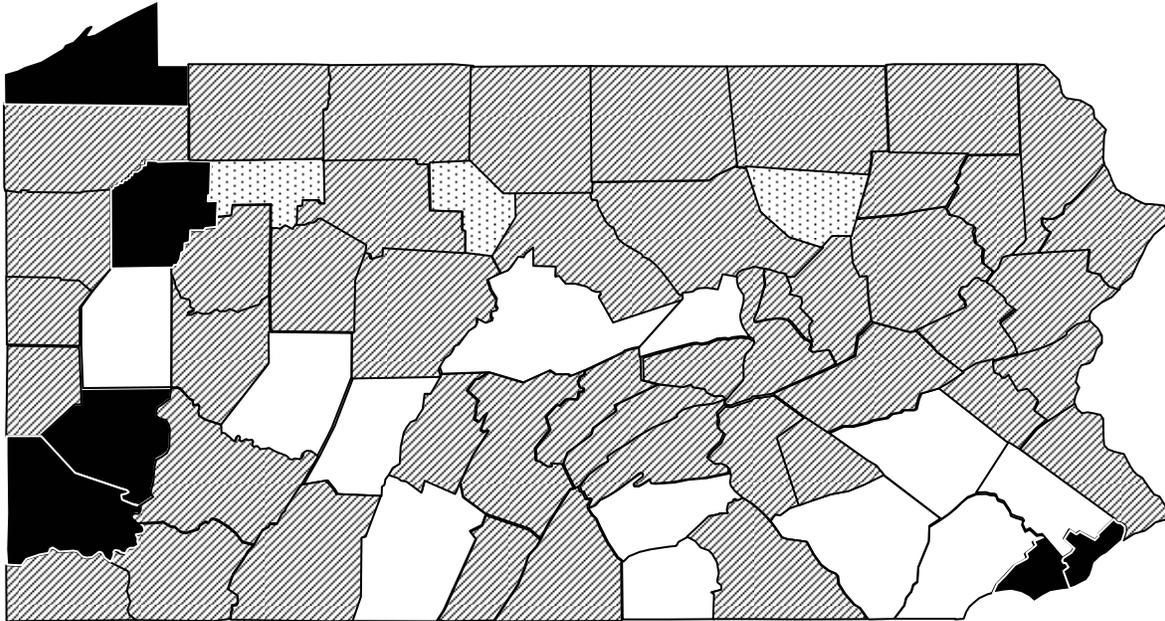
Note: Significance was determined by calculating and comparing county confidence intervals to the state rate. The calculations were not performed for counties that had less than 20 events. Rates for counties with less than 20 events are considered unreliable. See Technical Notes.

Average Annual Age-Adjusted Death Rates for Selected Causes, 2004-2006

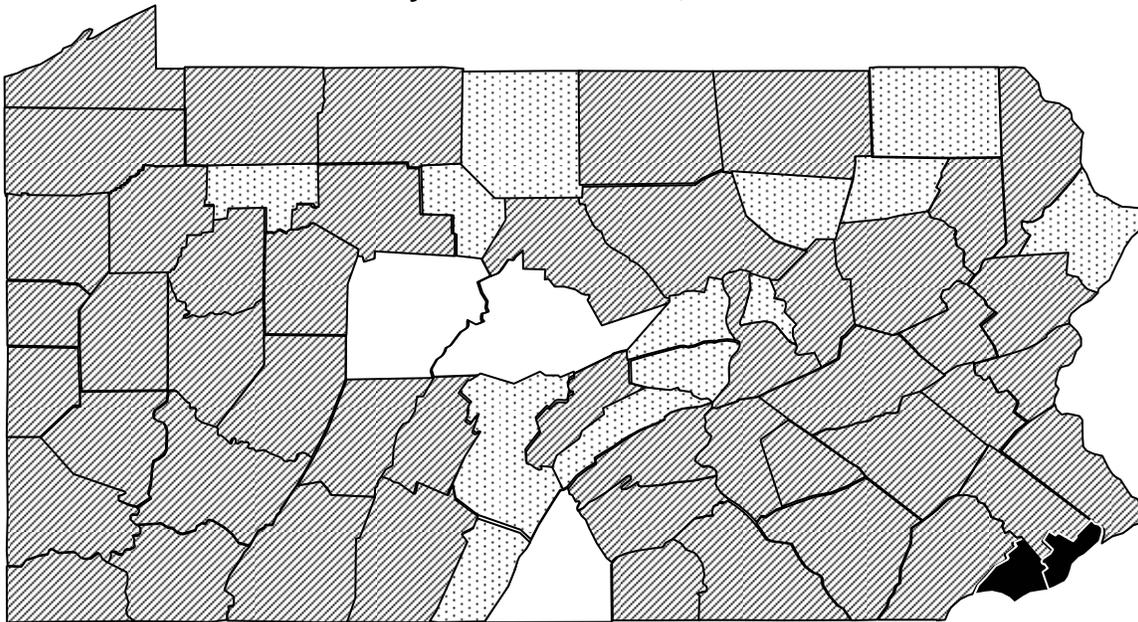
Male				Female			
Lung Cancer	No.	Rate	CI (95%)	Breast Cancer	No.	Rate	CI (95%)
Adams	145	43.9	36.75-51.05 -	Adams	37	20.4	13.83-26.97
Allegheny	2,968	59.3	57.17-61.43 +	Allegheny	748	26.7	24.79-28.61
Armstrong	162	56.1	47.46-64.74	Armstrong	43	27.8	19.49-36.11
Beaver	409	54.4	49.13-59.67	Beaver	97	23.7	18.98-28.42
Bedford	84	42.1	33.10-51.10 -	Bedford	28	27.3	17.19-37.41
Berks	660	49.2	45.45-52.95 -	Berks	182	24.5	20.94-28.06
Blair	284	55.8	49.31-62.29	Blair	81	27.3	21.35-33.25
Bradford	129	54.1	44.76-63.44	Bradford	31	23.3	15.10-31.50
Bucks	1,008	51.6	48.41-54.79	Bucks	296	26.7	23.66-29.74
Butler	296	47.7	42.27-53.13 -	Butler	85	24.9	19.61-30.19
Cambria	308	47.4	42.11-52.69 -	Cambria	88	23.8	18.83-28.77
Cameron	15	59.2		Cameron	7	47.8	
Carbon	141	57.3	47.84-66.76	Carbon	46	31.6	22.47-40.73
Centre	146	40.4	33.85-46.95 -	Centre	36	18.6	12.52-24.68 -
Chester	659	47.9	44.24-51.56 -	Chester	198	25.2	21.69-28.71
Clarion	84	55.6	43.71-67.49	Clarion	32	37.9	24.77-51.03
Clearfield	178	54.0	46.07-61.93	Clearfield	28	13.7	8.63-18.77 -
Clinton	65	45.5	34.44-56.56	Clinton	24	28.9	17.34-40.46
Columbia	111	45.9	37.36-54.44	Columbia	38	28.1	19.17-37.03
Crawford	184	55.8	47.74-63.86	Crawford	59	32.6	24.28-40.92
Cumberland	357	45.4	40.69-50.11 -	Cumberland	108	23.9	19.39-28.41
Dauphin	447	51.8	47.00-56.60	Dauphin	109	21.8	17.71-25.89
Delaware	1,136	58.4	55.00-61.80 +	Delaware	323	29.1	25.93-32.27 +
Elk	65	47.0	35.57-58.43	Elk	23	31.0	18.33-43.67
Erie	582	60.9	55.95-65.85 +	Erie	127	23.8	19.66-27.94
Fayette	312	51.1	45.43-56.77	Fayette	92	27.3	21.72-32.88
Forest	19	74.7		Forest	1	23.8	
Franklin	247	47.8	41.84-53.76	Franklin	55	19.5	14.35-24.65 -
Fulton	26	48.1	29.61-66.59	Fulton	5	17.4	
Greene	84	57.7	45.36-70.04	Greene	27	35.3	21.98-48.62
Huntingdon	86	52.8	41.64-63.96	Huntingdon	17	17.6	
Indiana	126	39.7	32.77-46.63 -	Indiana	42	25.0	17.44-32.56
Jefferson	90	47.9	38.00-57.80	Jefferson	21	20.0	11.45-28.55
Juniata	37	42.1	28.53-55.67	Juniata	8	15.1	
Lackawanna	433	49.4	44.75-54.05	Lackawanna	132	25.0	20.74-29.26
Lancaster	775	47.3	43.97-50.63 -	Lancaster	221	24.5	21.27-27.73
Lawrence	198	49.6	42.69-56.51	Lawrence	50	23.3	16.84-29.76
Lebanon	247	51.9	45.43-58.37	Lebanon	61	22.3	16.70-27.90
Lehigh	616	52.2	48.08-56.32	Lehigh	152	23.1	19.43-26.77
Luzerne	688	51.7	47.84-55.56	Luzerne	187	23.9	20.47-27.33
Lycoming	243	54.4	47.56-61.24	Lycoming	54	23.2	17.01-29.39
McKean	107	62.4	50.58-74.22	McKean	26	29.2	17.98-40.42
Mercer	240	49.4	43.15-55.65	Mercer	77	29.7	23.07-36.33
Mifflin	101	54.5	43.87-65.13	Mifflin	26	24.5	15.08-33.92
Monroe	244	51.9	45.39-58.41	Monroe	66	26.1	19.80-32.40
Montgomery	1,230	45.0	42.49-47.51 -	Montgomery	398	25.9	23.36-28.44
Montour	46	63.0	44.79-81.21	Montour	12	25.5	
Northampton	501	49.6	45.26-53.94	Northampton	140	24.4	20.36-28.44
Northumberland	192	49.0	42.07-55.93	Northumberland	71	31.8	24.40-39.20
Perry	81	58.2	45.53-70.87	Perry	23	29.4	17.38-41.42
Philadelphia	2,996	65.2	62.87-67.53 +	Philadelphia	803	29.4	27.37-31.43 +
Pike	96	49.8	39.84-59.76	Pike	19	20.1	
Potter	48	68.1	48.83-87.37	Potter	8	20.4	
Schuylkill	338	54.4	48.60-60.20	Schuylkill	101	28.6	23.02-34.18
Snyder	70	54.4	41.66-67.14	Snyder	13	18.9	
Somerset	159	48.5	40.96-56.04	Somerset	37	21.3	14.44-28.16
Sullivan	10	34.8		Sullivan	4	26.7	
Susquehanna	77	48.5	37.67-59.33	Susquehanna	19	21.8	
Tioga	87	54.6	43.13-66.07	Tioga	29	34.9	22.20-47.60
Union	57	40.0	29.62-50.38 -	Union	19	26.0	
Venango	147	66.6	55.83-77.37 +	Venango	34	26.5	17.59-35.41
Warren	82	47.5	37.22-57.78	Warren	24	24.1	14.46-33.74
Washington	490	59.1	53.87-64.33 +	Washington	135	29.4	24.44-34.36
Wayne	122	58.8	48.37-69.23	Wayne	38	36.8	25.10-48.50
Westmoreland	781	50.0	46.49-53.51	Westmoreland	199	22.9	19.72-26.08
Wyoming	55	55.5	40.83-70.17	Wyoming	13	25.2	
York	712	53.0	49.11-56.89	York	171	23.2	19.72-26.68
Pennsylvania	23,919	53.3	52.62-53.98 +	Pennsylvania	6,504	25.8	25.17-26.43 +
United States (2006)	158,525	51.5	51.25-51.75	United States (2005)	41,116	24.1	23.87-24.33

NOTE: A+ or - after the confidence interval (CI) denotes if the county rate was significantly higher or lower than the state rate. No + or - after a CI denotes no significant difference. State data were compared to U.S. data. CIs were not calculated for rates based on less than 20 events. See Technical Notes.

Average Annual Age-Adjusted Death Rates - Lung Cancer Pennsylvania Residents, 2004-2006



Average Annual Age-Adjusted Death Rates - Female Breast Cancer Pennsylvania Residents, 2004-2006



Note: Significance was determined by calculating and comparing county confidence intervals to the state rate. The calculations were not performed for counties that had less than 20 events. Rates for counties with less than 20 events are considered unreliable. See Technical Notes.

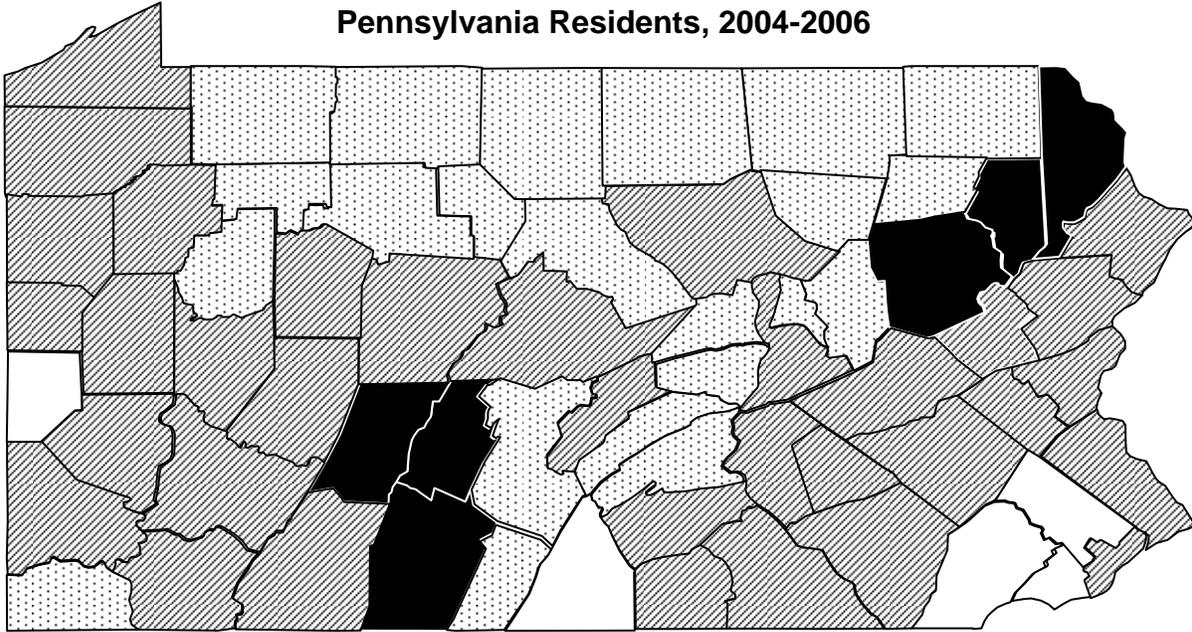
Average Annual Age-Adjusted Death Rates for Selected Causes, 2004-2006

Intentional Self-harm

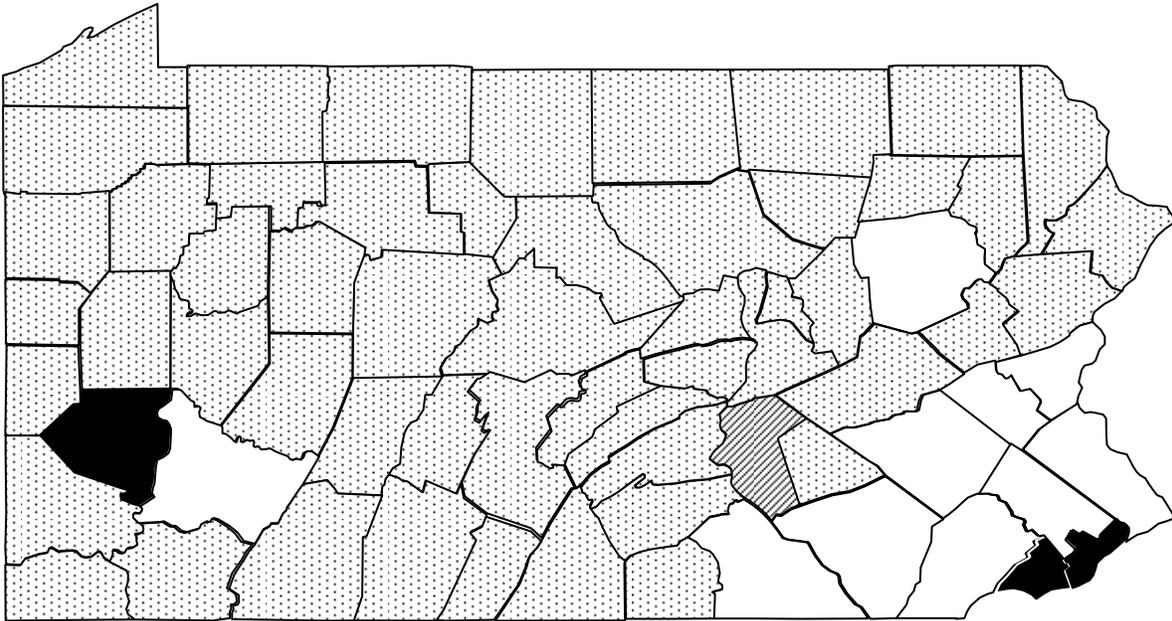
(Suicide)	No.	Rate	CI (95%)	Assault (Homicide)	No.	Rate	CI (95%)
Adams	28	9.2	5.79-12.61	Adams	4	1.3	
Allegheny	461	11.8	10.72-12.88	Allegheny	266	7.6	6.69-8.51 +
Armstrong	27	12.7	7.91-17.49	Armstrong	9	5.0	
Beaver	48	8.1	5.81-10.39 -	Beaver	17	3.4	
Bedford	31	21.1	13.67-28.53 +	Bedford	1	0.7	
Berks	144	11.9	9.96-13.84	Berks	45	4.0	2.83-5.17 -
Blair	60	14.8	11.06-18.54 +	Blair	14	3.8	
Bradford	19	10.1		Bradford	5	2.4	
Bucks	208	10.9	9.42-12.38	Bucks	38	2.1	1.43-2.77 -
Butler	49	9.0	6.48-11.52	Butler	10	1.9	
Cambria	66	15.4	11.68-19.12 +	Cambria	9	1.9	
Cameron	4	24.9		Cameron	0	-	
Carbon	31	14.3	9.27-19.33	Carbon	7	3.6	
Centre	37	10.5	7.12-13.88	Centre	2	0.4	
Chester	126	8.8	7.26-10.34 -	Chester	30	2.2	1.41-2.99 -
Clarion	14	11.8		Clarion	2	2.0	
Clearfield	36	13.8	9.29-18.31	Clearfield	1	0.3	
Clinton	17	15.9		Clinton	2	1.4	
Columbia	19	9.1		Columbia	3	2.2	
Crawford	35	12.6	8.43-16.77	Crawford	13	5.0	
Cumberland	67	9.9	7.53-12.27	Cumberland	6	1.0	
Dauphin	75	9.7	7.50-11.90	Dauphin	44	6.3	4.44-8.16
Delaware	154	9.0	7.58-10.42 -	Delaware	125	7.7	6.35-9.05 +
Elk	9	8.8		Elk	0	-	
Erie	84	9.9	7.78-12.02	Erie	15	1.9	
Fayette	46	10.2	7.25-13.15	Fayette	13	3.3	
Forest	2	9.1		Forest	0	-	
Franklin	31	7.5	4.86-10.14 -	Franklin	5	1.2	
Fulton	7	14.9		Fulton	0	-	
Greene	13	10.3		Greene	4	3.9	
Huntingdon	16	11.1		Huntingdon	3	2.6	
Indiana	27	10.9	6.79-15.01	Indiana	3	1.3	
Jefferson	20	14.4	8.09-20.71	Jefferson	2	1.8	
Juniata	6	9.6		Juniata	1	1.4	
Lackawanna	101	15.9	12.80-19.00 +	Lackawanna	10	1.8	
Lancaster	147	9.8	8.22-11.38	Lancaster	44	3.0	2.11-3.89 -
Lawrence	27	9.6	5.98-13.22	Lawrence	10	3.9	
Lebanon	35	8.8	5.88-11.72	Lebanon	9	2.3	
Lehigh	129	12.8	10.59-15.01	Lehigh	40	4.1	2.83-5.37 -
Luzerne	140	14.6	12.18-17.02 +	Luzerne	37	4.0	2.71-5.29 -
Lycoming	44	11.7	8.24-15.16	Lycoming	5	1.5	
McKean	17	11.8		McKean	3	2.3	
Mercer	40	11.4	7.87-14.93	Mercer	6	1.8	
Mifflin	20	15.2	8.54-21.86	Mifflin	3	2.5	
Monroe	55	11.0	8.09-13.91	Monroe	15	3.6	
Montgomery	204	8.4	7.25-9.55 -	Montgomery	54	2.4	1.76-3.04 -
Montour	3	4.0		Montour	1	1.6	
Northampton	84	9.5	7.47-11.53	Northampton	25	2.9	1.76-4.04 -
Northumberland	24	8.4	5.04-11.76	Northumberland	10	3.6	
Perry	18	12.9		Perry	3	2.0	
Philadelphia	451	10.4	9.44-11.36	Philadelphia	1,088	23.7	22.29-25.11 +
Pike	23	13.4	7.92-18.88	Pike	6	4.4	
Potter	14	26.7		Potter	1	2.1	
Schuylkill	65	14.1	10.67-17.53	Schuylkill	14	3.6	
Snyder	10	8.8		Snyder	2	1.3	
Somerset	25	10.3	6.26-14.34	Somerset	4	1.6	
Sullivan	0	-		Sullivan	1	2.9	
Susquehanna	15	12.4		Susquehanna	2	2.0	
Tioga	15	12.2		Tioga	0	-	
Union	6	4.5		Union	2	1.6	
Venango	27	15.1	9.40-20.80	Venango	1	0.5	
Warren	13	9.0		Warren	5	4.5	
Washington	70	10.5	8.04-12.96	Washington	10	1.6	
Wayne	29	19.5	12.40-26.60 +	Wayne	3	1.8	
Westmoreland	144	12.8	10.71-14.89	Westmoreland	22	2.2	1.28-3.12 -
Wyoming	18	22.7		Wyoming	2	2.5	
York	143	11.3	9.45-13.15	York	42	3.5	2.44-4.56 -
Pennsylvania	4,173	10.9	10.57-11.23	Pennsylvania	2,179	6.0	5.75-6.25
United States (2006)	32,185	10.6	10.48-10.72	United States (2006)	18,029	6.0	5.91-6.09

NOTE: A+ or - after the confidence interval (CI) denotes if the county rate was significantly higher or lower than the state rate. No + or - after a CI denotes no significant difference. State data were compared to U.S. data. CIs were not calculated for rates based on less than 20 events. See Technical Notes.

**Average Annual Age-Adjusted Death Rates
Intentional Self-harm (Suicide)
Pennsylvania Residents, 2004-2006**



**Average Annual Age-Adjusted Death Rates - Assault (Homicide)
Pennsylvania Residents, 2004-2006**



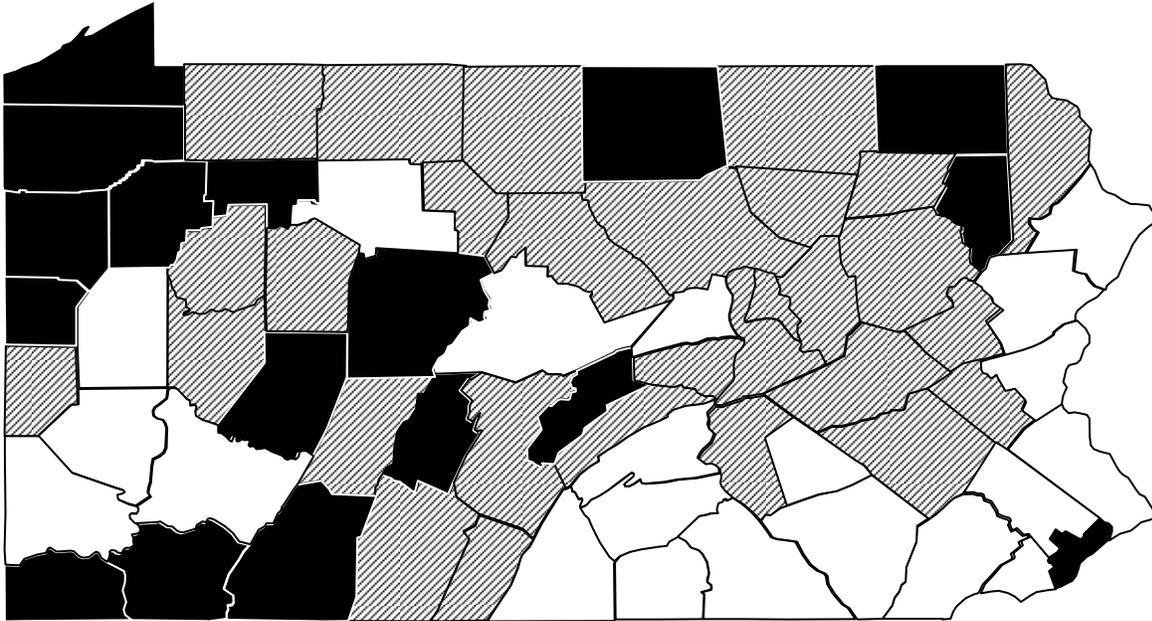
Note: Significance was determined by calculating and comparing county confidence intervals to the state rate. The calculations were not performed for counties that had less than 20 events. Rates for counties with less than 20 events are considered unreliable. See Technical Notes.

Percent of Children by Age Below Poverty Level, 2005

Related Children				All Children <18			
Ages 5-17 Below Poverty	No.	Pct.	μ (95%)	Below Poverty	No.	Pct.	μ (95%)
Adams	1,520	9.2	-6.22 -	Adams	2,379	10.9	-6.59 -
Allegheny	26,855	14.1	-3.58 -	Allegheny	39,651	15.4	-4.77 -
Armstrong	1,803	16.5	1.20	Armstrong	2,640	18.3	1.60
Beaver	4,093	14.6	-0.69	Beaver	6,091	16.4	-0.30
Bedford	1,388	17.2	1.55	Bedford	2,167	20.1	2.84 +
Berks	10,627	16.0	1.90	Berks	15,411	16.9	0.71
Blair	3,466	17.7	2.98 +	Blair	5,416	20.3	4.73 +
Bradford	1,774	16.5	1.19	Bradford	2,744	19.3	2.52 +
Bucks	6,022	5.5	-26.05 -	Bucks	9,339	6.5	-29.96 -
Butler	2,908	9.6	-7.85 -	Butler	4,215	10.3	-9.97 -
Cambria	3,490	16.5	1.67	Cambria	5,475	19.1	3.31 +
Cameron	146	16.0	0.22	Cameron	212	17.6	0.27
Carbon	1,305	14.2	-0.71	Carbon	1,969	16.0	-0.52
Centre	1,585	10.4	-4.76 -	Centre	2,540	12.0	-5.24 -
Chester	4,733	5.6	-22.65 -	Chester	7,474	6.5	-26.81 -
Clarion	1,000	17.1	1.25	Clarion	1,456	18.8	1.52
Clearfield	2,470	19.6	4.14 +	Clearfield	3,573	21.6	5.03 +
Clinton	929	17.6	1.49	Clinton	1,381	18.9	1.54
Columbia	1,188	13.4	-1.31	Columbia	1,838	15.5	-0.94
Crawford	2,511	17.3	2.17 +	Crawford	3,774	19.2	2.85 +
Cumberland	2,327	7.0	-12.11 -	Cumberland	3,708	8.3	-13.73 -
Dauphin	6,079	14.3	-1.35	Dauphin	9,307	15.7	-1.72
Delaware	11,367	11.7	-8.69 -	Delaware	16,862	12.8	-10.79 -
Elk	583	10.6	-2.74 -	Elk	863	12.1	-2.97 -
Erie	8,577	18.1	5.36 +	Erie	12,240	19.0	4.77 +
Fayette	5,961	26.4	13.92 +	Fayette	8,495	28.2	15.76 +
Forest	153	25.6	2.10 +	Forest	231	29.7	2.86 +
Franklin	2,469	11.1	-4.89 -	Franklin	3,894	12.7	-5.34 -
Fulton	340	14.0	-0.44	Fulton	517	16.0	-0.27
Greene	1,537	25.8	6.77 +	Greene	2,187	27.9	7.83 +
Huntingdon	1,117	16.9	1.20	Huntingdon	1,679	18.9	1.70
Indiana	2,114	17.7	2.33 +	Indiana	3,226	19.8	3.20 +
Jefferson	1,252	17.5	1.66	Jefferson	1,899	19.6	2.31 +
Juniata	465	11.8	-1.70	Juniata	725	13.4	-1.84
Lackawanna	5,293	16.7	2.34 +	Lackawanna	7,839	18.4	2.91 +
Lancaster	10,383	11.7	-8.31 -	Lancaster	16,270	13.3	-9.03 -
Lawrence	2,703	18.3	3.19 +	Lawrence	3,939	20.0	3.73 +
Lebanon	2,114	10.5	-5.35 -	Lebanon	3,136	11.5	-6.59 -
Lehigh	8,094	14.7	-0.77	Lehigh	12,279	16.2	-0.86
Luzerne	7,029	15.4	0.53	Luzerne	10,901	17.9	2.51 +
Lycoming	2,778	15.1	0.00	Lycoming	4,242	17.0	0.49
McKean	1,250	17.6	1.73	McKean	1,893	19.9	2.52 +
Mercer	3,653	19.3	4.74 +	Mercer	5,188	20.5	4.86 +
Mifflin	1,679	21.6	4.70 +	Mifflin	2,478	23.3	5.41 +
Monroe	3,376	11.2	-5.55 -	Monroe	4,772	12.3	-6.63 -
Montgomery	7,396	5.7	-27.77 -	Montgomery	10,446	5.8	-35.87 -
Montour	433	14.9	-0.09	Montour	681	17.2	0.30
Northampton	4,471	9.7	-9.51 -	Northampton	6,748	10.9	-11.10 -
Northumberland	2,117	15.9	0.76	Northumberland	3,277	18.1	1.58
Perry	834	11.1	-2.84 -	Perry	1,246	12.3	-3.39 -
Philadelphia	85,700	33.7	76.91 +	Philadelphia	128,662	35.4	88.71 +
Pike	999	9.5	-4.71 -	Pike	1,524	11.9	-4.16 -
Potter	555	17.8	1.24	Potter	860	20.5	1.98 +
Schuylkill	3,268	15.6	0.59	Schuylkill	4,726	16.8	0.26
Snyder	894	14.9	-0.13	Snyder	1,302	15.7	-0.64
Somerset	2,054	17.5	2.13 +	Somerset	3,041	19.5	2.83 +
Sullivan	134	17.1	0.46	Sullivan	189	18.6	0.50
Susquehanna	1,419	19.9	3.32 +	Susquehanna	2,319	24.6	6.08 +
Tioga	1,187	18.7	2.35 +	Tioga	1,707	19.9	2.39 +
Union	545	9.8	-3.24 -	Union	824	10.9	-3.88 -
Venango	1,832	20.3	4.05 +	Venango	2,891	24.5	6.72 +
Warren	1,192	17.4	1.56	Warren	1,740	19.4	2.08 +
Washington	3,571	11.3	-5.54 -	Washington	5,425	12.8	-6.12 -
Wayne	1,277	15.8	0.52	Wayne	1,833	17.2	0.48
Westmoreland	6,005	10.7	-8.55 -	Westmoreland	8,731	11.9	-9.96 -
Wyoming	735	15.7	0.34	Wyoming	1,035	16.7	0.06
York	6,326	9.3	-12.40 -	York	10,033	10.9	-13.53 -
Pennsylvania	305,450	15.1	-20.92 -	Pennsylvania	457,751	16.6	-23.41 -
United States (2005)	8,765,541	17.0		United States (2005)	13,360,273	18.5	

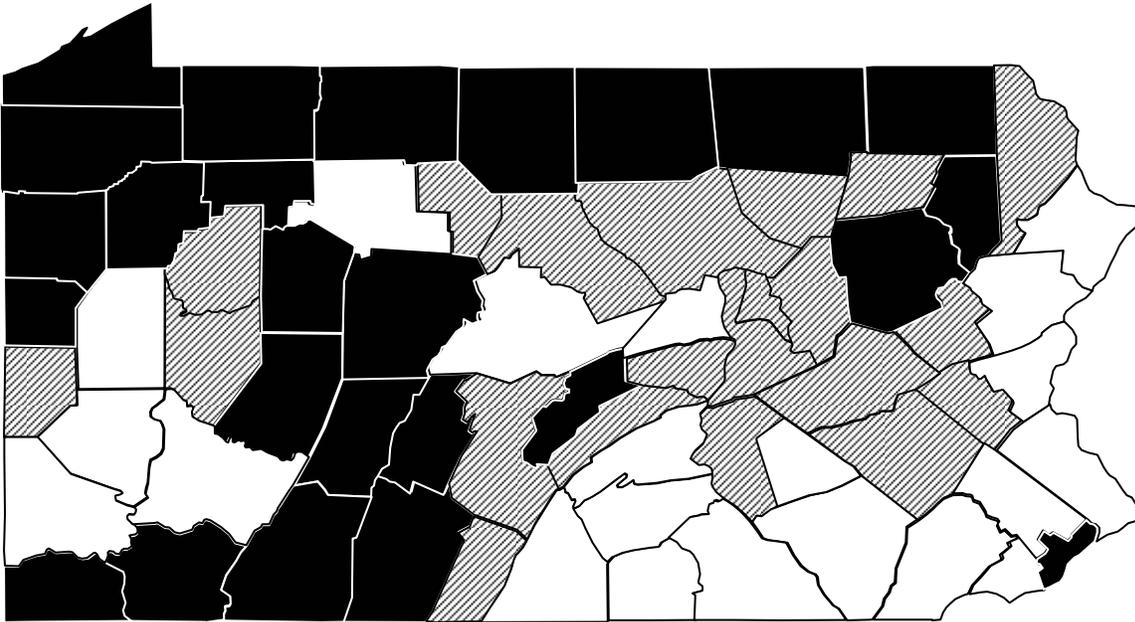
NOTE: A+ or - after the value of μ denotes if the county rate was significantly higher or lower than the state rate. No + or - after the μ value denotes no significant difference. State data were compared to U.S. data. Two separate formulas computed the μ values, depending on the number of events. See Technical Notes.

**Percent of Children 5-17 Related to Persons with Income Below Poverty Level
Pennsylvania Residents, 2005**



PERCENT Significantly lower than the state Not significantly higher or lower than the state Significantly higher than the state

**Percent of Children Under 18 Living Below Poverty Level
Pennsylvania Residents, 2005**



PERCENT Significantly lower than the state Not significantly higher or lower than the state Significantly higher than the state

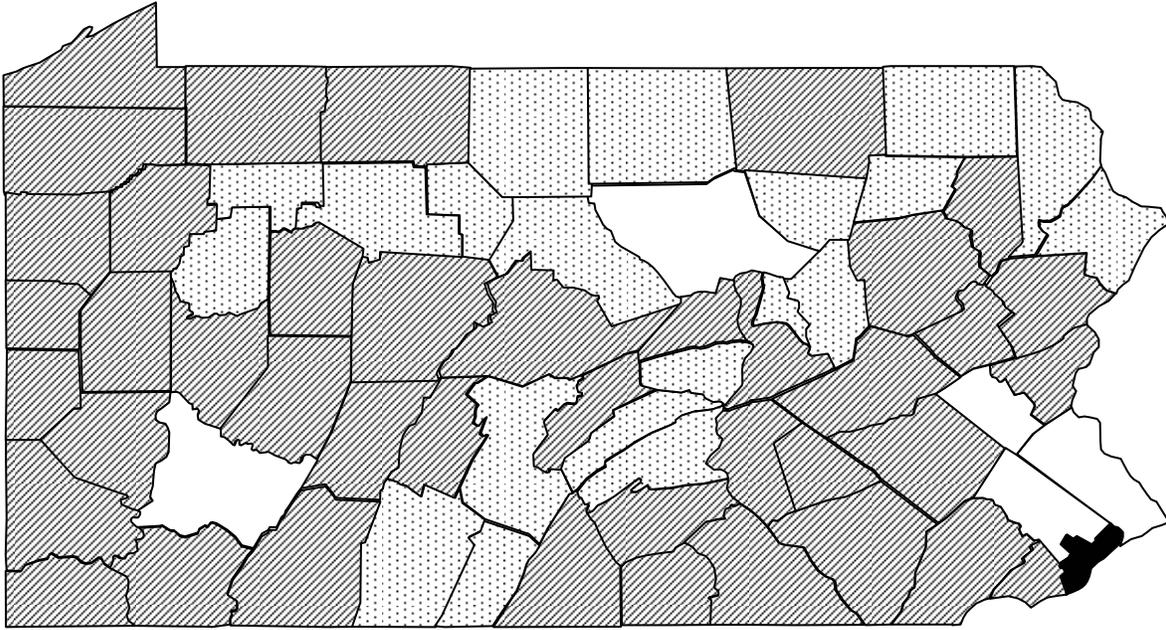
Note: Significance is determined by calculating county μ values. The calculations were not performed for counties that had less than 10 events. Rates for counties with less than 10 events are considered unreliable. See Technical Notes

Infant Death Rates, 2004-06, and Percent Low Birth Weight, 2006

2004-2006				Percent			
Infant Death Rates	No.	Rate	μ (95%)	Low Birth Weight	No.	Pct.	μ (95%)
Adams	31	9.4	1.41	Adams	74	6.8	-1.92
Allegheny	294	7.5	0.47	Allegheny	1,164	9.0	2.04 +
Armstrong	10	4.7	-1.39	Armstrong	64	9.0	0.46
Beaver	29	5.5	-1.57	Beaver	133	7.4	-1.67
Bedford	6	4.0		Bedford	26	5.4	-2.33 -
Berks	99	6.5	-1.13	Berks	363	7.0	-3.87 -
Blair	28	6.5	-0.61	Blair	110	7.8	-0.94
Bradford	19	8.4	0.64	Bradford	56	7.4	-1.04
Bucks	101	4.9	-4.05 -	Bucks	482	7.7	-2.27 -
Butler	38	6.3	-0.95	Butler	153	7.6	-1.45
Cambria	22	4.9	-1.86	Cambria	150	10.2	2.34 +
Cameron	1	6.8		Cameron	3	6.0	
Carbon	13	7.0	-0.16	Carbon	58	8.9	0.35
Centre	19	4.9	-1.76	Centre	93	6.9	-2.01 -
Chester	114	6.2	-1.76	Chester	452	7.2	-3.69 -
Clarion	7	5.7		Clarion	30	7.4	-0.76
Clearfield	24	10.0	1.53	Clearfield	58	7.3	-1.16
Clinton	7	5.4		Clinton	29	6.7	-1.28
Columbia	6	3.1		Columbia	52	8.0	-0.44
Crawford	17	5.5	-1.17	Crawford	70	6.8	-1.87
Cumberland	51	7.2	-0.09	Cumberland	166	6.8	-3.01 -
Dauphin	75	7.5	0.20	Dauphin	314	9.0	1.06
Delaware	157	7.6	0.51	Delaware	615	8.8	0.90
Elk	7	7.5		Elk	32	9.9	0.86
Erie	75	7.5	0.28	Erie	313	9.1	1.26
Fayette	36	8.4	0.85	Fayette	138	9.7	1.62
Forest	1	9.3		Forest	2	5.6	
Franklin	34	6.2	-0.95	Franklin	163	8.1	-0.64
Fulton	2	3.8		Fulton	14	7.5	-0.47
Greene	13	10.2	1.22	Greene	37	8.8	0.21
Huntingdon	6	4.5		Huntingdon	38	8.3	-0.15
Indiana	12	4.6	-1.59	Indiana	70	8.0	-0.51
Jefferson	12	8.2	0.39	Jefferson	52	10.1	1.25
Juniata	7	8.2		Juniata	9	3.6	
Lackawanna	38	5.6	-1.65	Lackawanna	191	8.4	-0.17
Lancaster	156	7.5	0.34	Lancaster	484	6.9	-4.81 -
Lawrence	23	8.2	0.58	Lawrence	70	7.6	-0.94
Lebanon	29	6.1	-0.93	Lebanon	106	6.6	-2.73 -
Lehigh	66	5.2	-2.70 -	Lehigh	393	9.2	1.64
Luzerne	70	7.4	0.12	Luzerne	285	9.0	1.01
Lycoming	17	4.2	-2.32 -	Lycoming	108	8.0	-0.66
McKean	12	8.4	0.49	McKean	41	8.1	-0.31
Mercer	26	7.3	-0.02	Mercer	79	6.7	-2.12 -
Mifflin	11	6.2	-0.53	Mifflin	41	6.8	-1.43
Monroe	31	6.4	-0.70	Monroe	111	7.0	-2.14 -
Montgomery	168	5.9	-2.78 -	Montgomery	721	7.5	-3.52 -
Montour	5	8.0		Montour	12	5.8	-1.33
Northampton	55	5.9	-1.57	Northampton	276	8.6	0.20
Northumberland	16	5.4	-1.21	Northumberland	79	7.7	-0.88
Perry	8	4.8		Perry	36	6.6	-1.52
Philadelphia	776	11.6	13.04 +	Philadelphia	2,588	11.5	16.14 +
Pike	3	2.3		Pike	27	5.8	-2.00 -
Potter	5	8.3		Potter	17	8.1	-0.20
Schuylkill	21	4.8	-1.89	Schuylkill	117	8.0	-0.69
Snyder	7	5.0		Snyder	24	4.8	-2.84 -
Somerset	11	5.1	-1.19	Somerset	56	7.7	-0.74
Sullivan	1	6.2		Sullivan	5	8.5	
Susquehanna	5	4.2		Susquehanna	27	7.1	-0.94
Tioga	6	4.9		Tioga	29	6.6	-1.37
Union	11	9.0	0.70	Union	21	5.3	-2.18 -
Venango	17	9.1	0.92	Venango	54	8.4	-0.09
Warren	10	8.5	0.47	Warren	27	6.7	-1.24
Washington	36	5.9	-1.27	Washington	155	7.4	-1.81
Wayne	7	5.1		Wayne	25	5.2	-2.48 -
Westmoreland	53	5.3	-2.37 -	Westmoreland	245	7.4	-2.27 -
Wyoming	5	5.3		Wyoming	21	6.7	-1.09
York	117	7.8	0.72	York	425	8.3	-0.51
Pennsylvania	3,195	7.3	4.87 +	Pennsylvania	12,479	8.5	4.19 +
United States (2006)	28,609	6.7		United States (2005)	338,565	8.2	

NOTE: A+ or - after the value of μ denotes if the county rate was significantly higher or lower than the state rate. No + or - after the μ value denotes no significant difference. State data were compared to U.S. data. Two separate formulas computed the μ values, depending on the number of events. See Technical Notes.

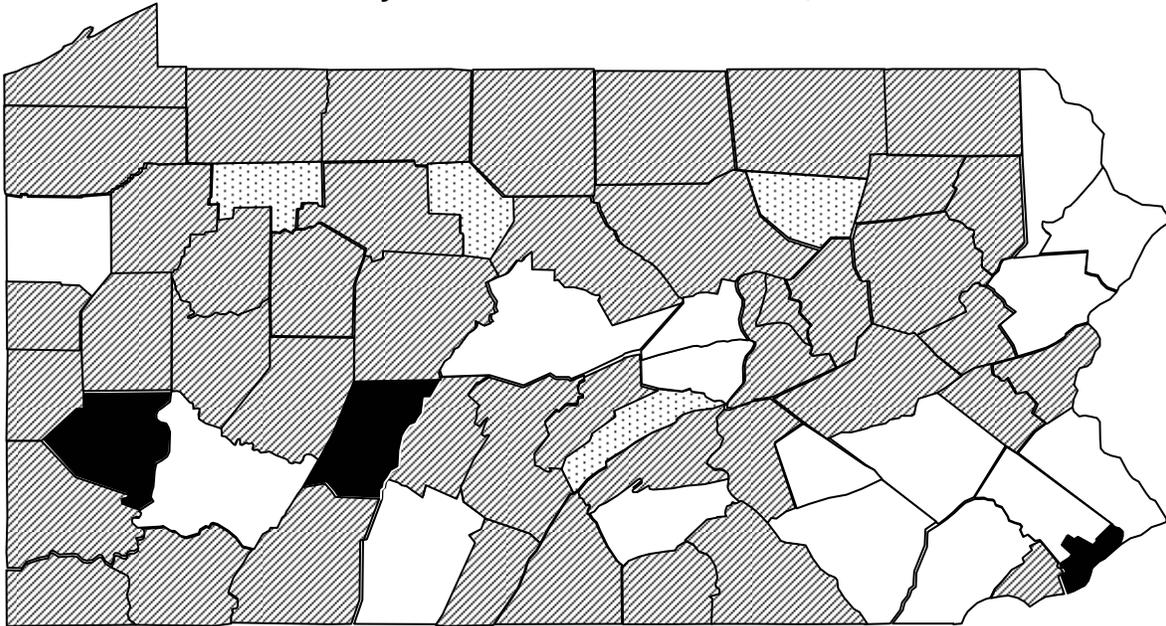
Infant Death Rates Pennsylvania Residents, 2004-2006



RATE

Significantly lower than the state	Not significantly higher or lower than the state
Significantly higher than the state	Less than 10 events - statistically unreliable

Percent Low Birth Weight Pennsylvania Resident Live Births, 2006



PERCENT

Significantly lower than the state	Not significantly higher or lower than the state
Significantly higher than the state	Less than 10 events - statistically unreliable

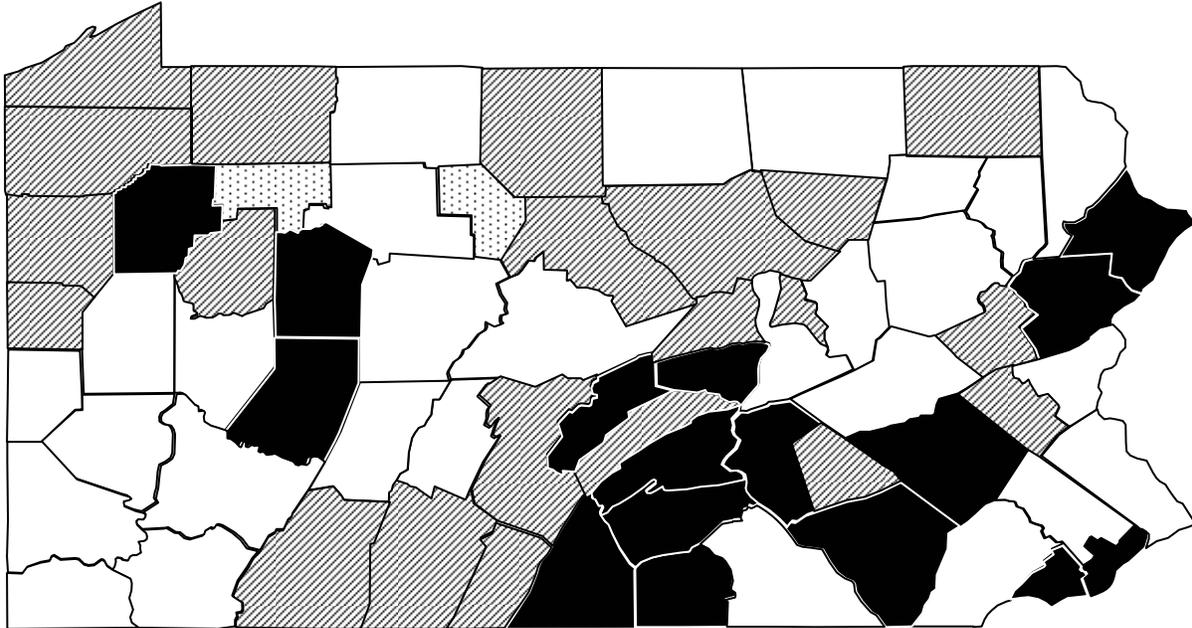
Note: Significance is determined by calculating county μ values. The calculations were not performed for counties that had less than 10 events. Rates for counties with less than 10 events are considered unreliable. See Technical Notes

Percent No Prenatal Care in First Trimester and Teen Births, 2006

No Prenatal Care				Births to			
First Trimester	No.	Pct.	μ (95%)	Mothers <18	No.	Pct.	μ (95%)
Adams	200	22.8	2.15 +	Adams	33	3.0	0.00
Allegheny	1,173	10.8	-23.75 -	Allegheny	344	2.6	-2.70 -
Armstrong	79	12.8	-3.95 -	Armstrong	19	2.7	-0.46
Beaver	236	15.6	-4.19 -	Beaver	47	2.6	-0.98
Bedford	73	17.6	-1.05	Bedford	12	2.5	-0.63
Berks	1,063	23.3	5.75 +	Berks	229	4.4	5.92 +
Blair	192	14.6	-4.81 -	Blair	52	3.7	1.52
Bradford	96	15.3	-2.58 -	Bradford	20	2.7	-0.47
Bucks	582	13.1	-11.35 -	Bucks	78	1.1	-9.24 -
Butler	240	13.3	-7.02 -	Butler	33	1.6	-3.67 -
Cambria	205	15.1	-4.43 -	Cambria	44	3.0	0.00
Cameron	6	13.0		Cameron	0	-	
Carbon	96	18.5	-0.71	Carbon	11	1.7	-1.91
Centre	209	17.0	-2.55 -	Centre	10	0.7	-5.02 -
Chester	945	17.6	-4.22 -	Chester	94	1.5	-6.86 -
Clarion	78	20.6	0.31	Clarion	7	1.7	
Clearfield	109	14.5	-3.71 -	Clearfield	17	2.1	-1.48
Clinton	75	18.8	-0.49	Clinton	12	2.8	-0.24
Columbia	80	13.0	-3.84 -	Columbia	15	2.3	-1.03
Crawford	181	20.7	0.59	Crawford	17	1.7	-2.37 -
Cumberland	460	22.1	2.51 +	Cumberland	23	0.9	-6.13 -
Dauphin	646	23.7	4.97 +	Dauphin	123	3.5	1.74
Delaware	1,276	21.2	2.53 +	Delaware	180	2.6	-1.95
Elk	44	14.8	-1.97 -	Elk	5	1.5	
Erie	555	18.7	-1.64	Erie	138	4.0	3.44 +
Fayette	194	15.7	-3.70 -	Fayette	54	3.8	1.74
Forest	9	26.5		Forest	0	-	
Franklin	459	28.5	8.64 +	Franklin	50	2.5	-1.29
Fulton	36	25.0	1.37	Fulton	6	3.2	
Greene	34	12.1	-2.93 -	Greene	17	4.0	1.19
Huntingdon	83	19.3	-0.28	Huntingdon	16	3.5	0.62
Indiana	194	23.8	2.79 +	Indiana	13	1.5	-2.55 -
Jefferson	127	27.2	3.95 +	Jefferson	10	1.9	-1.46
Juniata	54	24.8	1.62	Juniata	4	1.6	
Lackawanna	362	17.8	-2.37 -	Lackawanna	49	2.1	-2.51 -
Lancaster	1,338	21.2	2.59 +	Lancaster	182	2.6	-1.96 -
Lawrence	175	20.6	0.51	Lawrence	32	3.5	0.87
Lebanon	268	20.9	0.90	Lebanon	42	2.6	-0.93
Lehigh	668	19.7	-0.29	Lehigh	146	3.4	1.54
Luzerne	481	17.9	-2.60 -	Luzerne	105	3.3	0.99
Lycoming	263	21.0	0.98	Lycoming	24	1.8	-2.53 -
McKean	54	14.6	-2.28 -	McKean	13	2.6	-0.52
Mercer	206	19.1	-0.66	Mercer	28	2.4	-1.18
Mifflin	154	28.5	5.01 +	Mifflin	20	3.3	0.43
Monroe	306	24.8	4.31 +	Monroe	31	1.9	-2.57 -
Montgomery	1,389	17.4	-5.59 -	Montgomery	131	1.4	-9.07 -
Montour	33	17.1	-0.87	Montour	2	1.0	
Northampton	389	15.0	-6.25 -	Northampton	81	2.5	-1.64
Northumberland	156	16.3	-2.79 -	Northumberland	28	2.7	-0.56
Perry	106	23.6	1.96 +	Perry	19	3.5	0.67
Philadelphia	5,353	34.7	46.04 +	Philadelphia	1,397	6.1	27.50 +
Pike	58	32.8	3.85 +	Pike	16	3.3	0.38
Potter	26	16.9	-0.83	Potter	10	4.8	1.50
Schuylkill	155	12.4	-6.64 -	Schuylkill	43	2.9	-0.22
Snyder	124	26.6	3.62 +	Snyder	12	2.4	-0.77
Somerset	117	18.5	-0.88	Somerset	19	2.6	-0.62
Sullivan	10	18.9	-0.16	Sullivan	2	3.4	
Susquehanna	39	17.1	-0.95	Susquehanna	7	1.8	
Tioga	43	12.4	-3.13 -	Tioga	8	1.8	
Union	88	24.4	1.92	Union	12	3.0	0.00
Venango	146	24.0	2.53 +	Venango	18	2.8	-0.29
Warren	48	15.2	-1.87	Warren	4	1.0	
Washington	272	14.3	-6.12 -	Washington	49	2.3	-1.87
Wayne	51	12.7	-3.23 -	Wayne	7	1.4	
Westmoreland	370	12.5	-10.08 -	Westmoreland	66	2.0	-3.32 -
Wyoming	38	13.4	-2.45 -	Wyoming	10	3.2	0.20
York	698	16.7	-5.18 -	York	174	3.4	1.68
Pennsylvania	24,073	19.9	-56.34 -	Pennsylvania	4,520	3.0	-8.57 -
United States (2004)	139,115	27.1		United States (2005)	139,913	3.4	

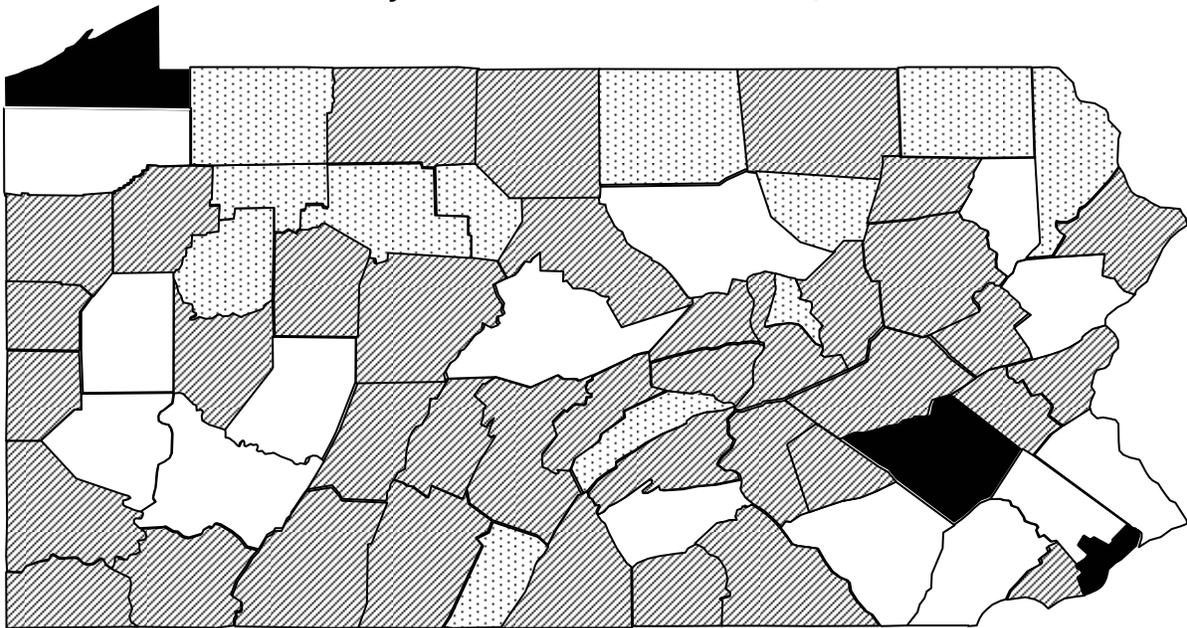
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**Percent with No Prenatal Care in First Trimester
Pennsylvania Resident Live Births, 2006**



PERCENT Significantly lower than the state Not significantly higher or lower than the state
 Significantly higher than the state Less than 10 events - statistically unreliable

**Percent of Births to Mothers Under 18
Pennsylvania Resident Live Births, 2006**



PERCENT Significantly lower than the state Not significantly higher or lower than the state
 Significantly higher than the state Less than 10 events - statistically unreliable

Note: Significance is determined by calculating county μ values. The calculations were not performed for counties that had less than 10 events. Rates for counties with less than 10 events are considered unreliable. See Technical Notes

Infant Death Rates, Total and By Race/Ethnicity

2006

Infant Deaths	No.	Rate
Adams	14	12.8
Allegheny	100	7.7
Armstrong	5	7.0
Beaver	6	3.3
Bedford	1	2.1
Berks	37	7.2
Blair	12	8.5
Bradford	6	8.0
Bucks	28	4.0
Butler	12	5.9
Cambria	8	5.5
Cameron	1	20.0
Carbon	5	7.7
Centre	5	3.7
Chester	38	6.0
Clarion	5	12.3
Clearfield	7	8.8
Clinton	1	2.3
Columbia	2	3.1
Crawford	5	4.9
Cumberland	18	7.3
Dauphin	25	7.2
Delaware	58	8.3
Elk	4	12.4
Erie	33	9.6
Fayette	9	6.3
Forest	0	-
Franklin	12	6.0
Fulton	1	5.4
Greene	4	9.5
Huntingdon	2	4.4
Indiana	4	4.6
Jefferson	5	9.7
Juniata	0	-
Lackawanna	14	6.1
Lancaster	57	8.1
Lawrence	5	5.4
Lebanon	11	6.9
Lehigh	28	6.5
Luzerne	29	9.1
Lycoming	7	5.2
McKean	1	2.0
Mercer	6	5.1
Mifflin	5	8.3
Monroe	9	5.5
Montgomery	52	5.4
Montour	4	19.3
Northampton	25	7.7
Northumberland	4	3.9
Perry	1	1.8
Philadelphia	282	12.3
Pike	0	-
Potter	2	9.6
Schuylkill	6	4.1
Snyder	4	8.0
Somerset	5	6.9
Sullivan	0	-
Susquehanna	3	7.9
Tioga	1	2.3
Union	3	7.6
Venango	6	9.2
Warren	2	5.0
Washington	13	6.2
Wayne	3	6.1
Westmoreland	18	5.4
Wyoming	3	9.5
York	40	7.8
Pennsylvania	1,122	7.5
United States (2006)	28,609	6.7

2006 Infant Deaths:		
White	No.	Rate
Allegheny	45	4.7
Berks	29	7.6
Bucks	23	4.0
Chester	27	5.2
Dauphin	12	5.8
Delaware	26	5.9
Erie	21	7.5
Lancaster	51	8.8
Lehigh	23	8.7
Montgomery	37	5.0
Northampton	16	6.4
Philadelphia	66	10.7
Pennsylvania	689	6.3
U.S. (2006)	18,496	5.6

Black	No.	Rate
Allegheny	51	19.3
Bucks	4	12.0
Chester	8	21.6
Dauphin	11	13.6
Delaware	28	15.3
Erie	11	26.5
Montgomery	8	9.4
Philadelphia	192	17.0
Pennsylvania	367	17.0
U.S. (2006)	8,824	13.3

Hispanic	No.	Rate
Berks	10	7.1
Chester	4	5.4
Lancaster	9	10.7
Lehigh	3	2.4
Montgomery	1	1.4
Northampton	5	9.5
Philadelphia	23	6.1
Pennsylvania	77	5.8
U.S. (2006)	5,762	5.6

2004-06 Infant Deaths:		
White	No.	Rate
Allegheny	146	5.0
Berks	82	7.2
Bucks	86	4.9
Chester	79	5.2
Dauphin	38	6.2
Delaware	86	6.4
Erie	54	6.6
Lancaster	142	8.2
Lehigh	56	7.0
Montgomery	111	4.9
Northampton	40	5.5
Philadelphia	192	10.5
Pennsylvania	2,051	6.3

Black	No.	Rate
Allegheny	138	17.6
Bucks	8	9.1
Chester	27	25.6
Dauphin	34	14.9
Delaware	64	12.7
Erie	18	15.5
Montgomery	36	14.6
Philadelphia	530	16.1
Pennsylvania	986	15.9

Hispanic	No.	Rate
Berks	38	9.3
Chester	11	5.3
Lancaster	21	9.1
Lehigh	16	4.5
Montgomery	11	5.8
Northampton	10	6.9
Philadelphia	85	8.0
Pennsylvania	256	6.9

Asian and Pacific Islander	No.	Rate
Allegheny	6	3.8
Delaware	5	4.0
Montgomery	10	4.4
Philadelphia	18	4.4
Pennsylvania	71	4.5

NOTES: Rates based on small numbers can be unreliable. See Technical Notes. Hispanics can be of any race.

Average Annual Incidence Rates for Selected Diseases, 2004-2006

Syphilis	No.	Rate	AIDS	No.	Rate	Tuberculosis	No.	Rate
Adams	1	0.3	Adams	8	2.7	Adams	15	5.0
Allegheny	153	4.1	Allegheny	245	6.6	Allegheny	71	1.9
Armstrong	1	0.5	Armstrong	4	1.9	Armstrong	1	0.5
Beaver	11	2.1	Beaver	19	3.6	Beaver	6	1.1
Bedford	0	-	Bedford	3	2.0	Bedford	1	0.7
Berks	7	0.6	Berks	90	7.6	Berks	20	1.7
Blair	0	-	Blair	17	4.5	Blair	5	1.3
Bradford	1	0.5	Bradford	3	1.6	Bradford	3	1.6
Bucks	11	0.6	Bucks	82	4.4	Bucks	48	2.6
Butler	0	-	Butler	8	1.5	Butler	8	1.5
Cambria	0	-	Cambria	12	2.7	Cambria	3	0.7
Cameron	0	-	Cameron	0	-	Cameron	1	6.0
Carbon	1	0.5	Carbon	8	4.3	Carbon	0	-
Centre	0	-	Centre	14	3.3	Centre	5	1.2
Chester	4	0.3	Chester	56	3.9	Chester	22	1.5
Clarion	0	-	Clarion	2	1.6	Clarion	0	-
Clearfield	0	-	Clearfield	6	2.4	Clearfield	3	1.2
Clinton	0	-	Clinton	3	2.7	Clinton	1	0.9
Columbia	1	0.5	Columbia	2	1.0	Columbia	1	0.5
Crawford	0	-	Crawford	3	1.1	Crawford	2	0.7
Cumberland	1	0.1	Cumberland	43	6.4	Cumberland	17	2.5
Dauphin	10	1.3	Dauphin	80	10.5	Dauphin	27	3.5
Delaware	1	0.1	Delaware	193	11.6	Delaware	56	3.4
Elk	0	-	Elk	0	-	Elk	0	-
Erie	6	0.7	Erie	34	4.0	Erie	19	2.3
Fayette	12	2.7	Fayette	15	3.4	Fayette	7	1.6
Forest	0	-	Forest	3	17.4	Forest	0	-
Franklin	0	-	Franklin	16	3.9	Franklin	5	1.2
Fulton	0	-	Fulton	1	2.3	Fulton	1	2.3
Greene	0	-	Greene	5	4.2	Greene	1	0.8
Huntingdon	0	-	Huntingdon	13	9.4	Huntingdon	3	2.2
Indiana	0	-	Indiana	3	1.1	Indiana	3	1.1
Jefferson	0	-	Jefferson	2	1.5	Jefferson	1	0.7
Juniata	0	-	Juniata	1	1.4	Juniata	1	1.4
Lackawanna	0	-	Lackawanna	29	4.6	Lackawanna	16	2.5
Lancaster	14	1.0	Lancaster	69	4.7	Lancaster	17	1.2
Lawrence	0	-	Lawrence	6	2.2	Lawrence	4	1.4
Lebanon	0	-	Lebanon	14	3.7	Lebanon	5	1.3
Lehigh	5	0.5	Lehigh	107	10.8	Lehigh	24	2.4
Luzerne	2	0.2	Luzerne	39	4.2	Luzerne	9	1.0
Lycoming	2	0.6	Lycoming	30	8.5	Lycoming	1	0.3
McKean	0	-	McKean	3	2.3	McKean	1	0.8
Mercer	0	-	Mercer	14	3.9	Mercer	2	0.6
Mifflin	0	-	Mifflin	1	0.7	Mifflin	5	3.6
Monroe	4	0.8	Monroe	32	6.6	Monroe	4	0.8
Montgomery	36	1.5	Montgomery	139	6.0	Montgomery	75	3.2
Montour	0	-	Montour	0	-	Montour	1	1.9
Northampton	4	0.5	Northampton	58	6.7	Northampton	21	2.4
Northumberland	1	0.4	Northumberland	17	6.1	Northumberland	2	0.7
Perry	0	-	Perry	4	3.0	Perry	0	-
Philadelphia	283	6.5	Philadelphia	2,167	49.5	Philadelphia	394	9.0
Pike	1	0.6	Pike	8	4.7	Pike	1	0.6
Potter	0	-	Potter	1	1.9	Potter	0	-
Schuylkill	0	-	Schuylkill	18	4.1	Schuylkill	9	2.0
Snyder	0	-	Snyder	2	1.7	Snyder	2	1.7
Somerset	0	-	Somerset	12	5.1	Somerset	2	0.8
Sullivan	0	-	Sullivan	0	-	Sullivan	0	-
Susquehanna	0	-	Susquehanna	4	3.2	Susquehanna	0	-
Tioga	0	-	Tioga	3	2.4	Tioga	0	-
Union	0	-	Union	6	4.6	Union	4	3.1
Venango	0	-	Venango	3	1.8	Venango	0	-
Warren	0	-	Warren	6	4.7	Warren	0	-
Washington	1	0.2	Washington	15	2.4	Washington	10	1.6
Wayne	0	-	Wayne	14	9.3	Wayne	3	2.0
Westmoreland	4	0.4	Westmoreland	20	1.8	Westmoreland	2	0.2
Wyoming	0	-	Wyoming	0	-	Wyoming	0	-
York	3	0.2	York	99	8.1	York	17	1.4
Pennsylvania	581	1.6	Pennsylvania	3,934	10.6	Pennsylvania	989	2.7
U.S. (2006)	9,756	3.3	U.S. (2005)	41,120	14.0	U.S. (2006)	13,779	4.7

NOTES: Rates based on small numbers can be unreliable. See the Technical Notes section.

Average Annual Incidence Rate for Measles, 2004-2006

<u>Measles</u>	<u>No.</u>	<u>Rate</u>	<u>Measles</u>	<u>No.</u>	<u>Rate</u>	<u>Measles</u>	<u>No.</u>	<u>Rate</u>
Adams	0	-	Elk	0	-	Montour	0	-
Allegheny	1	0.03	Erie	0	-	Northampton	0	-
Armstrong	0	-	Fayette	0	-	Northumberland	0	-
Beaver	0	-	Forest	0	-	Perry	0	-
Bedford	0	-	Franklin	0	-	Philadelphia	0	-
Berks	0	-	Fulton	0	-	Pike	0	-
Blair	0	-	Greene	0	-	Potter	0	-
Bradford	0	-	Huntingdon	0	-	Schuylkill	0	-
Bucks	0	-	Indiana	0	-	Snyder	0	-
Butler	0	-	Jefferson	0	-	Somerset	0	-
Cambria	0	-	Juniata	0	-	Sullivan	0	-
Cameron	0	-	Lackawanna	0	-	Susquehanna	0	-
Carbon	0	-	Lancaster	0	-	Tioga	0	-
Centre	0	-	Lawrence	0	-	Union	0	-
Chester	0	-	Lebanon	0	-	Venango	0	-
Clarion	0	-	Lehigh	0	-	Warren	0	-
Clearfield	0	-	Luzerne	0	-	Washington	0	-
Clinton	0	-	Lycoming	0	-	Wayne	1	0.66
Columbia	0	-	McKean	0	-	Westmoreland	0	-
Crawford	0	-	Mercer	0	-	Wyoming	0	-
Cumberland	0	-	Mifflin	0	-	York	0	-
Dauphin	0	-	Monroe	0	-			
Delaware	0	-	Montgomery	0	-	Pennsylvania	2	0.01
						U.S. (2006)	55	0.02

Average Annual Work-Related Injury Death Rate, 2004-2006

<u>Work-Related</u>	<u>No.</u>	<u>Rate</u>	<u>Work-Related</u>	<u>No.</u>	<u>Rate</u>	<u>Work-Related</u>	<u>No.</u>	<u>Rate</u>
<u>Injury Deaths</u>			<u>Injury Deaths</u>			<u>Injury Deaths</u>		
Adams	4	1.3	Elk	3	3.0	Montour	1	1.9
Allegheny	52	1.4	Erie	15	1.8	Northampton	9	1.0
Armstrong	10	4.7	Fayette	9	2.1	Northumberland	3	1.1
Beaver	11	2.1	Forest	0	-	Perry	8	5.9
Bedford	7	4.7	Franklin	12	2.9	Philadelphia	74	1.7
Berks	26	2.2	Fulton	1	2.3	Pike	3	1.8
Blair	8	2.1	Greene	6	5.0	Potter	0	-
Bradford	7	3.7	Huntingdon	3	2.2	Schuylkill	12	2.7
Bucks	18	1.0	Indiana	3	1.1	Snyder	6	5.2
Butler	3	0.5	Jefferson	4	2.9	Somerset	10	4.2
Cambria	8	1.8	Juniata	3	4.3	Sullivan	1	5.2
Cameron	0	-	Lackawanna	7	1.1	Susquehanna	0	-
Carbon	4	2.2	Lancaster	27	1.8	Tioga	2	1.6
Centre	9	2.1	Lawrence	6	2.2	Union	2	1.5
Chester	28	2.0	Lebanon	9	2.4	Venango	5	3.0
Clarion	2	1.6	Lehigh	19	1.9	Warren	4	3.2
Clearfield	8	3.2	Luzerne	16	1.7	Washington	20	3.2
Clinton	6	5.3	Lycoming	5	1.4	Wayne	2	1.3
Columbia	9	4.6	McKean	9	6.8	Westmoreland	15	1.4
Crawford	3	1.1	Mercer	12	3.4	Wyoming	0	-
Cumberland	14	2.1	Mifflin	4	2.9	York	16	1.3
Dauphin	18	2.4	Monroe	11	2.3			
Delaware	33	2.0	Montgomery	29	1.2	Pennsylvania	694	1.9
						U.S. (2006)	5,840	2.0

NOTES: Rates based on small numbers can be unreliable. See the Technical Notes.

Selected Birth Statistics by Race and Hispanic Origin of Mother, 2006

Low Birth Weight			No Prenatal Care First Trimester			Births to Mother <18		
	No.	Pct.		No.	Pct.		No.	Pct.
White:			White:			White:		
Allegheny	731	7.6	Allegheny	747	9.1	Allegheny	96	1.0
Berks	263	6.9	Berks	635	18.7	Berks	100	2.6
Bucks	396	7.5	Bucks	405	10.7	Bucks	51	0.9
Chester	351	6.8	Chester	666	15.3	Chester	48	0.9
Dauphin	143	6.9	Dauphin	291	17.2	Dauphin	29	1.4
Delaware	305	6.9	Delaware	548	14.1	Delaware	42	0.9
Erie	236	8.4	Erie	380	15.6	Erie	82	2.9
Lancaster	344	5.9	Lancaster	1,138	21.4	Lancaster	89	1.5
Lehigh	218	8.3	Lehigh	309	14.4	Lehigh	50	1.9
Montgomery	521	7.0	Montgomery	840	13.5	Montgomery	66	0.9
Northampton	198	8.0	Northampton	240	12.0	Northampton	32	1.3
Philadelphia	472	7.7	Philadelphia	891	23.1	Philadelphia	122	2.0
Pennsylvania	8,023	7.4	Pennsylvania	14,541	15.9	Pennsylvania	1,935	1.8
U.S. (2005)	230,966	7.2	U.S. (2004)	100,950	24.1	U.S. (2005)	95,148	2.9
Black:			Black:			Black:		
Allegheny	384	14.6	Allegheny	364	18.4	Allegheny	244	9.2
Bucks	33	11.7	Bucks	54	30.9	Bucks	13	3.9
Chester	49	13.2	Chester	105	31.5	Chester	23	6.2
Dauphin	108	13.5	Dauphin	201	36.3	Dauphin	57	7.0
Delaware	255	14.0	Delaware	549	36.2	Delaware	125	6.8
Erie	57	13.8	Erie	127	36.2	Erie	44	10.6
Montgomery	100	11.8	Montgomery	238	36.0	Montgomery	45	5.3
Philadelphia	1,602	14.4	Philadelphia	2,996	38.9	Philadelphia	922	8.2
Pennsylvania	2,980	14.0	Pennsylvania	5,398	34.4	Pennsylvania	1,711	8.0
U.S. (2005)	85,884	13.6	U.S. (2004)	30,909	42.2	U.S. (2005)	39,541	6.2
Hispanic:			Hispanic:			Hispanic:		
Berks	100	7.1	Berks	446	36.3	Berks	129	9.1
Chester	52	7.0	Chester	247	37.0	Chester	38	5.1
Lancaster	82	9.7	Lancaster	120	17.9	Lancaster	68	8.1
Lehigh	128	10.3	Lehigh	263	28.1	Lehigh	86	6.9
Montgomery	49	6.9	Montgomery	279	47.6	Montgomery	31	4.4
Northampton	61	11.7	Northampton	97	22.9	Northampton	46	8.7
Philadelphia	369	9.8	Philadelphia	968	36.0	Philadelphia	334	8.8
Pennsylvania	1,138	8.7	Pennsylvania	3,487	33.7	Pennsylvania	948	7.2
U.S. (2005)	67,796	6.9	U.S. (2004)	23,055	43.5	U.S. (2005)	52,512	5.3
Asian and Pacific Islander:			Asian and Pacific Islander:			Asian and Pacific Islander:		
Allegheny	39	7.4	Allegheny	36	8.1	Allegheny	2	0.4
Delaware	31	7.0	Delaware	98	25.9	Delaware	1	0.2
Montgomery	58	7.0	Montgomery	135	18.8	Montgomery	3	0.4
Philadelphia	110	7.6	Philadelphia	408	39.3	Philadelphia	29	2.0
Pennsylvania	433	7.7	Pennsylvania	1,113	24.2	Pennsylvania	68	1.2
U.S. (2005)	18,422	8.0	U.S. (2004)	5,851	30.9	U.S. (2005)	2,333	1.0

NOTES: Percents based on small numbers can be unreliable. See the Technical Notes section. Hispanics can be of any race.

Health Status Indicators by Department of Health District

Total Number of Deaths and Average Annual Age-Adjusted Death Rates All Causes and Selected Causes, 2004-2006

All Causes	No.	Rate	CI (95%)	
North Central	19,935	827.7	816.21-839.19	-
Northeastern	48,793	845.7	838.20-853.20	
Northwestern	30,420	849.0	839.46-858.54	
South Central	45,728	830.4	822.79-838.01	-
Southeastern	139,591	850.2	845.74-854.66	+
Southwestern	95,042	847.6	842.21-852.99	
Pennsylvania	379,509	845.3	842.61-847.99	+
U.S. (2006)	2,425,901	776.4	775.42-777.38	

Cardiovascular Disease

	No.	Rate	CI (95%)	
North Central	7,499	306.4	299.47-313.33	+
Northeastern	18,174	306.6	302.14-311.06	+
Northwestern	11,211	304.6	298.96-310.24	+
South Central	16,492	296.7	292.17-301.23	
Southeastern	48,220	288.6	286.02-291.18	-
Southwestern	34,584	297.1	293.97-300.23	
Pennsylvania	136,180	296.1	294.53-297.67	+
U.S. (2006)	821,494	260.5	259.94-261.06	

Lung Cancer	No.	Rate	CI (95%)	
North Central	1,204	49.4	46.61-52.19	-
Northeastern	2,973	51.3	49.46-53.14	-
Northwestern	1,991	55.5	53.06-57.94	
South Central	2,854	50.5	48.65-52.35	-
Southeastern	8,802	53.9	52.77-55.03	
Southwestern	6,095	54.9	53.52-56.28	+
Pennsylvania	23,919	53.3	52.62-53.98	+
U.S. (2006)	158,525	51.5	51.25-51.75	

Diseases of Heart

	No.	Rate	CI (95%)	
North Central	5,846	239.3	233.17-245.43	+
Northeastern	14,278	241.0	237.05-244.95	+
Northwestern	8,568	233.3	228.36-238.24	
South Central	12,835	230.7	226.71-234.69	
Southeastern	36,658	219.6	217.35-221.85	-
Southwestern	27,188	234.0	231.22-236.78	+
Pennsylvania	105,373	229.4	228.01-230.79	+
U.S. (2006)	629,191	199.4	198.91-199.89	

Female

Breast Cancer	No.	Rate	CI (95%)	
North Central	339	25.4	22.70-28.10	
Northeastern	812	24.7	23.00-26.40	
Northwestern	509	25.6	23.38-27.82	
South Central	729	23.0	21.33-24.67	-
Southeastern	2,522	27.1	26.04-28.16	+
Southwestern	1,593	25.9	24.63-27.17	
Pennsylvania	6,504	25.8	25.17-26.43	+
U.S. (2005)	41,116	24.1	23.87-24.33	

Stroke

	No.	Rate	CI (95%)	
North Central	1,226	49.7	46.92-52.48	
Northeastern	2,553	43.1	41.43-44.77	-
Northwestern	1,879	50.7	48.41-52.99	
South Central	2,673	48.2	46.37-50.03	
Southeastern	8,682	51.8	50.71-52.89	+
Southwestern	5,392	45.9	44.67-47.13	-
Pennsylvania	22,405	48.6	47.96-49.24	+
U.S. (2006)	137,265	43.6	43.37-43.83	

Intentional Self-harm

(Suicide)	No.	Rate	CI (95%)	
North Central	208	10.0	8.64-11.36	
Northeastern	625	13.2	12.17-14.23	+
Northwestern	328	11.3	10.08-12.52	
South Central	537	10.9	9.98-11.82	
Southeastern	1,499	10.0	9.49-10.51	-
Southwestern	976	11.4	10.68-12.12	
Pennsylvania	4,173	10.9	10.57-11.23	
U.S. (2006)	32,185	10.6	10.48-10.72	

Motor Vehicle

Accidents	No.	Rate	CI (95%)	
North Central	376	17.4	15.64-19.16	+
Northeastern	715	15.0	13.90-16.10	+
Northwestern	448	15.6	14.16-17.04	+
South Central	800	16.4	15.26-17.54	+
Southeastern	1,457	9.6	9.11-10.09	-
Southwestern	1,006	11.9	11.16-12.64	
Pennsylvania	4,802	12.5	12.15-12.85	-
U.S. (2006)	44,572	14.7	14.56-14.84	

Assault (Homicide)	No.	Rate	CI (95%)	
North Central	34	1.7	1.13-2.27	-
Northeastern	147	3.3	2.77-3.83	-
Northwestern	58	2.2	1.63-2.77	-
South Central	135	2.9	2.41-3.39	-
Southeastern	1,438	9.9	9.39-10.41	+
Southwestern	367	4.8	4.31-5.29	-
Pennsylvania	2,179	6.0	5.75-6.25	
U.S. (2006)	18,029	6.0	5.91-6.09	

NOTES: A + or - after the confidence interval (CI) denotes if the district age-adjusted death rate was significantly higher or lower than the state rate. No + or - after a CI denotes no significant difference. State data were compared to U.S. data. Rates based on small numbers can be unreliable. See Technical Notes section.

Health Status Indicators by Department of Health District

Infant Deaths, Number and Average Annual Rate By Race and Hispanic Origin, 2004-2006

All Infant Deaths	No.	Rate	μ (95%)
North Central	119	5.5	-3.11 -
Northeastern	293	5.9	-3.66 -
Northwestern	232	7.7	0.82
South Central	405	7.0	-0.85
Southeastern	1,592	8.2	4.67 +
Southwestern	554	6.6	-2.38 -
Pennsylvania	3,195	7.3	4.87 +
U.S. (2006)	28,609	6.7	

White	No.	Rate	Black	No.	Rate	Hispanic	No.	Rate
North Central	109	5.4	North Central	5	11.1	North Central	0	-
Northeastern	242	6.1	Northeastern	34	13.8	Northeastern	36	4.8
Northwestern	196	7.1	Northwestern	29	17.3	Northwestern	4	5.9
South Central	327	6.7	South Central	70	17.9	South Central	30	7.1
Southeastern	798	6.6	Southeastern	693	15.8	Southeastern	178	7.7
Southwestern	379	5.3	Southwestern	155	16.5	Southwestern	8	7.5
Pennsylvania	2,051	6.3	Pennsylvania	986	15.9	Pennsylvania	256	6.9
U.S. (2006)	18,496	5.6	U.S. (2006)	8,824	13.3	U.S. (2006)	5,762	5.6

Infant Deaths, Number and Rate By Race and Hispanic Origin, 2006

All Infant Deaths	No.	Rate	μ (95%)
North Central	39	5.3	-2.21 -
Northeastern	119	7.0	-0.76
Northwestern	80	7.8	0.34
South Central	142	7.2	-0.49
Southeastern	558	8.4	2.69 +
Southwestern	184	6.6	-1.74
Pennsylvania	1,122	7.5	3.78 +
U.S. (2006)	28,609	6.7	

White	No.	Rate	Black	No.	Rate	Hispanic	No.	Rate
North Central	33	4.7	North Central	4	26.0	North Central	0	-
Northeastern	93	7.0	Northeastern	16	17.3	Northeastern	10	3.8
Northwestern	65	7.0	Northwestern	12	20.7	Northwestern	3	12.9
South Central	110	6.7	South Central	27	19.1	South Central	13	8.1
Southeastern	265	6.6	Southeastern	253	16.5	Southeastern	49	6.0
Southwestern	123	5.2	Southwestern	55	17.4	Southwestern	2	5.7
Pennsylvania	689	6.3	Pennsylvania	367	17.0	Pennsylvania	77	5.8
U.S. (2006)	18,496	5.6	U.S. (2006)	8,824	13.3	U.S. (2006)	5,762	5.6

Note: A + or - after the value of μ denotes if the district rate was significantly higher or lower than the state rate. No + or - after the μ value denotes no significant difference. State data were compared to U.S. data. Two separate formulas computed the μ values, depending on the number of events. The value of μ was not calculated for rates/percents based on less than 10 events or for rates by race and Hispanic origin. Rates based on small numbers can be unreliable. See Technical Notes.

Health Status Indicators by Department of Health District

Selected Diseases

Total Number and Average Annual Rate, 2004-2006

Syphilis			Tuberculosis		
	No.	Rate		No.	Rate
North Central	5	0.2	North Central	20	1.0
Northeastern	17	0.4	Northeastern	78	1.7
Northwestern	6	0.2	Northwestern	33	1.2
South Central	15	0.3	South Central	102	2.1
Southeastern	356	2.4	Southeastern	641	4.3
Southwestern	182	2.2	Southwestern	114	1.4
Pennsylvania	581	1.6	Pennsylvania	989	2.7
U.S. (2006)	9,756	3.3	U.S. (2006)	13,779	4.7

AIDS			Measles		
	No.	Rate		No.	Rate
North Central	81	4.0	North Central	0	-
Northeastern	299	6.5	Northeastern	1	0.02
Northwestern	82	2.9	Northwestern	0	-
South Central	300	6.2	South Central	0	-
Southeastern	2,814	19.1	Southeastern	0	-
Southwestern	358	4.4	Southwestern	1	0.01
Pennsylvania	3,934	10.6	Pennsylvania	2	0.01
U.S. (2005)	41,120	14.0	U.S. (2006)	55	0.02

Low Birth Weight, Number and Percent, By Race and Hispanic Origin, 2006

All Births	No.	Pct.	μ (95%)
North Central	525	7.1	-4.32 -
Northeastern	1,414	8.4	-0.47
Northwestern	831	8.1	-1.45
South Central	1,522	7.7	-4.03 -
Southeastern	5,822	8.9	3.67 +
Southwestern	2,365	8.5	0.00
Pennsylvania	12,479	8.5	4.19 +
U.S. (2005)	338,565	8.2	

White	No.	Pct.	Black	No.	Pct.	Hispanic	No.	Pct.
North Central	481	6.9	North Central	16	10.4	North Central	10	7.9
Northeastern	1,043	7.9	Northeastern	121	13.2	Northeastern	251	9.5
Northwestern	716	7.7	Northwestern	80	13.8	Northwestern	27	11.7
South Central	1,175	7.1	South Central	185	13.2	South Central	135	8.4
Southeastern	2,763	7.0	Southeastern	2,126	14.1	Southeastern	695	8.5
Southwestern	1,845	7.8	Southwestern	452	14.3	Southwestern	20	5.7
Pennsylvania	8,023	7.4	Pennsylvania	2,980	14.0	Pennsylvania	1,138	8.7
U.S. (2005)	230,966	7.2	U.S. (2005)	85,884	13.6	U.S. (2005)	67,796	6.9

Note: A + or - after the value of μ denotes if the district rate was significantly higher or lower than the state rate. No + or - after the μ value denotes no significant difference. State data were compared to U.S. data. Two separate formulas computed the μ values, depending on the number of events. The value of μ was not calculated for rates/percents based on less than 10 events or for rates/percents by race and Hispanic origin. Rates/percents based on small numbers can be unreliable. See Technical Notes.

Health Status Indicators by Department of Health District

No Prenatal Care in First Trimester, Number and Percent of Live Births, By Race and Hispanic Origin, 2006

All Births	No.	Pct.	μ (95%)
North Central	1,203	18.1	-3.68 -
Northeastern	2,488	18.4	-4.37 -
Northwestern	1,738	19.2	-1.67
South Central	3,429	21.1	3.83 +
Southeastern	12,101	23.6	20.99 +
Southwestern	3,114	13.0	-26.75 -
Pennsylvania	24,073	19.9	-56.34 -
U.S. (2004)	139,115	27.1	

White	No.	Pct.	Black	No.	Pct.	Hispanic	No.	Pct.
North Central	1,095	17.5	North Central	56	41.8	North Central	30	25.4
Northeastern	1,583	14.9	Northeastern	245	35.8	Northeastern	638	30.5
Northwestern	1,487	18.0	Northwestern	174	35.0	Northwestern	57	27.8
South Central	2,596	18.9	South Central	340	32.5	South Central	474	37.4
Southeastern	5,257	16.4	Southeastern	4,106	37.7	Southeastern	2,225	35.0
Southwestern	2,523	12.2	Southwestern	477	19.8	Southwestern	63	21.3
Pennsylvania	14,541	15.9	Pennsylvania	5,398	34.4	Pennsylvania	3,487	33.7
U.S. (2004)	100,950	24.1	U.S. (2004)	30,909	42.2	U.S. (2004)	23,055	43.5

Live Births to Mothers Under Age 18, Number and Percent, By Race and Hispanic Origin, 2006

All Births	No.	Pct.	μ (95%)
North Central	155	2.1	-4.53 -
Northeastern	463	2.7	-2.30 -
Northwestern	289	2.8	-1.19
South Central	574	2.9	-0.82
Southeastern	2,334	3.5	7.57 +
Southwestern	705	2.5	-4.92 -
Pennsylvania	4,520	3.0	-8.57 -
U.S. (2005)	139,913	3.4	

White	No.	Pct.	Black	No.	Pct.	Hispanic	No.	Pct.
North Central	147	2.1	North Central	7	4.5	North Central	3	2.4
Northeastern	256	1.9	Northeastern	56	6.1	Northeastern	180	6.8
Northwestern	217	2.3	Northwestern	59	10.2	Northwestern	17	7.3
South Central	364	2.2	South Central	107	7.6	South Central	107	6.7
Southeastern	557	1.4	Southeastern	1,185	7.8	Southeastern	626	7.6
Southwestern	394	1.7	Southwestern	297	9.4	Southwestern	15	4.2
Pennsylvania	1,935	1.8	Pennsylvania	1,711	8.0	Pennsylvania	948	7.2
U.S. (2005)	95,148	2.9	U.S. (2005)	39,541	6.2	U.S. (2005)	52,512	5.3

Note: A + or - after the value of μ denotes if the district rate was significantly higher or lower than the state rate. No + or - after the μ value denotes no significant difference. State data were compared to U.S. data. Two separate formulas were used to compute the μ values, depending on the number of events. The value of μ was not calculated for percents based on less than 10 events or for percents by race and Hispanic Origin. Percents based on small numbers can be unreliable. See Technical Notes.

Technical Notes

Data Sources

The Pennsylvania Department of Health's vital statistics registration system was the source for the birth and death statistics that appear in this report, except for work-related injury deaths which were from the Census of Fatal Occupational Injuries as conducted by the U.S.

Department of Labor. The National Center for Health Statistics was the source for the U.S. birth and death statistics that appear in this report. The latest available U.S. birth statistics are final 2005 data (final 2004 for prenatal care data). **Please note that the 2004 U.S. prenatal care data that appear in this report are based on only the seven states [Idaho, Kentucky, New York (excluding New York City), Pennsylvania, South Carolina, Tennessee and Washington] that have implemented the 2003 Revision of the U.S. Certificate of Live Birth. These data are not comparable to those states that have not implemented the 2003 Revision.**

The latest available U.S. death statistics are preliminary 2006 data (female breast cancer are final 2005 data).

The Department's Communicable Disease Surveillance, Sexually Transmitted Disease and Tuberculosis Control Programs were the sources for the number of measles, syphilis and tuberculosis cases reported. For the number of AIDS cases reported, data from the Department's AIDS Reporting System were used.

The U.S. Census Bureau 2005 income data were used for the estimated number and percentage of related children ages 5-17 and all children under age 18 living below the poverty level by county. Access their website at www.census.gov to review complete data tables, including confidence intervals and data limitations.

Population estimates, for the years 2004 through 2006, used to compute rates were produced jointly by the U.S. Census Bureau and the State Data Center of the Pennsylvania State University at Harrisburg, under the Federal-State Cooperative Program for Local Population Estimates. The estimated county population figures used to compute the rates that appear in this report are available from the Bureau of Health Statistics and Research upon request. The 2000 United States standard million population used in calculating age-adjusted death rates follows:

<u>Age</u>	<u>Population</u>
All Ages	1,000,000
Under 1	13,818
1-4	55,317
5-14	145,565
15-24	138,646
25-34	135,573
35-44	162,613
45-54	134,834
55-64	87,247
65-74	66,037
75-84	44,842
85+	15,508

Definitions of Terms

Death rates by cause (and for all causes) are per 100,000 population (except the rate for female breast cancer which is per 100,000 females) and are age-adjusted to the 2000 standard million U.S. population, except the rate for work related injury, which is a crude rate per 100,000 population.

Infant death rates are per 1,000 live births for the specified years.

Incidence rates are per 100,000 population for the specified years.

The **International Classification of Diseases (ICD-10) codes** for the selected causes of death shown in this report are as follows:

	<u>ICD-10</u>
Motor Vehicle Accidents	V02-V04, V09.0, V09.2, V12-V14, V19.0-V19.2, V19.4-V19.6, V20-V79, V80.3-V80.5, V81.0-V81.1, V82.0-V82.1, V83-V86, V87.0-V87.8, V88.0-V88.8, V89.0, V89.2
Intentional Self-harm (Suicide)	U03, X60-X84, Y87.0
Lung Cancer	C33-C34
Female Breast Cancer	C50 (sex = female)
Cardiovascular Disease	I00-I78
Diseases of Heart	I00-I09, I11, I13, I20-I51
Stroke	I60-I69
Assault (Homicide)	U01-U02, X85-Y09, Y87.1

Low Birth Weight is less than 2,500 grams or 5 pounds and 9 ounces.

Hispanics can be of any race.

All calculations exclude any unknowns.

Age-Adjusted Rates

There are many characteristics of a population that can render a crude rate of little use, especially when comparing different populations. (A crude rate is usually defined as: total number of events divided by total population at risk, then multiplied by 1,000 or 100,000.) Any unique demographic factors such as those related to age, sex and race may not be accounted for in crude rates. The median age of Pennsylvania's population has been for many years one of the highest among all the states. Therefore, age-adjusted rates offer a more refined measurement to compare experiences over geographic areas or periods of time. However, there are limitations to their use and one should be familiar with these types of rates when using them.

The age-adjusted death rates that appear in this report were calculated using the direct method and the 2000 United States standard million population distribution (shown in the column on the left). It is important to use the same standard population in the computation of each

age-adjusted rate to allow comparability. **Please note that reports for Health Status Indicators prior to the 2001 issue used the 1940 U.S. standard million population to calculate age-adjusted rates. Therefore, the age-adjusted rates that appear in this report should not be compared to the age-adjusted rates that appeared in reports prior to the 2001 issue.** This change in the use of a standard population is in response to national/federal guidelines. Also, note that age-adjusted rates are artificial measurements and should never be compared with any other type of rate or be used to calculate the actual number of events.

To calculate an age-adjusted rate using the direct method, the age-specific rates must first be calculated for each of the age groups (as shown in the 2000 standard population distribution on the previous page) using the enumerated or estimated population figures for the time period and population under study. Each age-specific rate is then multiplied by the population figure of the corresponding age group in the standard population breakdown. The resultant figures are the number of deaths to be expected if the population under study had the same age distribution as the standard population. The total of these expected events is then divided by the total of the standard population (in the report 1,000,000). This dividend is then multiplied by 100,000 to yield the age-adjusted rate per 100,000 population.

Reliability of Rates

All rates are subject to variation. This variation is directly related to the number of events used to calculate the rate. The smaller the number of events used in the calculation of a rate, the higher will be the variability of the rate. Rates (or percentages) based on unusually small numbers of events over a specified period of time, or for a sparsely populated geographic area, should be of particular concern and used cautiously. When few events or small populations are evident in calculating/studying rates, multiple-year summary rates, usually referred to as average annual rates, will sometimes provide a much better perspective or measurement of an outcome. Expanding the period of time studied enlarges the absolute numbers and adds more credence to a statement regarding a rate. Another approach is to expand the geographical area of study, thereby enlarging the number of events. Adjoining counties can be grouped into regions according to any demographic features they may share, i.e., rural counties with mostly White, older populations.

It is also common practice among data users familiar with health statistics to calculate what is called a standard error (SE) of a rate when comparing rates. This statistic defines a rate's variability and can be used to calculate a confidence interval (CI) to determine the range of possible values for the true rate. If a set standard, goal or target value is included in a rate's confidence interval, there is no significant difference between the two. However, there are various statistical formulas for comparing rates depending on the types of rates or populations being studied and the number of events involved. The following section discusses various

statistical formulas that were used to compare the rates that appear in this report.

NOTE: Before we proceed with presenting formulas for comparing rates and ratios/percentages, the user should understand that these statistical tools for analyzing/comparing rates are crude and rather conservative approaches, especially the formulas presented for comparing age-adjusted rates. A user may wish to utilize more precise and sophisticated calculations performed by computer software such as SPSS or SAS. Consultation with a statistician or other professional familiar with analyzing health statistics may also be a consideration before pursuing any further study.

Comparison of Age-Adjusted Rates

As mentioned above, a first step in comparing rates is the computation of a standard error (SE), defining the rate's variability. The usual formula given for computing the standard error of an age-adjusted rate (Chiang, 1961) is very complex and not often understood or used by the average health data user. However, the average user can approximate the standard error of an age-adjusted rate with the following less complex formula (Keyfitz, 1966):

$$SE = (R / \sqrt{N})$$

where:

R = (age-adjusted) rate

N = number of events (deaths)

This estimate assumes the rate to be a binomial proportion. As an example, let's use the state's average annual (2004-2006) age-adjusted death rate for suicide (10.9) to calculate an estimated SE. The rate was based on 4,173 suicides. The square root of 4,173 is 64.60. By dividing the rate of 10.9 by 64.60, one obtains the estimated SE of 0.1687. The estimated SE can then be used to compute a 95 percent confidence interval (CI) for the rate. The standard formula for determining the 95 percent CI of a rate is:

$$R \pm (1.96 \times SE)$$

Following this formula, for the rate we are using, produces an equation of $10.9 \pm (1.96 \times 0.1687)$ and the result is 10.9 ± 0.33 . Then, by subtracting and adding 0.33 against the original rate of 10.9, a range can be calculated and considered the estimated 95 percent confidence interval for the state, i.e., 10.57 - 11.23. One could then state, with 95 percent certainty that the actual age-adjusted suicide rate for the state during 2004-2006 was between 10.57 and 11.23.

To compare a particular county's age-adjusted suicide rate for 2004-2006 with the state's corresponding rate, one must go through the same steps shown directly above to obtain the 95 percent CI for that county's rate. If the rate for the state is not included in the CI, then the county rate is considered to be significantly different, at the 95 percent confidence level. For example, at first glance, Venango County's age-adjusted suicide rate for

2004-2006 of 15.1 (based on 27 deaths) seems much higher than the corresponding state rate of 10.9. However, calculation of a 95 percent CI for Venango County's rate would produce a rather wide range of 9.40-20.80. Since this range for Venango County also includes 10.9 or the state rate, we can say that the county rate is not significantly different from the state rate, at the 95 percent confidence level. If we were comparing two counties, any significant difference would be determined by whether their confidence intervals overlapped or not. However, please note that the formula for computation of the SE that we are using is not as precise as others, and the application of a more precise methodology may produce somewhat different results. Another important result of using this formula is that the smaller the number of events upon which the rate is based, the larger the SE and CI will be. This clearly demonstrates the wider variability (and less reliability) of rates based on smaller numbers. As a general rule, age-adjusted rates based on less than twenty events should be considered unstable and are not recommended for comparative use or in determining significance. For this reason, the CIs were not computed, compared and shown for any age-adjusted mortality rate in this report based on less than twenty events.

Comparison of Crude Rates/Ratios

A crude rate is easily computed and usually based on the number of vital events and the total population for a specific area or group, i.e., number of births or deaths among a specific population per 1,000 (or 100,000) of that specific population. A ratio is simply a proportion or percentage, usually a rate per 100. Any of the indicators that are not presented in this report as age-adjusted rates can be considered crude rates or ratios. Before comparison of these figures can be done, they should first be identified as dependent or independent and then defined as being based on a small or large number of events.

DEPENDENT vs. INDEPENDENT CRUDE RATES:

Two crude rates or ratios are considered dependent when the same events are included in their numerators. Examples of this include a state rate and a county or city rate or rates that share or overlap the same time periods, i.e., two multiple-year summary rates for the state – one for 2000-2005, the other for 2000-2008. Two rates are considered to be independent when they do not include any of the same data or events in their numerator, such as rates for two different counties.

NUMBER of EVENTS: When comparing two dependent or independent rates, determining whether a significant difference exists between the two rates or whether the difference is caused solely by chance requires a rather complex statistical computation. The number of events upon which the two observed rates are based is of primary importance. The statistical formula for determining significance is different for a rate based on a small number of events, as compared to the formula for a rate based on a large number of events. Exactly what is considered a small number of events is arbitrary, but, as a general rule, one can define "small number" as less

than 100 events. Crude rates or ratios based on less than ten events should be considered unstable and are not recommended for comparative use or in determining significance. The formulas are also different depending on whether the rates being compared are dependent or independent.

Four formulas for comparing crude rates and ratios are presented next: one recommended for use in comparing dependent rates based on a small number of events; another for comparing dependent rates based on a large number of events; a third, for independent rates based on less than 100 events; and a fourth, for comparing independent rates based on 100 or more events. A sample step-by-step calculation is shown for the first formula to demonstrate its use.

COMPARISON of DEPENDENT CRUDE RATES

BASED on SMALL NUMBER OF EVENTS: When the (county or local) crude rate or ratio to be compared to a standard (state or national) rate or ratio is based on 10-99 events, actual and estimated numbers of events are used to determine statistical significance. The formula for this situation is shown below:

$$\mu = [(o-e) / \sqrt{e}]$$

where:

- o = the number of events for the county or local area to be compared
- e = the expected number of events for the county or local area (based on the state or national crude rate)

If μ has a value greater than + 1.96, the county rate is considered to differ significantly at a 95 percent confidence level from the state rate to which it is being compared. The value for o is a readily available figure. However, e must be specially computed. To compute the expected number of events for the county based on a state or national crude rate, first change the state rate to a percentage or rate per person. For example, if the state rate was 14.5 per 1,000 population, simply divide 14.5 by 1,000; the result is .0145. (Note: If comparing percentages, divide by 100.) Then, multiply the value of the denominator in the county rate (the population used to compute the rate) by this figure to obtain the value for e or the expected number of events for the county.

As an example for computation of this formula, use a county infant death rate of 13.8 per 1,000 resident live births. This rate was based on 58 resident infant deaths occurring among 4,205 resident live births for the county. The comparable state rate that year was 9.5. Step-by-step computation would yield the following results:

$$o = 58$$

$$e = (9.5/1,000) 4,205 = 39.9$$

1. $\sqrt{e} = \sqrt{39.9} = 6.3$
2. $(o - e) = 58 - 39.9 = 18.1$
3. $(o - e) / \sqrt{e} = 18.1 / 6.3 = 2.9$ or μ

Since the value of μ in the previous computation exceeds the value of 1.96, it can be stated that the difference between the county's infant death rate and the state's rate that year was significant at the 95 percent confidence level. In other words, the user can be up to 95 percent confident that the county's true infant death rate that year was significantly higher than the infant death rate for the state. A negative value of more than -1.96 would mean a significantly lower rate.

COMPARISON of DEPENDENT CRUDE RATES BASED on LARGE NUMBER OF EVENTS: The following formula for determining the significance between two observed, dependent crude rates with 100 or more events in the numerator of the county or local rate is more complex than the previous formula for dependent rates.

$$\mu = [(r - s) \sqrt{(n / (s - s^2))}]$$

where:

- r = the county or local rate to be compared, expressed as a rate per person
- s = the state (or national, regional, etc.) rate expressed as a rate per person
- n = the population figure used for computing the county or local rate

To compute a rate per person, divide the rate by the population number used to express the rate. For example, the rate per person for a death rate of 23.5 per 100,000 would be calculated by dividing 23.5 by 100,000. The result is 0.000235.

Determining significance according to the μ value follows the same rules as listed in the previous section for comparing dependent rates based on a small number of events.

COMPARISON of INDEPENDENT CRUDE RATES BASED on SMALL NUMBER OF EVENTS: The following formulas can be used to compute a 95 percent confidence interval to determine the statistical significance of the difference between two independent crude rates when both rates are based on 10-99 events. The first step is to calculate the difference (D) between the two rates with the following formula:

$$D = (r_1 - r_2)$$

where:

- r₁ = rate for County 1
- r₂ = rate for County 2

The 95 percent confidence interval (CI) is then computed using the following formula:

$$CI = D \pm \sqrt{(CL_1^2 + CL_2^2)}$$

where:

- CL₁ = confidence limit for County 1 rate
- CL₂ = confidence limit for County 2 rate

This computation becomes a three-step process due to the need to construct a confidence limit or CL (the numerical value that determines the range of the confidence interval) for each rate before the above formula can be calculated for CI. The formula for 95 percent confidence is as follows:

$$CL = [1.96 (r / \sqrt{d})]$$

where: d = number of events

At the end of this three-step process, if the confidence interval or the range of the numbers calculated for the difference between the two rates includes the value of 0, then it can be stated that the two rates are not significantly different, with 95 percent confidence. Of course, if the range of numbers does not contain 0, then the difference between the rates is considered significant, with 95 percent confidence. For example, a computed confidence interval (CI) of 4.38 for a rate difference (D) of 6.8 would result in a range of 2.42 to 11.18. Since that range does not include the value of 0, the difference between the two rates being compared can be considered significant, with 95 percent confidence.

COMPARISON of INDEPENDENT CRUDE RATES BASED on LARGE NUMBER OF EVENTS: If two independent crude rates or ratios are being compared and one or both of the figures is based on 100 or more events, a two-step calculation is performed to construct a 95 percent confidence interval for the ratio between the two rates. Please note, however, that whenever only one of the two rates is based on 100 or more events, then that rate must be used as r₂ in the following formula.

The formula for calculating the ratio (R) between the two rates is:

$$R = (r_1 / r_2)$$

where:

- r₁ = rate for County 1
- r₂ = rate for County 2

The formula for the 95 percent confidence interval (CI) for the ratio between the two independent rates is:

$$CI = R \pm [1.96 (R) \sqrt{((1 / d_1) + (1 / d_2))}]$$

where:

- d₁ = number of events for County 1
- d₂ = number of events for County 2

If the range of numbers derived from the confidence interval (CI) for the ratio contains the value of 1, then a significant difference does not exist, at 95 percent confidence. If the range of numbers does not contain the value of 1, then it can be stated that the ratio between the two county rates is significantly different, with 95 percent confidence.

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Appendix

Additional Statistics Available

The Bureau of Health Statistics and Research has created special five-year summary tabulations of birth and death data at the minor civil division level (city, borough or township) that can be used to calculate the health status indicators relating to births and deaths as shown in this report. Five-year summary data have been produced because of the very small annual numbers of births and deaths in most of the minor civil divisions in the state.

Birth multiple-year data that can be used to compute indicators by race and Hispanic Origin are only available for selected municipalities. These municipalities were selected according to the following criteria – a city or borough with 2000 enumerated population of 20,000 or more and having at least 100 annual resident live births to Black mothers or mothers of Hispanic origin are included in these tabulations. (Please also refer to another one of our publications, *Maternal and Child Health Status Indicators for Pennsylvania and Major Municipalities*, to easily obtain various health statistics at the municipality level.)

All additional data available, except minor civil division population and poverty status figures, will be updated every year, i.e., when 2007 data are available, 2003-2007 summary data will be created. As updates are made, historical multiple-year data will continue to be available, allowing for computing and comparing of trend data. A complete list of the additional statistics available for use in computing and comparing indicators appears below. Copies of these tabulations can be obtained by contacting the Bureau in writing, by telephone (717-783-2548) or FAX (717-772-3258). More recent tabulations are available in Portable Document Format (PDF) files and by visiting the Health Statistics pages of the Department's website at www.health.state.pa.us/stats.

Births:

Resident Live Births by Birth Weight for State, Counties and Minor Civil Divisions, Five-Year Summary and by Race (White and Black) and Hispanic Origin for Selected Municipalities, Three-Year Summary

Resident Live Births by Trimester of Mother's Entry in Prenatal Care for State, Counties and Minor Civil Divisions, Five-Year Summary and by Race (White and Black) and Hispanic Origin for Selected Municipalities, Three-Year Summary

Resident Live Births by Age Group of Mother for State, Counties and Minor Civil Divisions, Five-Year Summary and by Race (White and Black) and Hispanic Origin for Selected Municipalities, Three-Year Summary

Deaths:

Resident Deaths by Selected Causes by Age Group for State, Counties and Minor Civil Divisions, Five-Year Summary

Resident Infant Deaths for State, Counties and Minor Civil Divisions, Five-Year Summary

Population/Poverty:

Population for State and Counties by Age Group

Population for Minor Civil Division by Age Group, 2000 Enumerated Only*

Related Children under 18 Years of Age Living with Person/s with Income in 2005 below Poverty Level for State and Counties – Selected Minor Civil Divisions, Number and Percent, 1999

*2000 enumerated population data can be accessed via the U.S. Census Bureau web site at www.census.gov.

Pennsylvania Health Districts and Counties

