

**Health Status Indicators  
for Pennsylvania Counties  
and Health Districts  
2009/10 Report**

Bureau of Health Statistics and Research  
Pennsylvania Department of Health  
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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 death 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 have encouraged 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 2007. Indicators updated with 2008 data will appear in the 2010/11 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 death 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 mortality 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.

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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**

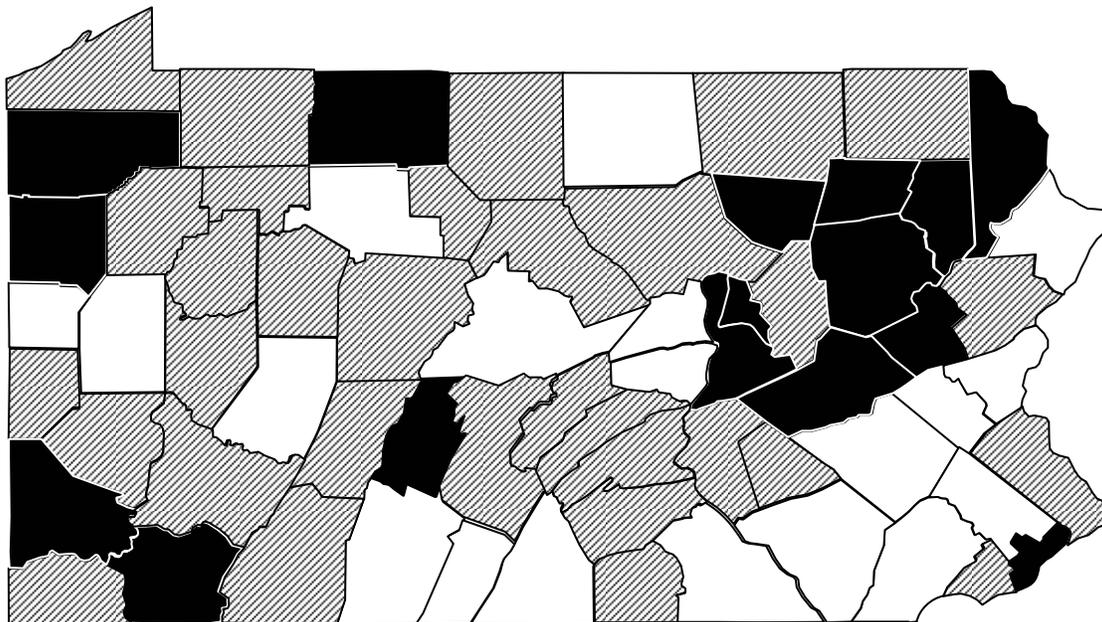
The latest multiple or single-year numbers and rates or ratios for health status indicators by county and by Pennsylvania Department of Health District are presented in summary data table format.

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, 2005-2007

All Causes	No.	Rate	CI (95%)	All Causes	No.	Rate	CI (95%)
Adams	2,692	816.2	785.37-847.03	Lancaster	13,146	821.1	807.06-835.14 -
Allegheny	42,711	847.2	839.17-855.23	Lawrence	3,227	814.1	786.01-842.19 -
Armstrong	2,502	861.8	828.03-895.57	Lebanon	4,055	867.8	841.09-894.51
Beaver	6,288	855.0	833.87-876.13	Lehigh	9,300	795.4	779.23-811.57 -
Bedford	1,465	775.0	735.31-814.69 -	Luzerne	12,365	921.3	905.06-937.54 +
Berks	10,597	795.0	779.86-810.14 -	Lycoming	3,768	862.2	834.67-889.73
Blair	4,665	948.4	921.18-975.62 +	McKean	1,580	930.1	884.24-975.96 +
Bradford	1,923	840.7	803.12-878.28	Mercer	4,199	874.7	848.24-901.16 +
Bucks	15,075	831.6	818.32-844.88	Mifflin	1,550	863.6	820.61-906.59
Butler	5,250	818.1	795.97-840.23 -	Monroe	3,556	829.3	802.04-856.56
Cambria	5,578	863.7	841.03-886.37	Montgomery	21,179	787.1	776.50-797.70 -
Cameron	199	797.2	686.44-907.96	Montour	724	1,069.0	991.13-1,146.87 +
Carbon	2,367	993.6	953.57-1,033.63 +	Northampton	7,777	764.1	747.12-781.08 -
Centre	2,632	756.7	727.79-785.61 -	Northumberland	3,490	881.6	852.35-910.85 +
Chester	10,217	769.9	754.97-784.83 -	Perry	1,171	853.0	804.14-901.86
Clarion	1,247	817.5	772.13-862.87	Philadelphia	45,807	965.6	956.76-974.44 +
Clearfield	2,802	865.0	832.97-897.03	Pike	1,125	622.7	586.31-659.09 -
Clinton	1,197	866.4	817.32-915.48	Potter	588	834.2	766.77-901.63
Columbia	2,008	843.8	806.89-880.71	Schuylkill	5,850	925.3	901.59-949.01 +
Crawford	2,845	876.5	844.29-908.71 +	Snyder	940	748.0	700.18-795.82 -
Cumberland	6,287	831.2	810.65-851.75	Somerset	2,815	863.6	831.70-895.50
Dauphin	7,092	824.4	805.21-843.59	Sullivan	296	954.9	846.12-1,063.68 +
Delaware	16,630	849.7	836.79-862.61	Susquehanna	1,338	837.3	792.43-882.17
Elk	1,048	769.4	722.82-815.98 -	Tioga	1,264	777.7	734.83-820.57 -
Erie	8,040	842.8	824.38-861.22	Union	1,096	792.3	745.39-839.21 -
Fayette	5,269	876.1	852.44-899.76 +	Venango	1,868	877.0	837.23-916.77
Forest	232	954.2	831.41-1,076.99	Warren	1,441	881.8	836.27-927.33
Franklin	3,933	772.2	748.07-796.33 -	Washington	7,056	863.6	843.45-883.75 +
Fulton	387	762.3	686.35-838.25 -	Wayne	1,730	901.4	858.92-943.88 +
Greene	1,166	814.1	767.37-860.83	Westmoreland	12,828	846.6	831.95-861.25
Huntingdon	1,325	843.8	798.37-889.23	Wyoming	839	960.5	895.51-1,025.49 +
Indiana	2,592	771.2	741.51-800.89 -	York	10,252	794.5	779.12-809.88 -
Jefferson	1,584	866.5	823.83-909.17				
Juniata	668	788.3	728.52-848.08	Pennsylvania	376,874	842.9	840.21-845.59 +
Lackawanna	8,141	905.6	885.93-925.27 +	United States (2007)	2,424,059	760.3	759.34-761.26



**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, 2005-2007

### Cardiovascular

Disease	No.	Rate	CI (95%)
Adams	1,041	312.0	293.05-330.95 +
Allegheny	15,238	289.9	285.30-294.50
Armstrong	856	285.0	265.91-304.09
Beaver	2,220	293.0	280.81-305.19
Bedford	583	303.3	278.68-327.92
Berks	3,882	288.5	279.42-297.58
Blair	1,777	352.2	335.82-368.58 +
Bradford	660	284.4	262.70-306.10
Bucks	4,711	268.8	261.12-276.48 -
Butler	1,859	281.5	268.70-294.30
Cambria	2,091	306.6	293.46-319.74 +
Cameron	74	273.7	211.34-336.06
Carbon	840	347.7	324.19-371.21 +
Centre	927	270.1	252.71-287.49 -
Chester	3,522	272.1	263.11-281.09 -
Clarion	458	292.1	265.35-318.85
Clearfield	1,056	317.4	298.26-336.54 +
Clinton	480	340.9	310.40-371.40 +
Columbia	801	330.5	307.61-353.39 +
Crawford	978	294.8	276.32-313.28
Cumberland	2,225	294.6	282.36-306.84
Dauphin	2,495	287.6	276.31-298.89
Delaware	5,868	292.5	285.02-299.98
Elk	350	247.3	221.39-273.21 -
Erie	2,749	283.9	273.29-294.51
Fayette	1,981	317.4	303.42-331.38 +
Forest	94	382.4	305.09-459.71 +
Franklin	1,296	252.3	238.56-266.04 -
Fulton	120	230.8	189.50-272.10 -
Greene	412	280.0	252.96-307.04
Huntingdon	476	301.3	274.23-328.37
Indiana	875	253.3	236.52-270.08 -
Jefferson	646	346.0	319.32-372.68 +
Juniata	263	305.1	268.23-341.97
Lackawanna	3,236	345.8	333.89-357.71 +
Lancaster	4,309	269.2	261.16-277.24 -
Lawrence	1,150	277.7	261.65-293.75
Lebanon	1,446	307.0	291.18-322.82 +
Lehigh	2,976	250.7	241.69-259.71 -
Luzerne	4,730	331.8	322.34-341.26 +
Lycoming	1,291	291.2	275.32-307.08
McKean	620	355.9	327.89-383.91 +
Mercer	1,509	305.0	289.61-320.39 +
Mifflin	553	301.6	276.46-326.74
Monroe	1,100	266.1	250.37-281.83 -
Montgomery	7,041	259.7	253.63-265.77 -
Montour	234	336.7	293.56-379.84 +
Northampton	2,706	261.0	251.17-270.83 -
Northumberland	1,335	324.2	306.81-341.59 +
Perry	367	265.8	238.61-292.99
Philadelphia	15,119	309.7	304.76-314.64 +
Pike	373	213.1	191.47-234.73 -
Potter	197	266.5	229.28-303.72
Schuylkill	2,280	344.5	330.36-358.64 +
Snyder	324	256.6	228.66-284.54 -
Somerset	998	297.5	279.04-315.96
Sullivan	108	329.7	267.52-391.88
Susquehanna	503	304.2	277.62-330.78
Tioga	420	248.2	224.46-271.94 -
Union	419	301.2	272.36-330.04
Venango	668	307.3	284.00-330.60
Warren	549	330.4	302.76-358.04 +
Washington	2,293	273.2	262.02-284.38 -
Wayne	667	341.3	315.40-367.20 +
Westmoreland	4,549	292.2	283.71-300.69
Wyoming	280	326.1	287.90-364.30
York	3,361	261.9	253.05-270.75 -
Pennsylvania	131,615	288.0	286.44-289.56 +
United States (2007)	803,504	249.1	248.56-249.64

Diseases of Heart	No.	Rate	CI (95%)
Adams	858	256.7	239.52-273.88 +
Allegheny	11,997	228.8	224.71-232.89 +
Armstrong	663	220.9	204.09-237.71
Beaver	1,747	230.9	220.07-241.73
Bedford	413	214.3	193.63-234.97
Berks	2,868	213.1	205.30-220.90 -
Blair	1,412	280.0	265.40-294.60 +
Bradford	536	231.1	211.54-250.66
Bucks	3,486	198.5	191.91-205.09 -
Butler	1,437	217.2	205.97-228.43
Cambria	1,640	240.8	229.15-252.45 +
Cameron	55	206.0	151.56-260.44
Carbon	644	266.4	245.82-286.98 +
Centre	701	203.3	188.25-218.35 -
Chester	2,760	213.1	205.15-221.05 -
Clarion	347	222.8	199.36-246.24
Clearfield	860	258.9	241.60-276.20 +
Clinton	375	267.2	240.16-294.24 +
Columbia	646	266.5	245.95-287.05 +
Crawford	739	222.4	206.37-238.43
Cumberland	1,724	227.9	217.14-238.66
Dauphin	1,919	221.2	211.30-231.10
Delaware	4,456	222.4	215.87-228.93
Elk	255	180.4	158.26-202.54 -
Erie	2,080	215.0	205.76-224.24
Fayette	1,541	247.7	235.33-260.07 +
Forest	71	285.8	219.32-352.28
Franklin	982	190.8	178.87-202.73 -
Fulton	91	174.6	138.73-210.47 -
Greene	352	238.8	213.85-263.75
Huntingdon	371	234.6	210.73-258.47
Indiana	701	203.7	188.62-218.78 -
Jefferson	466	251.4	228.57-274.23 +
Juniata	208	241.1	208.33-273.87
Lackawanna	2,617	280.1	269.37-290.83 +
Lancaster	3,223	201.5	194.54-208.46 -
Lawrence	879	212.9	198.83-226.97
Lebanon	1,134	240.5	226.50-254.50 +
Lehigh	2,304	194.1	186.17-202.03 -
Luzerne	3,693	259.0	250.65-267.35 +
Lycoming	977	220.7	206.86-234.54
McKean	451	258.8	234.91-282.69 +
Mercer	1,178	238.7	225.07-252.33 +
Mifflin	454	248.1	225.28-270.92 +
Monroe	855	204.4	190.70-218.10 -
Montgomery	5,172	190.7	185.50-195.90 -
Montour	177	254.7	217.18-292.22
Northampton	2,119	204.3	195.60-213.00 -
Northumberland	1,096	267.5	251.66-283.34 +
Perry	298	215.3	190.85-239.75
Philadelphia	11,796	242.0	237.63-246.37 +
Pike	301	170.0	150.79-189.21 -
Potter	155	211.8	178.46-245.14
Schuylkill	1,794	271.6	259.03-284.17 +
Snyder	241	191.4	167.23-215.57 -
Somerset	806	239.7	223.15-256.25 +
Sullivan	84	255.9	201.17-310.63
Susquehanna	408	247.9	223.85-271.95 +
Tioga	330	195.5	174.41-216.59 -
Union	318	228.6	203.47-253.73
Venango	512	235.2	214.83-255.57
Warren	415	249.9	225.86-273.94 +
Washington	1,794	214.2	204.29-224.11
Wayne	526	267.5	244.64-290.36 +
Westmoreland	3,530	226.9	219.41-234.39
Wyoming	203	234.7	202.41-266.99
York	2,586	201.0	193.25-208.75 -
Pennsylvania	101,827	223.0	221.63-224.37 +
United States (2007)	615,651	190.7	190.22-191.18

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.

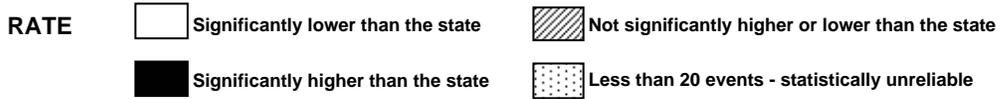
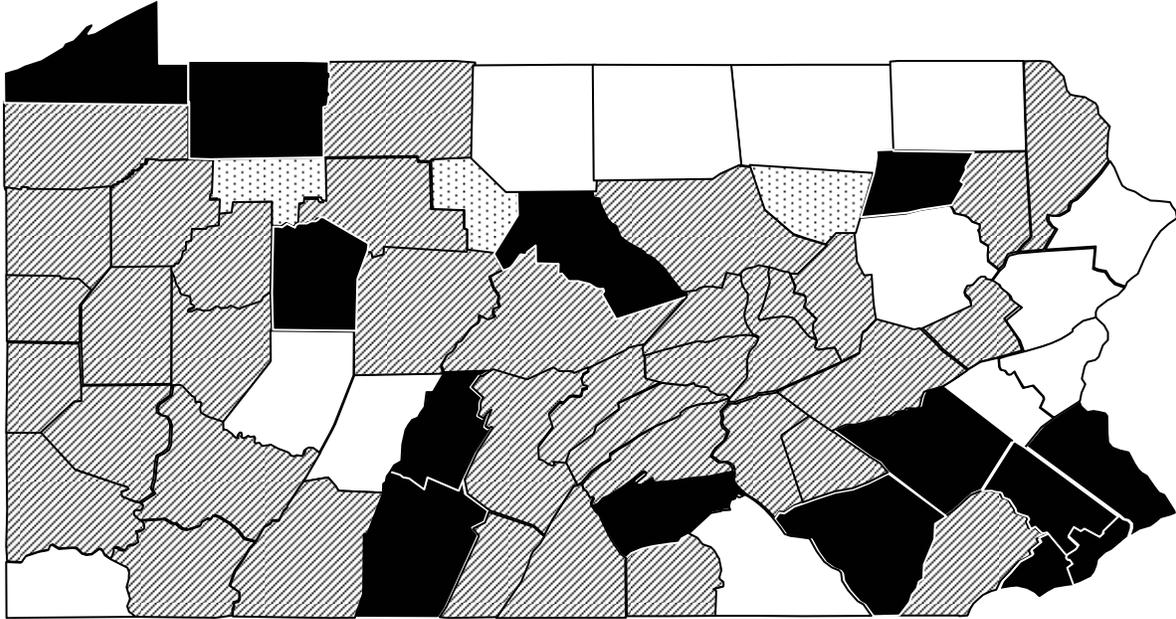


## Average Annual Age-Adjusted Death Rates for Selected Causes, 2005-2007

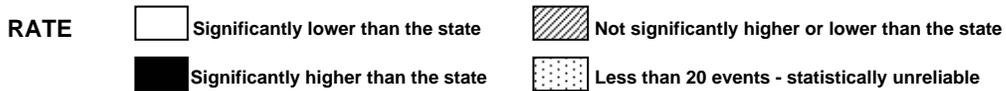
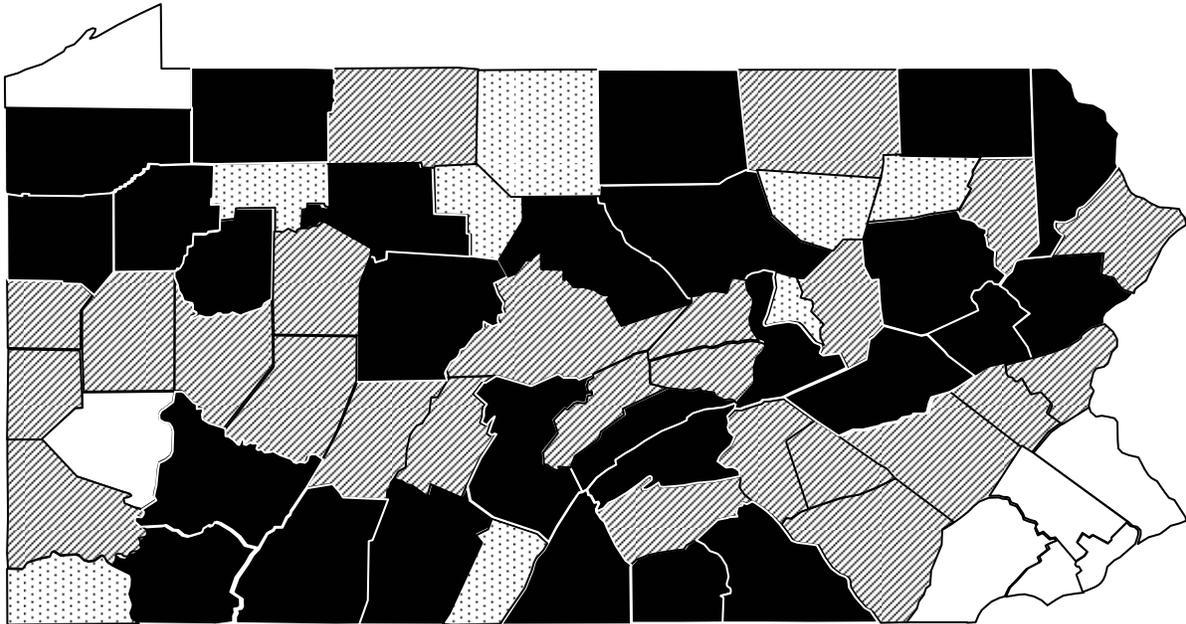
Stroke				Motor Vehicle Accidents			
	No.	Rate	CI (95%)		No.	Rate	CI (95%)
Adams	139	42.1	35.10-49.10	Adams	66	21.3	16.16-26.44 +
Allegheny	2,450	46.0	44.18-47.82	Allegheny	280	7.3	6.44-8.16 -
Armstrong	138	45.6	37.99-53.21	Armstrong	38	17.7	12.07-23.33
Beaver	344	45.1	40.33-49.87	Beaver	71	13.3	10.21-16.39
Bedford	137	71.5	59.53-83.47 +	Bedford	30	20.4	13.10-27.70 +
Berks	792	58.9	54.80-63.00 +	Berks	175	14.5	12.35-16.65
Blair	275	54.5	48.06-60.94 +	Blair	61	15.8	11.83-19.77
Bradford	83	35.8	28.10-43.50 -	Bradford	29	16.5	10.49-22.51
Bucks	920	53.1	49.67-56.53 +	Bucks	176	9.7	8.27-11.13 -
Butler	333	50.4	44.99-55.81	Butler	82	15.2	11.91-18.49
Cambria	282	41.3	36.48-46.12 -	Cambria	67	14.6	11.10-18.10
Cameron	12	ND		Cameron	3	ND	
Carbon	110	45.9	37.32-54.48	Carbon	46	23.8	16.92-30.68 +
Centre	153	45.7	38.46-52.94	Centre	53	14.1	10.30-17.90
Chester	579	44.9	41.24-48.56	Chester	148	10.5	8.81-12.19 -
Clarion	71	44.9	34.46-55.34	Clarion	29	23.2	14.76-31.64 +
Clearfield	143	42.8	35.78-49.82	Clearfield	53	21.3	15.57-27.03 +
Clinton	86	60.6	47.79-73.41 +	Clinton	33	29.3	19.30-39.30 +
Columbia	130	53.8	44.55-63.05	Columbia	34	17.8	11.82-23.78
Crawford	183	55.5	47.46-63.54	Crawford	60	22.1	16.51-27.69 +
Cumberland	397	52.9	47.70-58.10 +	Cumberland	88	12.1	9.57-14.63
Dauphin	403	46.6	42.05-51.15	Dauphin	101	13.2	10.63-15.77
Delaware	1,109	54.9	51.67-58.13 +	Delaware	107	6.0	4.86-7.14 -
Elk	75	52.9	40.93-64.87	Elk	24	23.4	14.04-32.76 +
Erie	511	52.5	47.95-57.05 +	Erie	86	10.0	7.89-12.11 -
Fayette	307	48.5	43.07-53.93	Fayette	97	21.8	17.46-26.14 +
Forest	16	ND		Forest	4	ND	
Franklin	231	45.2	39.37-51.03	Franklin	90	20.8	16.50-25.10 +
Fulton	22	42.8	24.92-60.68	Fulton	16	ND	
Greene	46	31.1	22.11-40.09 -	Greene	19	ND	
Huntingdon	80	51.0	39.82-62.18	Huntingdon	34	24.5	16.26-32.74 +
Indiana	126	35.9	29.63-42.17 -	Indiana	39	14.8	10.16-19.44
Jefferson	125	66.0	54.43-77.57 +	Jefferson	21	15.0	8.58-21.42
Juniata	38	44.7	30.49-58.91	Juniata	22	31.0	18.05-43.95 +
Lackawanna	448	47.8	43.37-52.23	Lackawanna	79	12.2	9.51-14.89
Lancaster	825	51.5	47.99-55.01 +	Lancaster	209	13.9	12.02-15.78
Lawrence	182	43.4	37.09-49.71	Lawrence	32	11.8	7.71-15.89
Lebanon	224	47.8	41.54-54.06	Lebanon	49	12.0	8.64-15.36
Lehigh	493	41.7	38.02-45.38 -	Lehigh	113	10.8	8.81-12.79
Luzerne	589	41.6	38.24-44.96 -	Luzerne	143	15.2	12.71-17.69 +
Lycoming	237	53.4	46.60-60.20	Lycoming	68	17.8	13.57-22.03 +
McKean	88	50.7	40.11-61.29	McKean	22	16.0	9.31-22.69
Mercer	250	50.1	43.89-56.31	Mercer	65	17.7	13.40-22.00 +
Mifflin	77	41.9	32.54-51.26	Mifflin	26	18.6	11.45-25.75
Monroe	153	38.5	32.40-44.60 -	Monroe	117	23.5	19.24-27.76 +
Montgomery	1,426	52.7	49.96-55.44 +	Montgomery	187	8.0	6.85-9.15 -
Montour	44	63.4	44.67-82.13	Montour	8	ND	
Northampton	388	37.7	33.95-41.45 -	Northampton	97	10.5	8.41-12.59
Northumberland	191	45.2	38.79-51.61	Northumberland	54	19.2	14.08-24.32 +
Perry	51	37.8	27.43-48.17	Perry	35	27.0	18.05-35.95 +
Philadelphia	2,450	49.8	47.83-51.77 +	Philadelphia	363	8.0	7.18-8.82 -
Pike	50	29.6	21.40-37.80 -	Pike	26	15.3	9.42-21.18
Potter	25	32.3	19.64-44.96 -	Potter	11	ND	
Schuylkill	336	49.9	44.56-55.24	Schuylkill	95	21.0	16.78-25.22 +
Snyder	58	45.6	33.86-57.34	Snyder	23	19.9	11.77-28.03
Somerset	157	47.2	39.82-54.58	Somerset	56	23.3	17.20-29.40 +
Sullivan	18	ND		Sullivan	4	ND	
Susquehanna	60	35.6	26.59-44.61 -	Susquehanna	29	21.8	13.87-29.73 +
Tioga	63	37.4	28.16-46.64 -	Tioga	27	20.7	12.89-28.51 +
Union	68	48.9	37.28-60.52	Union	22	15.6	9.08-22.12
Venango	114	52.7	43.03-62.37	Venango	37	22.8	15.45-30.15 +
Warren	106	63.5	51.41-75.59 +	Warren	29	23.2	14.76-31.64 +
Washington	366	43.2	38.77-47.63	Washington	70	11.4	8.73-14.07
Wayne	91	48.4	38.46-58.34	Wayne	44	31.6	22.26-40.94 +
Westmoreland	694	44.4	41.10-47.70	Westmoreland	172	16.2	13.78-18.62 +
Wyoming	56	65.7	48.49-82.91 +	Wyoming	19	ND	
York	545	43.0	39.39-46.61 -	York	182	14.7	12.56-16.84 +
Pennsylvania	21,769	47.5	46.87-48.13 +	Pennsylvania	4,795	12.5	12.15-12.85 -
United States (2007)	133,990	41.6	41.38-41.82	United States (2007)	43,098	14.1	13.97-14.23

NOTE: Age-adjusted rates based on less than 20 events are considered statistically unreliable and are not displayed (ND). 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, 2005-2007**



**Average Annual Age-Adjusted Death Rates - Motor Vehicle Accidents  
Pennsylvania Residents, 2005-2007**



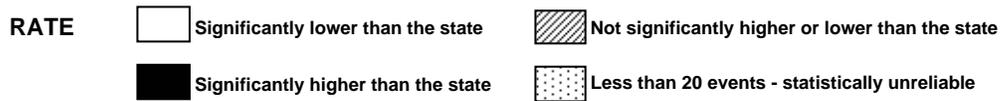
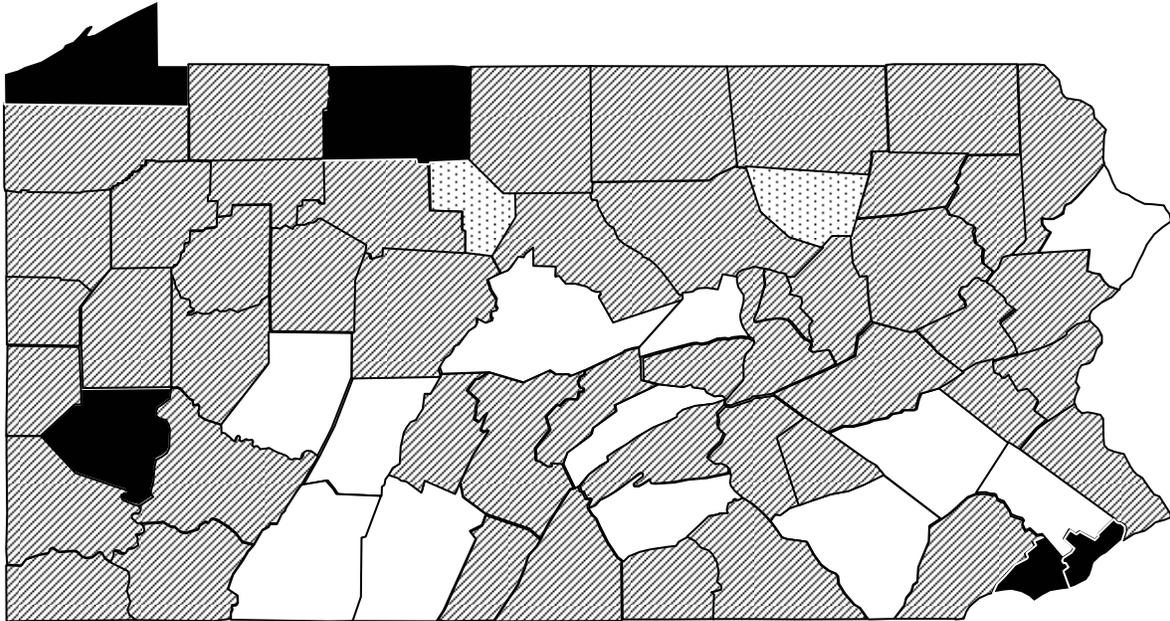
Note: Significance was determined by calculating and comparing county confidence intervals to the state rate. The calculations were not performed for counties that had less than 20 events. Rates for counties with less than 20 events are considered unreliable. See Technical Notes.

## Average Annual Age-Adjusted Death Rates for Selected Causes, 2005-2007

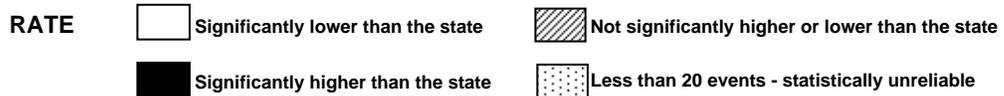
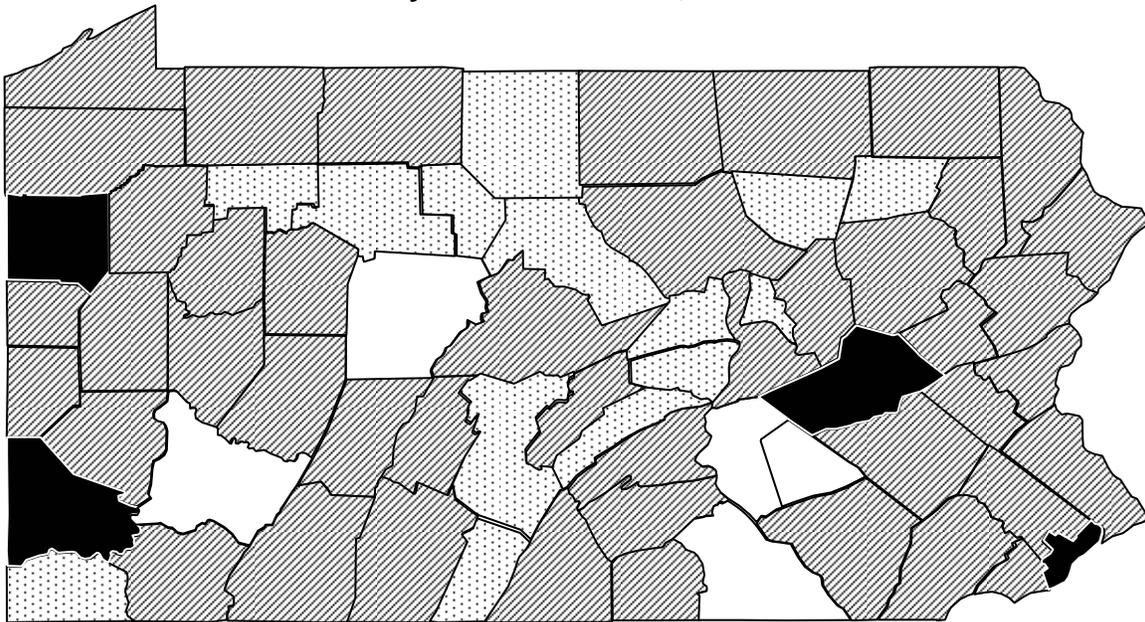
				Female			
Lung Cancer	No.	Rate	CI (95%)	Breast Cancer	No.	Rate	CI (95%)
Adams	155	46.2	38.93-53.47	Adams	40	22.6	15.60-29.60
Allegheny	2,918	58.8	56.67-60.93 +	Allegheny	707	25.0	23.16-26.84
Armstrong	153	52.1	43.84-60.36	Armstrong	30	20.0	12.84-27.16
Beaver	420	56.2	50.83-61.57	Beaver	104	25.4	20.52-30.28
Bedford	86	43.3	34.15-52.45 -	Bedford	30	27.7	17.79-37.61
Berks	654	48.2	44.51-51.89 -	Berks	184	24.3	20.79-27.81
Blair	277	54.4	47.99-60.81	Blair	80	27.4	21.40-33.40
Bradford	122	51.0	41.95-60.05	Bradford	27	20.0	12.46-27.54
Bucks	997	50.4	47.27-53.53	Bucks	283	25.4	22.44-28.36
Butler	316	50.5	44.93-56.07	Butler	96	27.1	21.68-32.52
Cambria	297	46.3	41.03-51.57 -	Cambria	74	20.8	16.06-25.54
Cameron	16	ND		Cameron	5	ND	
Carbon	145	58.5	48.98-68.02	Carbon	37	26.8	18.16-35.44
Centre	161	44.3	37.46-51.14 -	Centre	42	21.5	15.00-28.00
Chester	692	49.4	45.72-53.08	Chester	186	23.3	19.95-26.65
Clarion	71	46.5	35.68-57.32	Clarion	28	33.4	21.03-45.77
Clearfield	196	59.6	51.26-67.94	Clearfield	30	16.2	10.40-22.00 -
Clinton	71	49.4	37.91-60.89	Clinton	18	ND	
Columbia	128	53.4	44.15-62.65	Columbia	39	30.7	21.06-40.34
Crawford	173	52.5	44.68-60.32	Crawford	51	27.5	19.95-35.05
Cumberland	355	44.8	40.14-49.46 -	Cumberland	103	22.7	18.32-27.08
Dauphin	442	50.9	46.15-55.65	Dauphin	104	20.3	16.40-24.20 -
Delaware	1,136	58.7	55.29-62.11 +	Delaware	293	26.6	23.55-29.65
Elk	72	52.2	40.14-64.26	Elk	18	ND	
Erie	581	60.9	55.95-65.85 +	Erie	123	23.0	18.94-27.06
Fayette	349	57.2	51.20-63.20	Fayette	91	26.9	21.37-32.43
Forest	21	81.5	46.64-116.36	Forest	0	ND	
Franklin	255	48.1	42.20-54.00	Franklin	62	21.7	16.30-27.10
Fulton	24	43.4	26.04-60.76	Fulton	4	ND	
Greene	72	49.1	37.76-60.44	Greene	18	ND	
Huntingdon	83	49.8	39.09-60.51	Huntingdon	18	ND	
Indiana	123	38.3	31.53-45.07 -	Indiana	39	22.8	15.64-29.96
Jefferson	82	43.6	34.16-53.04	Jefferson	26	25.5	15.70-35.30
Juniata	33	37.3	24.57-50.03 -	Juniata	10	ND	
Lackawanna	430	49.2	44.55-53.85	Lackawanna	118	21.9	17.95-25.85
Lancaster	792	47.8	44.47-51.13 -	Lancaster	234	25.7	22.41-28.99
Lawrence	188	47.6	40.80-54.40	Lawrence	48	21.3	15.27-27.33
Lebanon	259	54.2	47.60-60.80	Lebanon	52	19.1	13.91-24.29 -
Lehigh	596	49.9	45.89-53.91	Lehigh	153	22.9	19.27-26.53
Luzerne	671	50.8	46.96-54.64	Luzerne	170	21.6	18.35-24.85
Lycoming	234	52.2	45.51-58.89	Lycoming	49	20.6	14.83-26.37
McKean	117	68.4	56.01-80.79 +	McKean	22	25.7	14.96-36.44
Mercer	247	50.6	44.29-56.91	Mercer	82	31.7	24.84-38.56 +
Mifflin	105	56.0	45.29-66.71	Mifflin	24	22.3	13.38-31.22
Monroe	269	57.0	50.19-63.81	Monroe	63	24.5	18.45-30.55
Montgomery	1,233	44.9	42.39-47.41 -	Montgomery	381	24.8	22.31-27.29
Montour	46	63.6	45.22-81.98	Montour	9	ND	
Northampton	500	49.1	44.80-53.40	Northampton	136	23.4	19.47-27.33
Northumberland	184	46.8	40.04-53.56	Northumberland	69	31.4	23.99-38.81
Perry	85	61.8	48.66-74.94	Perry	27	34.0	21.18-46.82
Philadelphia	2,929	64.2	61.87-66.53 +	Philadelphia	768	27.9	25.93-29.87 +
Pike	84	41.0	32.23-49.77 -	Pike	21	20.9	11.96-29.84
Potter	46	66.3	47.14-85.46	Potter	8	ND	
Schuylkill	331	53.3	47.56-59.04	Schuylkill	121	34.4	28.27-40.53 +
Snyder	62	48.8	36.65-60.95	Snyder	19	ND	
Somerset	149	45.1	37.86-52.34 -	Somerset	43	25.1	17.60-32.60
Sullivan	13	ND		Sullivan	4	ND	
Susquehanna	88	55.3	43.75-66.85	Susquehanna	22	25.6	14.90-36.30
Tioga	97	60.3	48.30-72.30	Tioga	22	27.2	15.83-38.57
Union	59	41.3	30.76-51.84 -	Union	13	ND	
Venango	124	56.0	46.14-65.86	Venango	28	21.7	13.66-29.74
Warren	78	44.6	34.70-54.50	Warren	20	19.9	11.18-28.62
Washington	481	57.6	52.45-62.75	Washington	135	30.2	25.11-35.29 +
Wayne	118	54.7	44.83-64.57	Wayne	37	34.8	23.59-46.01
Westmoreland	812	52.1	48.52-55.68	Westmoreland	186	21.3	18.24-24.36 -
Wyoming	53	53.1	38.80-67.40	Wyoming	14	ND	
York	717	52.2	48.38-56.02	York	158	20.8	17.56-24.04 -
Pennsylvania	23,873	53.0	52.33-53.67 +	Pennsylvania	6,256	24.6	23.99-25.21 +
United States (2007)	158,258	50.5	50.25-50.75	United States (2006)	40,821	23.5	23.27-23.73

NOTE: Age-adjusted rates based on less than 20 events are considered statistically unreliable and are not displayed (ND). 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, 2005-2007



## Average Annual Age-Adjusted Death Rates - Female Breast Cancer Pennsylvania Residents, 2005-2007



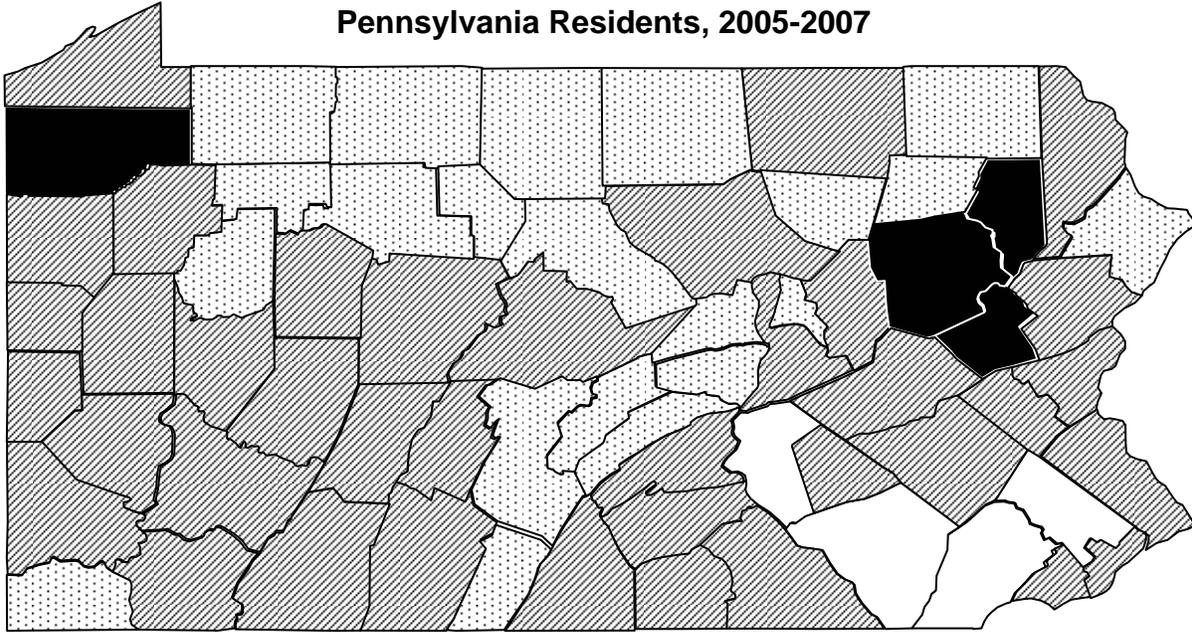
Note: Significance was determined by calculating and comparing county confidence intervals to the state rate. The calculations were not performed for counties that had less than 20 events. Rates for counties with less than 20 events are considered unreliable. See Technical Notes.

## Average Annual Age-Adjusted Death Rates for Selected Causes, 2005-2007

Intentional Self-harm				Assault (Homicide)			
(Suicide)	No.	Rate	CI (95%)	No.	Rate	CI (95%)	
Adams	25	8.2	4.99-11.41	Adams	3	ND	
Allegheny	433	11.2	10.15-12.25	Allegheny	276	8.0	7.06-8.94 +
Armstrong	24	11.5	6.90-16.10	Armstrong	6	ND	
Beaver	56	9.8	7.23-12.37	Beaver	18	ND	
Bedford	21	13.6	7.78-19.42	Bedford	0	ND	
Berks	131	10.8	8.95-12.65	Berks	45	4.0	2.83-5.17 -
Blair	54	13.9	10.19-17.61	Blair	13	ND	
Bradford	23	12.2	7.21-17.19	Bradford	6	ND	
Bucks	229	11.8	10.27-13.33	Bucks	42	2.3	1.60-3.00 -
Butler	58	10.6	7.87-13.33	Butler	12	ND	
Cambria	64	14.4	10.87-17.93	Cambria	7	ND	
Cameron	6	ND		Cameron	0	ND	
Carbon	35	16.7	11.17-22.23 +	Carbon	3	ND	
Centre	39	10.7	7.34-14.06	Centre	3	ND	
Chester	128	8.7	7.19-10.21 -	Chester	33	2.3	1.52-3.08 -
Clarion	15	ND		Clarion	1	ND	
Clearfield	35	13.1	8.76-17.44	Clearfield	1	ND	
Clinton	15	ND		Clinton	0	ND	
Columbia	22	11.2	6.52-15.88	Columbia	2	ND	
Crawford	44	15.6	10.99-20.21 +	Crawford	14	ND	
Cumberland	72	10.4	8.00-12.80	Cumberland	8	ND	
Dauphin	70	8.8	6.74-10.86 -	Dauphin	47	6.7	4.78-8.62
Delaware	186	10.8	9.25-12.35	Delaware	138	8.5	7.08-9.92 +
Elk	12	ND		Elk	0	ND	
Erie	98	11.7	9.38-14.02	Erie	17	ND	
Fayette	44	9.3	6.55-12.05	Fayette	12	ND	
Forest	1	ND		Forest	0	ND	
Franklin	44	10.1	7.12-13.08	Franklin	5	ND	
Fulton	7	ND		Fulton	0	ND	
Greene	14	ND		Greene	2	ND	
Huntingdon	17	ND		Huntingdon	1	ND	
Indiana	37	13.6	9.22-17.98	Indiana	3	ND	
Jefferson	20	14.7	8.26-21.14	Jefferson	2	ND	
Juniata	6	ND		Juniata	1	ND	
Lackawanna	97	15.0	12.01-17.99 +	Lackawanna	10	ND	
Lancaster	121	8.1	6.66-9.54 -	Lancaster	42	2.8	1.95-3.65 -
Lawrence	31	11.4	7.39-15.41	Lawrence	10	ND	
Lebanon	35	8.7	5.82-11.58	Lebanon	4	ND	
Lehigh	119	11.8	9.68-13.92	Lehigh	52	5.3	3.86-6.74
Luzerne	142	15.0	12.53-17.47 +	Luzerne	39	4.3	2.95-5.65 -
Lycoming	39	10.7	7.34-14.06	Lycoming	6	ND	
McKean	14	ND		McKean	4	ND	
Mercer	44	12.7	8.95-16.45	Mercer	6	ND	
Mifflin	16	ND		Mifflin	5	ND	
Monroe	56	11.1	8.19-14.01	Monroe	13	ND	
Montgomery	206	8.4	7.25-9.55 -	Montgomery	53	2.4	1.75-3.05 -
Montour	6	ND		Montour	1	ND	
Northampton	104	11.8	9.53-14.07	Northampton	30	3.4	2.18-4.62 -
Northumberland	29	10.6	6.74-14.46	Northumberland	7	ND	
Perry	21	15.0	8.58-21.42	Perry	3	ND	
Philadelphia	427	10.0	9.05-10.95	Philadelphia	1,132	24.7	23.26-26.14 +
Pike	19	ND		Pike	4	ND	
Potter	14	ND		Potter	0	ND	
Schuylkill	56	12.0	8.86-15.14	Schuylkill	9	ND	
Snyder	12	ND		Snyder	1	ND	
Somerset	26	9.9	6.09-13.71	Somerset	4	ND	
Sullivan	4	ND		Sullivan	0	ND	
Susquehanna	18	ND		Susquehanna	0	ND	
Tioga	18	ND		Tioga	0	ND	
Union	6	ND		Union	2	ND	
Venango	25	13.7	8.33-19.07	Venango	1	ND	
Warren	12	ND		Warren	6	ND	
Washington	70	10.7	8.19-13.21	Washington	13	ND	
Wayne	25	16.0	9.73-22.27	Wayne	4	ND	
Westmoreland	144	12.7	10.63-14.77	Westmoreland	17	ND	
Wyoming	14	ND		Wyoming	2	ND	
York	137	10.7	8.91-12.49	York	36	3.0	2.02-3.98 -
Pennsylvania	4,192	10.9	10.57-11.23	Pennsylvania	2,237	6.2	5.94-6.46 +
United States (2007)	33,185	10.8	10.68-10.92	United States (2007)	17,520	5.8	5.71-5.89

NOTE: Age-adjusted rates based on less than 20 events are considered statistically unreliable and are not displayed (ND). 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.

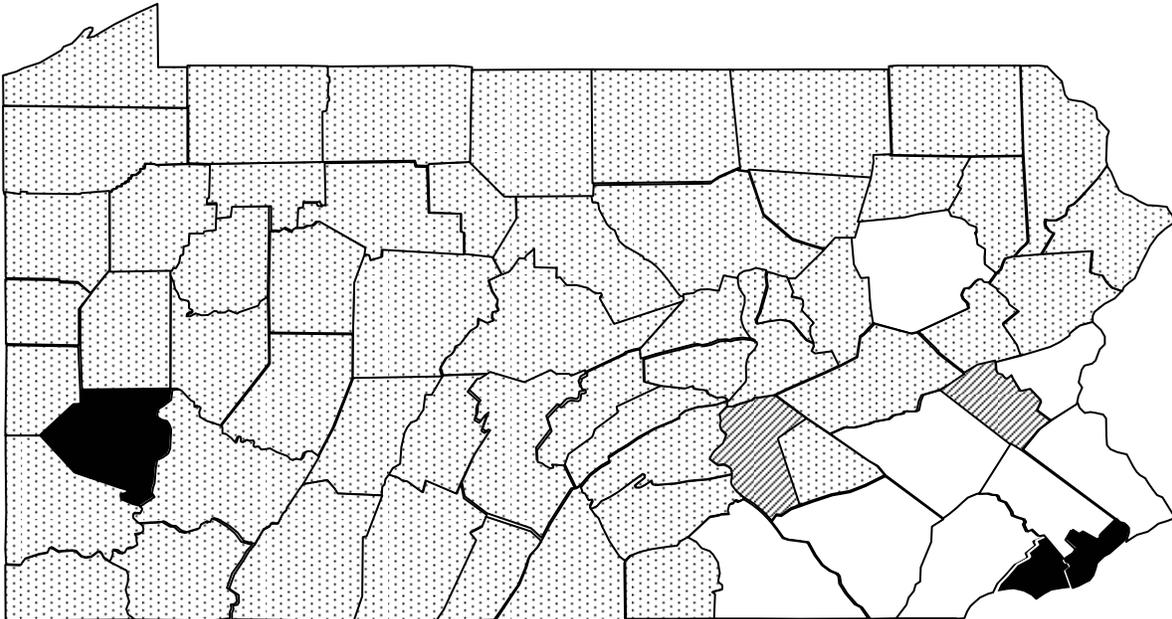
**Average Annual Age-Adjusted Death Rates  
Intentional Self-harm (Suicide)  
Pennsylvania Residents, 2005-2007**



**RATE**

 Significantly lower than the state	 Not significantly higher or lower than the state
 Significantly higher than the state	 Less than 20 events - statistically unreliable

**Average Annual Age-Adjusted Death Rates - Assault (Homicide)  
Pennsylvania Residents, 2005-2007**



**RATE**

 Significantly lower than the state	 Not significantly higher or lower than the state
 Significantly higher than the state	 Less than 20 events - statistically unreliable

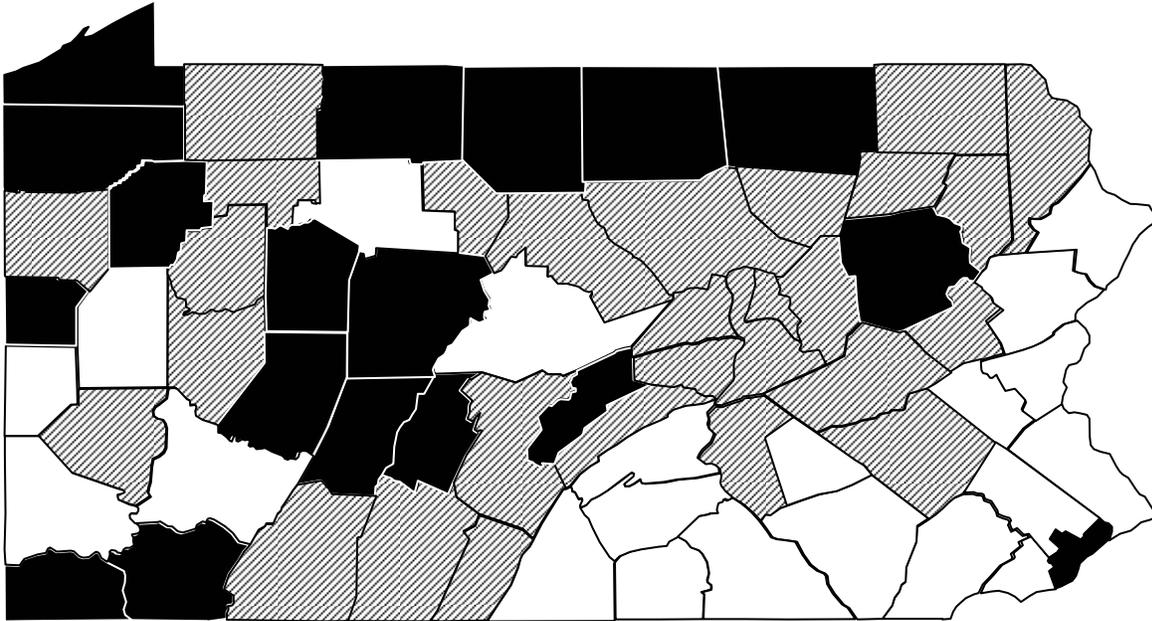
Note: Significance was determined by calculating and comparing county confidence intervals to the state rate. The calculations were not performed for counties that had less than 20 events. Rates for counties with less than 20 events are considered unreliable. See Technical Notes.

## Percent of Children by Age Below Poverty Level, 2007

Related Children				All Children <18			
Ages 5-17 Below Poverty	No.	Pct.	$\mu$ (95%)	Below Poverty	No.	Pct.	$\mu$ (95%)
Adams	1,360	8.3	-6.72 -	Adams	2,161	9.8	-7.53 -
Allegheny	26,200	14.1	-1.80	Allegheny	39,953	16.0	-0.79
Armstrong	1,651	15.9	1.10	Armstrong	2,503	18.1	1.77
Beaver	3,311	12.5	-2.85 -	Beaver	5,058	14.3	-2.83 -
Bedford	1,288	16.4	1.33	Bedford	1,919	18.3	1.70
Berks	9,725	14.4	-0.43	Berks	15,318	16.4	0.48
Blair	3,314	17.5	3.33 +	Blair	5,287	20.2	5.13 +
Bradford	1,820	17.9	2.77 +	Bradford	3,006	21.7	5.13 +
Bucks	5,226	4.9	-26.41 -	Bucks	8,053	5.7	-31.26 -
Butler	2,766	9.1	-7.99 -	Butler	4,220	10.4	-9.25 -
Cambria	3,832	18.8	5.00 +	Cambria	5,646	20.3	5.42 +
Cameron	130	15.7	0.26	Cameron	192	17.8	0.42
Carbon	1,436	15.4	0.64	Carbon	2,233	17.7	1.33
Centre	1,642	9.8	-5.18 -	Centre	2,546	11.0	-6.27 -
Chester	4,236	4.9	-23.78 -	Chester	6,745	5.7	-28.61 -
Clarion	952	16.7	1.32	Clarion	1,434	18.6	1.67
Clearfield	2,197	18.4	3.46 +	Clearfield	3,469	21.8	5.60 +
Clinton	911	17.2	1.58	Clinton	1,347	18.2	1.36
Columbia	1,213	14.0	-0.47	Columbia	1,702	14.4	-1.55
Crawford	2,498	17.7	3.07 +	Crawford	3,927	20.4	4.62 +
Cumberland	2,102	6.2	-12.89 -	Cumberland	3,396	7.4	-14.93 -
Dauphin	6,211	14.6	0.00	Dauphin	9,706	16.4	0.39
Delaware	11,915	12.4	-5.69 -	Delaware	16,507	12.6	-10.32 -
Elk	503	9.9	-2.79 -	Elk	811	12.3	-2.51 -
Erie	9,040	19.4	8.64 +	Erie	13,467	21.4	10.33 +
Fayette	6,053	27.8	16.24 +	Fayette	9,025	31.0	20.00 +
Forest	137	22.7	1.66	Forest	265	28.6	2.99 +
Franklin	2,254	9.9	-5.91 -	Franklin	3,595	11.3	-6.92 -
Fulton	369	15.3	0.29	Fulton	621	19.1	1.31
Greene	1,316	23.2	5.40 +	Greene	1,977	25.6	6.54 +
Huntingdon	943	14.6	0.00	Huntingdon	1,437	16.6	0.29
Indiana	2,269	19.3	4.25 +	Indiana	3,446	21.4	5.23 +
Jefferson	1,251	18.2	2.49 +	Jefferson	1,863	20.0	2.91 +
Juniata	499	13.1	-0.77	Juniata	766	14.5	-0.98
Lackawanna	4,492	14.4	-0.29	Lackawanna	7,417	17.4	1.96 +
Lancaster	10,259	11.5	-7.72 -	Lancaster	15,929	12.9	-9.19 -
Lawrence	2,643	18.6	3.98 +	Lawrence	4,048	21.3	5.57 +
Lebanon	2,350	11.5	-3.69 -	Lebanon	3,821	13.5	-3.60 -
Lehigh	7,118	12.6	-3.96 -	Lehigh	10,528	13.5	-5.97 -
Luzerne	7,554	16.8	3.89 +	Luzerne	10,974	17.9	3.33 +
Lycoming	2,824	16.1	1.66	Lycoming	4,481	18.5	2.84 +
McKean	1,201	17.9	2.25 +	McKean	1,749	19.4	2.41 +
Mercer	2,840	15.6	1.12	Mercer	4,003	16.5	0.37
Mifflin	1,434	19.0	3.19 +	Mifflin	2,214	21.1	3.98 +
Monroe	3,092	10.1	-6.56 -	Monroe	4,556	11.6	-7.22 -
Montgomery	6,762	5.2	-28.26 -	Montgomery	10,498	5.9	-34.42 -
Montour	373	13.4	-0.53	Montour	597	15.6	-0.29
Northampton	4,141	8.8	-10.49 -	Northampton	6,731	10.6	-11.18 -
Northumberland	2,003	15.6	0.94	Northumberland	3,187	18.1	2.00 +
Perry	828	11.3	-2.36 -	Perry	1,288	12.7	-2.79 -
Philadelphia	81,430	32.6	75.00 +	Philadelphia	121,011	34.0	84.12 +
Pike	1,005	9.4	-4.48 -	Pike	1,503	11.4	-4.37 -
Potter	591	20.3	2.56 +	Potter	899	23.0	3.37 +
Schuylkill	2,943	14.4	-0.24	Schuylkill	4,394	15.7	-0.66
Snyder	808	13.7	-0.58	Snyder	1,216	14.7	-1.08
Somerset	1,779	15.9	1.15	Somerset	2,550	17.2	0.96
Sullivan	135	17.0	0.56	Sullivan	230	19.9	1.00
Susquehanna	1,088	16.2	1.09	Susquehanna	1,543	17.3	0.82
Tioga	1,123	18.2	2.36 +	Tioga	1,634	19.8	2.59 +
Union	645	11.8	-1.73	Union	989	13.1	-2.13 -
Venango	1,642	19.2	3.55 +	Venango	2,587	22.7	5.50 +
Warren	1,110	17.3	1.80	Warren	1,751	20.8	3.34 +
Washington	3,433	11.0	-5.30 -	Washington	5,205	12.5	-5.98 -
Wayne	1,157	14.5	-0.07	Wayne	1,729	16.6	0.32
Westmoreland	6,263	11.7	-5.59 -	Westmoreland	8,651	12.2	-8.44 -
Wyoming	585	12.9	-0.95	Wyoming	972	16.0	-0.12
York	7,395	10.6	-8.81 -	York	11,601	12.1	-10.06 -
Pennsylvania	293,616	14.6	-20.07 -	Pennsylvania	444,089	16.2	-22.40 -
United States (2007)	8,499,844	16.4		United States (2007)	13,097,100	18.0	

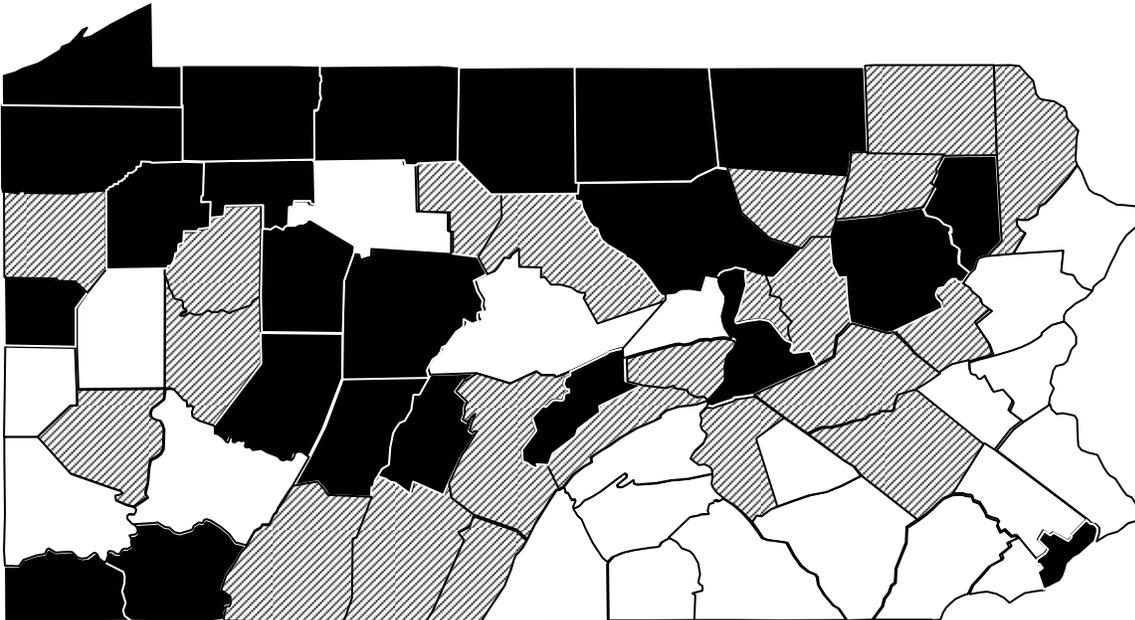
NOTE: A+ or - after the value of  $\mu$  denotes if the county rate was significantly higher or lower than the state rate. No + or - after the  $\mu$  value denotes no significant difference. State data were compared to U.S. data. Two separate formulas computed the  $\mu$  values, depending on the number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

**Percent of Children 5-17 Related to Persons with Income Below Poverty Level  
Pennsylvania Residents, 2007**



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, 2007**



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

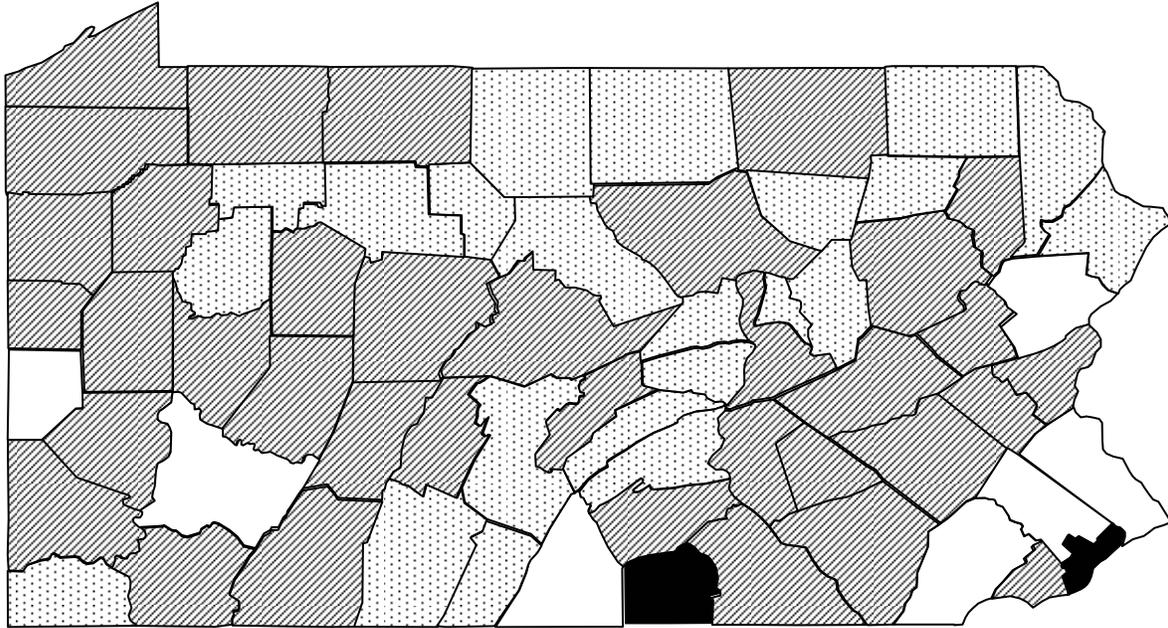
Note: Significance is determined by calculating county  $\mu$  values. The calculations were not performed for counties that had less than 10 events. Rates for counties with less than 10 events are considered unreliable. See Technical Notes

## Infant Mortality Rates, 2005-07, and Percent Low Birth Weight, 2007

2005-2007 Infant Mortality Rates				Percent Low Birth Weight			
	No.	Rate	$\mu$ (95%)		No.	Pct.	$\mu$ (95%)
Adams	37	11.0	2.44 +	Adams	86	7.4	-1.18
Allegheny	295	7.5	0.23	Allegheny	1,150	8.6	0.83
Armstrong	14	6.5	-0.50	Armstrong	46	6.0	-2.29 -
Beaver	27	5.0	-2.00 -	Beaver	146	8.1	-0.46
Bedford	6	ND		Bedford	24	4.6	-2.99 -
Berks	99	6.4	-1.39	Berks	404	7.9	-1.29
Blair	29	6.7	-0.52	Blair	107	7.2	-1.67
Bradford	18	7.9	0.27	Bradford	53	6.6	-1.76
Bucks	82	4.0	-5.74 -	Bucks	406	7.0	-3.84 -
Butler	32	5.4	-1.83	Butler	120	6.2	-3.49 -
Cambria	29	6.4	-0.74	Cambria	142	9.2	1.13
Cameron	2	ND		Cameron	5	ND	
Carbon	14	7.3	-0.05	Carbon	42	6.3	-1.87
Centre	22	5.6	-1.35	Centre	76	5.7	-3.40 -
Chester	113	6.1	-2.06 -	Chester	432	7.1	-3.66 -
Clarion	9	ND		Clarion	24	6.4	-1.34
Clearfield	23	9.5	1.22	Clearfield	65	7.9	-0.49
Clinton	4	ND		Clinton	23	5.2	-2.32 -
Columbia	4	ND		Columbia	54	8.8	0.34
Crawford	21	6.7	-0.45	Crawford	66	6.2	-2.48 -
Cumberland	55	7.5	0.10	Cumberland	172	6.8	-2.90 -
Dauphin	76	7.3	-0.11	Dauphin	321	9.0	1.29
Delaware	151	7.3	-0.17	Delaware	568	8.3	-0.30
Elk	9	ND		Elk	26	8.8	0.24
Erie	85	8.3	1.10	Erie	298	8.5	0.21
Fayette	31	7.3	-0.08	Fayette	126	9.1	0.94
Forest	0	ND		Forest	3	ND	
Franklin	30	5.2	-1.99 -	Franklin	144	7.1	-2.11 -
Fulton	6	ND		Fulton	22	11.3	1.40
Greene	9	ND		Greene	40	9.9	1.04
Huntingdon	6	ND		Huntingdon	29	6.4	-1.47
Indiana	15	5.8	-0.96	Indiana	69	8.0	-0.41
Jefferson	13	8.6	0.56	Jefferson	45	8.8	0.31
Juniata	2	ND		Juniata	24	8.5	0.06
Lackawanna	40	5.8	-1.56	Lackawanna	232	9.9	2.62 +
Lancaster	160	7.5	0.17	Lancaster	502	6.8	-4.96 -
Lawrence	19	6.9	-0.33	Lawrence	78	8.6	0.21
Lebanon	35	7.2	-0.20	Lebanon	134	7.9	-0.74
Lehigh	95	7.4	-0.05	Lehigh	384	8.6	0.48
Luzerne	75	7.8	0.44	Luzerne	261	7.9	-1.04
Lycoming	26	6.5	-0.68	Lycoming	93	7.2	-1.49
McKean	11	7.5	0.03	McKean	31	6.4	-1.52
Mercer	21	6.0	-0.98	Mercer	70	6.1	-2.69 -
Mifflin	14	7.7	0.16	Mifflin	37	6.1	-1.95
Monroe	22	4.6	-2.29 -	Monroe	118	7.8	-0.84
Montgomery	160	5.6	-3.54 -	Montgomery	684	7.4	-3.47 -
Montour	8	ND		Montour	17	7.2	-0.64
Northampton	59	6.2	-1.36	Northampton	281	8.6	0.41
Northumberland	16	5.3	-1.37	Northumberland	93	9.2	0.88
Perry	3	ND		Perry	47	8.8	0.32
Philadelphia	831	12.1	14.36 +	Philadelphia	2,773	11.9	19.26 +
Pike	3	ND		Pike	45	10.0	1.17
Potter	4	ND		Potter	17	8.2	-0.10
Schuylkill	27	6.0	-1.07	Schuylkill	127	8.6	0.28
Snyder	8	ND		Snyder	28	6.0	-1.79
Somerset	12	5.5	-1.03	Somerset	63	8.4	0.00
Sullivan	1	ND		Sullivan	1	ND	
Susquehanna	5	ND		Susquehanna	23	5.7	-1.87
Tioga	7	ND		Tioga	27	6.3	-1.50
Union	9	ND		Union	24	5.8	-1.82
Venango	18	9.7	1.16	Venango	37	6.3	-1.76
Warren	10	8.5	0.44	Warren	30	7.5	-0.62
Washington	40	6.5	-0.85	Washington	150	7.1	-2.15 -
Wayne	7	ND		Wayne	40	8.2	-0.15
Westmoreland	54	5.4	-2.38 -	Westmoreland	254	7.5	-1.89
Wyoming	6	ND		Wyoming	20	6.5	-1.15
York	118	7.7	0.43	York	417	7.9	-1.31
Pennsylvania	3,292	7.4	4.87 +	Pennsylvania	12,496	8.4	1.40
United States (2007)	29,241	6.8		United States (2006)	351,974	8.3	

NOTE: Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). A+ or - after the value of  $\mu$  denotes if the county rate was significantly higher or lower than the state rate. No + or - after the  $\mu$  value denotes no significant difference. State data were compared to U.S. data. Two separate formulas computed the  $\mu$  values, depending on the number of events. See Technical Notes.

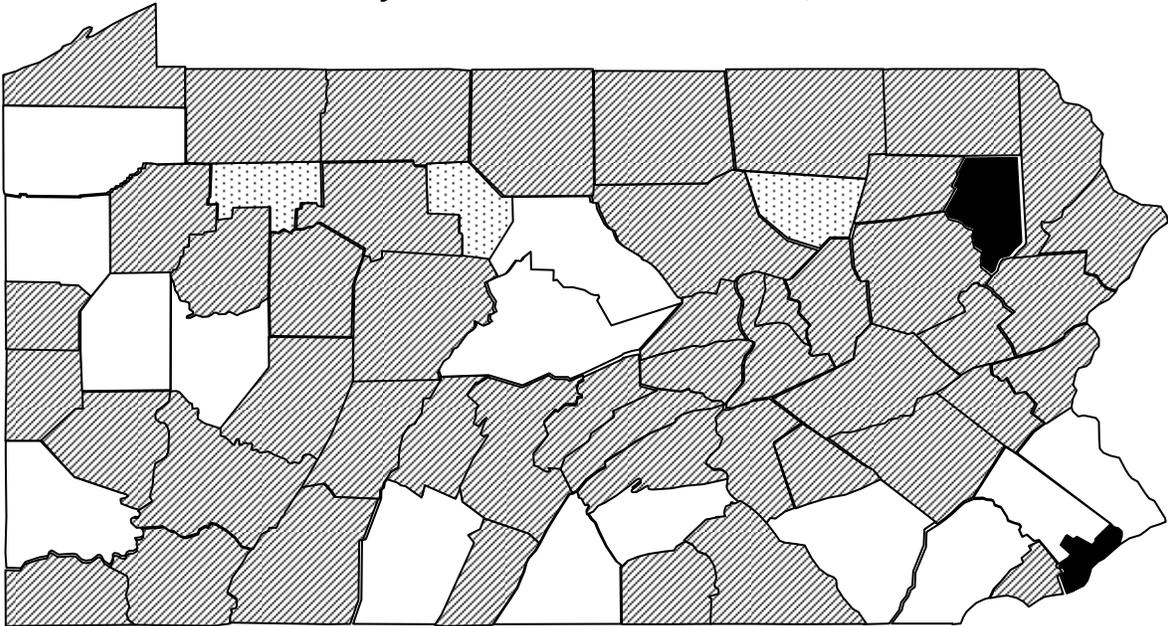
## Infant Mortality Rates Pennsylvania Residents, 2005-2007



**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, 2007



**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

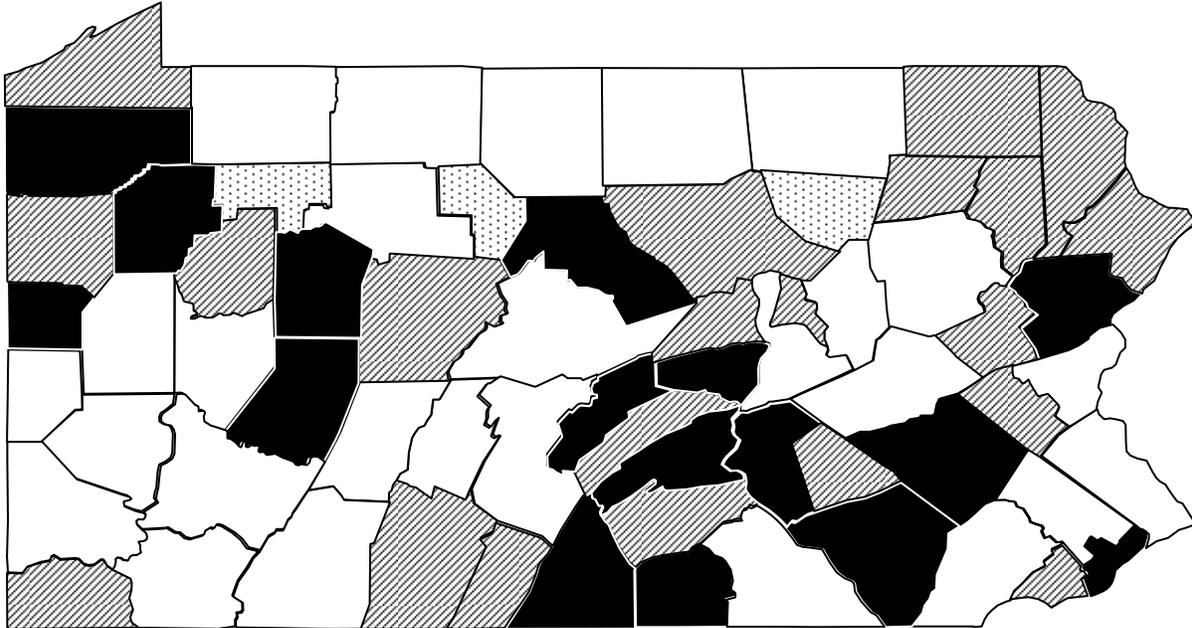
Note: Significance is determined by calculating county  $\mu$  values. The calculations were not performed for counties that had less than 10 events. Rates for counties with less than 10 events are considered unreliable. See Technical Notes

## Percent No Prenatal Care in First Trimester and Teen Births, 2007

No Prenatal Care				Births to Mothers <18			
First Trimester	No.	Pct.	$\mu$ (95%)	No.	Pct.	$\mu$ (95%)	
Adams	218	24.1	2.76 +	Adams	40	3.4	0.79
Allegheny	1,144	10.2	-26.81 -	Allegheny	352	2.6	-2.73 -
Armstrong	104	15.0	-3.53 -	Armstrong	16	2.1	-1.43
Beaver	263	17.3	-3.00 -	Beaver	54	3.0	0.00
Bedford	77	16.9	-1.65	Bedford	15	2.9	-0.13
Berks	1,034	23.0	4.33 +	Berks	198	3.9	3.76 +
Blair	219	16.3	-3.73 -	Blair	34	2.3	-1.55
Bradford	74	11.7	-4.84 -	Bradford	14	1.7	-2.15 -
Bucks	715	15.8	-7.68 -	Bucks	58	0.8	-10.82 -
Butler	256	14.7	-5.90 -	Butler	23	1.2	-4.55 -
Cambria	209	14.7	-5.33 -	Cambria	45	2.9	-0.23
Cameron	9	ND		Cameron	2	ND	
Carbon	121	21.8	0.82	Carbon	17	2.5	-0.75
Centre	165	13.6	-5.88 -	Centre	9	ND	
Chester	932	18.0	-4.29 -	Chester	88	1.5	-6.63 -
Clarion	76	22.5	0.85	Clarion	7	ND	
Clearfield	137	18.2	-1.50	Clearfield	17	2.1	-1.48
Clinton	111	27.4	3.50 +	Clinton	14	3.2	0.24
Columbia	79	14.1	-3.30 -	Columbia	14	2.3	-1.00
Crawford	242	24.8	3.41 +	Crawford	23	2.1	-1.72
Cumberland	424	19.5	-1.04	Cumberland	38	1.5	-4.36 -
Dauphin	659	23.2	3.70 +	Dauphin	104	2.9	-0.35
Delaware	1,191	21.0	1.12	Delaware	189	2.7	-1.47
Elk	36	13.6	-2.45 -	Elk	9	ND	
Erie	657	21.4	1.38	Erie	177	5.0	6.98 +
Fayette	197	16.9	-2.97 -	Fayette	60	4.3	2.80 +
Forest	9	ND		Forest	0	ND	
Franklin	408	24.9	4.52 +	Franklin	58	2.9	-0.26
Fulton	26	18.7	-0.44	Fulton	4	ND	
Greene	51	18.6	-0.66	Greene	16	4.0	1.15
Huntingdon	70	16.0	-2.04 -	Huntingdon	13	2.9	-0.12
Indiana	210	25.8	3.82 +	Indiana	15	1.7	-2.23 -
Jefferson	139	29.8	5.04 +	Jefferson	12	2.3	-0.92
Juniata	60	23.5	1.10	Juniata	4	ND	
Lackawanna	406	18.9	-1.73	Lackawanna	59	2.5	-1.40
Lancaster	1,475	22.8	4.79 +	Lancaster	174	2.4	-2.99 -
Lawrence	198	23.5	2.23 +	Lawrence	29	3.2	0.35
Lebanon	298	21.6	1.11	Lebanon	41	2.4	-1.43
Lehigh	763	21.7	1.91	Lehigh	173	3.9	3.51 +
Luzerne	483	17.9	-3.22 -	Luzerne	99	3.0	0.00
Lycoming	261	22.1	1.45	Lycoming	36	2.8	-0.41
McKean	34	9.2	-4.77 -	McKean	10	2.1	-1.13
Mercer	206	19.5	-0.73	Mercer	42	3.6	1.18
Mifflin	150	27.0	3.86 +	Mifflin	19	3.2	0.28
Monroe	301	25.3	4.19 +	Monroe	31	2.0	-2.27 -
Montgomery	1,397	18.2	-4.78 -	Montgomery	115	1.2	-10.33 -
Montour	36	16.1	-1.42	Montour	8	ND	
Northampton	450	17.6	-3.51 -	Northampton	73	2.2	-2.66 -
Northumberland	149	15.8	-3.51 -	Northumberland	27	2.7	-0.55
Perry	116	26.4	3.12 +	Perry	16	3.0	0.00
Philadelphia	5,297	36.5	48.13 +	Philadelphia	1,373	5.8	25.25 +
Pike	35	21.9	0.42	Pike	16	3.4	0.50
Potter	12	7.2	-3.77 -	Potter	4	ND	
Schuylkill	145	11.7	-7.60 -	Schuylkill	35	2.4	-1.32
Snyder	134	30.6	5.30 +	Snyder	8	ND	
Somerset	107	15.8	-2.97 -	Somerset	15	2.0	-1.58
Sullivan	8	ND		Sullivan	3	ND	
Susquehanna	47	18.1	-0.82	Susquehanna	9	ND	
Tioga	41	13.4	-2.71 -	Tioga	13	3.0	0.00
Union	70	18.3	-0.91	Union	8	ND	
Venango	131	24.1	2.14 +	Venango	19	3.2	0.28
Warren	36	12.0	-3.22 -	Warren	7	ND	
Washington	271	14.3	-6.59 -	Washington	51	2.4	-1.60
Wayne	68	16.7	-1.65	Wayne	3	ND	
Westmoreland	378	12.5	-10.78 -	Westmoreland	71	2.1	-3.02 -
Wyoming	52	18.3	-0.78	Wyoming	9	ND	
York	722	16.5	-6.40 -	York	164	3.1	0.43
Pennsylvania	24,599	20.4	-79.59 -	Pennsylvania	4,499	3.0	-8.55 -
United States (2006)	NA	31.0		United States (2006)	145,339	3.4	

NOTE: Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). A+ or - after the value of  $\mu$  denotes if the county rate was significantly higher or lower than the state rate. No + or - after the  $\mu$  value denotes no significant difference. State data were compared to U.S. data (prenatal care data are for 18 states only). Two separate formulas computed the  $\mu$  values, depending on the number of events. See Technical Notes.

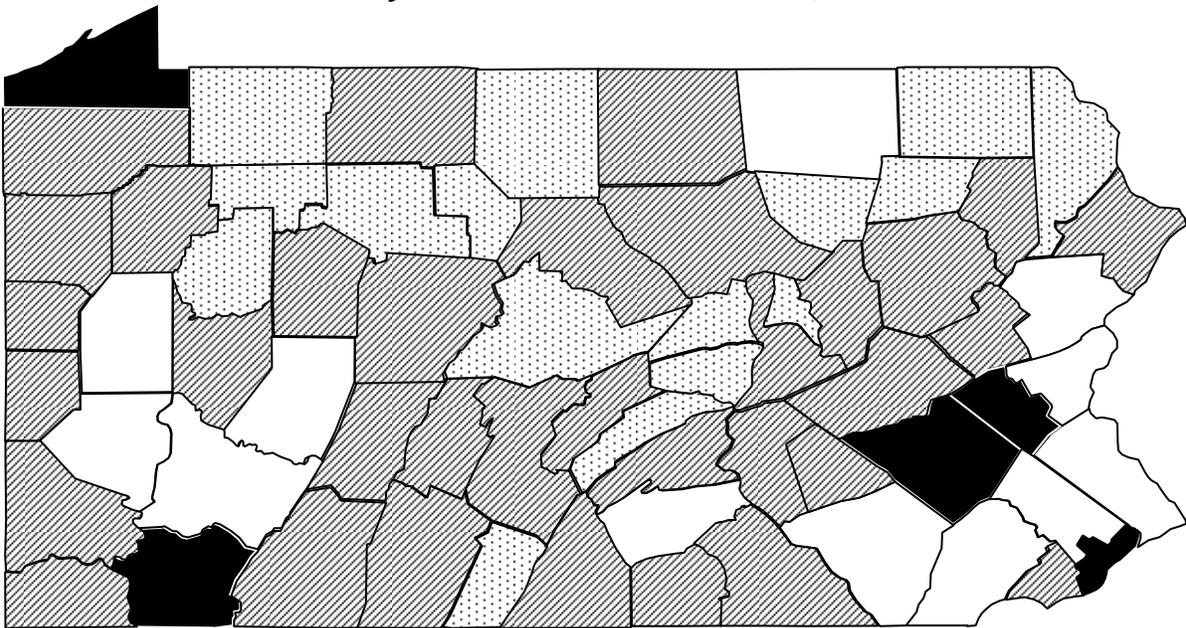
**Percent with No Prenatal Care in First Trimester  
Pennsylvania Resident Live Births, 2007**



**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, 2007**



**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  $\mu$  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 Mortality Rates, Total and By Race/Ethnicity

2007			2007 Infant Deaths:			2005-07 Infant Deaths:		
Infant Deaths	No.	Rate	White	No.	Rate	White	No.	Rate
Adams	14	12.0	Allegheny	44	4.5	Allegheny	140	4.8
Allegheny	98	7.3	Berks	21	5.9	Berks	73	6.5
Armstrong	5	ND	Bucks	22	3.9	Bucks	67	3.9
Beaver	10	5.5	Chester	32	6.5	Chester	81	5.3
Bedford	2	ND	Dauphin	17	7.9	Dauphin	40	6.4
Berks	33	6.4	Delaware	13	3.0	Delaware	66	5.0
Blair	8	ND	Erie	18	6.4	Erie	58	7.0
Bradford	7	ND	Lancaster	53	8.7	Lancaster	143	8.1
Bucks	28	4.1	Lehigh	32	11.9	Lehigh	75	9.4
Butler	9	ND	Montgomery	27	3.8	Montgomery	97	4.4
Cambria	13	8.4	Northampton	14	5.7	Northampton	42	5.8
Cameron	1	ND	Philadelphia	59	9.5	Philadelphia	199	10.8
Carbon	4	ND	Pennsylvania	676	6.2	Pennsylvania	2,045	6.2
Centre	11	8.2	U.S. (2007)	19,049	5.7			
Chester	41	6.8						
Clarion	2	ND						
Clearfield	6	ND						
Clinton	1	ND						
Columbia	1	ND						
Crawford	10	9.3						
Cumberland	17	6.7						
Dauphin	25	7.0						
Delaware	50	7.3						
Elk	2	ND						
Erie	29	8.2						
Fayette	6	ND						
Forest	0	ND						
Franklin	9	ND						
Fulton	5	ND						
Greene	0	ND						
Huntingdon	1	ND						
Indiana	6	ND						
Jefferson	3	ND						
Juniata	0	ND						
Lackawanna	15	6.3						
Lancaster	60	8.2						
Lawrence	8	ND						
Lebanon	13	7.6						
Lehigh	44	9.8						
Luzerne	19	5.7						
Lycoming	12	9.2						
McKean	5	ND						
Mercer	5	ND						
Mifflin	6	ND						
Monroe	8	ND						
Montgomery	47	5.0						
Montour	4	ND						
Northampton	20	6.1						
Northumberland	8	ND						
Perry	0	ND						
Philadelphia	286	12.1						
Pike	2	ND						
Potter	1	ND						
Schuylkill	10	6.7						
Snyder	1	ND						
Somerset	3	ND						
Sullivan	0	ND						
Susquehanna	2	ND						
Tioga	4	ND						
Union	2	ND						
Venango	4	ND						
Warren	4	ND						
Washington	15	7.1						
Wayne	2	ND						
Westmoreland	23	6.8						
Wyoming	1	ND						
York	32	6.1						
Pennsylvania	1,123	7.5						
United States (2007)	29,241	6.8						

2007 Infant Deaths:			2005-07 Infant Deaths:		
Black	No.	Rate	Black	No.	Rate
Allegheny	50	17.9	Allegheny	145	18.1
Bucks	5	ND	Bucks	11	11.5
Chester	7	ND	Chester	25	23.2
Dauphin	8	ND	Dauphin	33	13.7
Delaware	35	19.1	Delaware	79	15.0
Erie	10	22.1	Erie	24	19.0
Montgomery	11	13.3	Montgomery	39	15.6
Philadelphia	189	16.5	Philadelphia	550	16.4
Pennsylvania	375	17.0	Pennsylvania	1,062	16.6
U.S. (2007)	8,793	12.9			

Hispanic			Hispanic		
	No.	Rate		No.	Rate
Berks	5	ND	Berks	26	6.1
Chester	3	ND	Chester	7	ND
Lancaster	8	ND	Lancaster	23	9.3
Lehigh	8	ND	Lehigh	19	5.1
Montgomery	4	ND	Montgomery	9	ND
Northampton	3	ND	Northampton	8	ND
Philadelphia	32	8.2	Philadelphia	91	8.1
Pennsylvania	91	6.6	Pennsylvania	254	6.5
U.S. (2007)	6,063	5.7			

Asian and Pacific Islander			Asian and Pacific Islander		
	No.	Rate		No.	Rate
Allegheny	6	ND	Allegheny	6	ND
Delaware	4	ND	Delaware	4	ND
Montgomery	7	ND	Montgomery	7	ND
Philadelphia	25	5.8	Philadelphia	25	5.8
Pennsylvania	68	4.2	Pennsylvania	68	4.2

NOTES: Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). See Technical Notes. Hispanics can be of any race.

## Average Annual Incidence Rates for Selected Diseases, 2005-2007

<b>Syphilis</b>			<b>AIDS</b>			<b>Tuberculosis</b>		
	<b>No.</b>	<b>Rate</b>		<b>No.</b>	<b>Rate</b>		<b>No.</b>	<b>Rate</b>
Adams	1	ND	Adams	10	3.3	Adams	15	5.0
Allegheny	186	5.1	Allegheny	247	6.7	Allegheny	72	2.0
Armstrong	1	ND	Armstrong	5	ND	Armstrong	2	ND
Beaver	11	2.1	Beaver	18	3.4	Beaver	8	ND
Bedford	0	ND	Bedford	3	ND	Bedford	2	ND
Berks	9	ND	Berks	106	8.8	Berks	14	1.2
Blair	1	ND	Blair	16	4.2	Blair	6	ND
Bradford	1	ND	Bradford	3	ND	Bradford	1	ND
Bucks	24	1.3	Bucks	88	4.7	Bucks	45	2.4
Butler	0	ND	Butler	9	ND	Butler	5	ND
Cambria	0	ND	Cambria	20	4.5	Cambria	3	ND
Cameron	0	ND	Cameron	0	ND	Cameron	1	ND
Carbon	3	ND	Carbon	7	ND	Carbon	0	ND
Centre	0	ND	Centre	20	4.7	Centre	1	ND
Chester	8	ND	Chester	60	4.2	Chester	22	1.5
Clarion	1	ND	Clarion	2	ND	Clarion	0	ND
Clearfield	0	ND	Clearfield	6	ND	Clearfield	3	ND
Clinton	0	ND	Clinton	2	ND	Clinton	1	ND
Columbia	1	ND	Columbia	3	ND	Columbia	1	ND
Crawford	0	ND	Crawford	3	ND	Crawford	2	ND
Cumberland	2	ND	Cumberland	43	6.3	Cumberland	19	2.8
Dauphin	10	1.3	Dauphin	92	12.0	Dauphin	21	2.7
Delaware	7	ND	Delaware	230	13.8	Delaware	46	2.8
Elk	0	ND	Elk	0	ND	Elk	0	ND
Erie	7	ND	Erie	39	4.6	Erie	21	2.5
Fayette	17	3.9	Fayette	14	3.2	Fayette	5	ND
Forest	0	ND	Forest	4	ND	Forest	0	ND
Franklin	0	ND	Franklin	15	3.6	Franklin	8	ND
Fulton	0	ND	Fulton	2	ND	Fulton	0	ND
Greene	2	ND	Greene	7	ND	Greene	1	ND
Huntingdon	0	ND	Huntingdon	16	11.7	Huntingdon	1	ND
Indiana	0	ND	Indiana	4	ND	Indiana	3	ND
Jefferson	0	ND	Jefferson	2	ND	Jefferson	1	ND
Juniata	0	ND	Juniata	2	ND	Juniata	0	ND
Lackawanna	0	ND	Lackawanna	30	4.8	Lackawanna	16	2.5
Lancaster	9	ND	Lancaster	84	5.7	Lancaster	10	0.7
Lawrence	2	ND	Lawrence	8	ND	Lawrence	6	ND
Lebanon	0	ND	Lebanon	17	4.5	Lebanon	4	ND
Lehigh	8	ND	Lehigh	124	12.4	Lehigh	19	1.9
Luzerne	2	ND	Luzerne	50	5.3	Luzerne	8	ND
Lycoming	2	ND	Lycoming	34	9.6	Lycoming	1	ND
McKean	0	ND	McKean	2	ND	McKean	1	ND
Mercer	0	ND	Mercer	14	3.9	Mercer	3	ND
Mifflin	0	ND	Mifflin	1	ND	Mifflin	3	ND
Monroe	4	ND	Monroe	36	7.3	Monroe	3	ND
Montgomery	39	1.7	Montgomery	131	5.6	Montgomery	77	3.3
Montour	1	ND	Montour	2	ND	Montour	1	ND
Northampton	7	ND	Northampton	79	9.1	Northampton	15	1.7
Northumberland	0	ND	Northumberland	16	5.8	Northumberland	0	ND
Perry	0	ND	Perry	5	ND	Perry	0	ND
Philadelphia	347	8.0	Philadelphia	2,100	48.2	Philadelphia	398	9.1
Pike	1	ND	Pike	9	ND	Pike	0	ND
Potter	0	ND	Potter	1	ND	Potter	0	ND
Schuylkill	0	ND	Schuylkill	26	5.9	Schuylkill	4	ND
Snyder	0	ND	Snyder	2	ND	Snyder	2	ND
Somerset	0	ND	Somerset	7	ND	Somerset	3	ND
Sullivan	0	ND	Sullivan	0	ND	Sullivan	0	ND
Susquehanna	0	ND	Susquehanna	4	ND	Susquehanna	2	ND
Tioga	0	ND	Tioga	3	ND	Tioga	0	ND
Union	0	ND	Union	7	ND	Union	3	ND
Venango	0	ND	Venango	3	ND	Venango	1	ND
Warren	0	ND	Warren	3	ND	Warren	0	ND
Washington	2	ND	Washington	18	2.9	Washington	7	ND
Wayne	0	ND	Wayne	15	9.8	Wayne	2	ND
Westmoreland	3	ND	Westmoreland	18	1.6	Westmoreland	3	ND
Wyoming	0	ND	Wyoming	1	ND	Wyoming	1	ND
York	7	ND	York	108	8.7	York	15	1.2
Pennsylvania	726	1.9	Pennsylvania	4,056	10.9	Pennsylvania	938	2.5
U.S. (2007)	11,466	3.8	U.S. (2007)	37,503	12.5	U.S. (2007)	13,299	4.4

NOTES: Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). See the Technical Notes section.

## Average Annual Incidence Rate for Measles, 2005-2007

<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	ND	Elk	0	ND	Montour	0	ND
Allegheny	1	ND	Erie	0	ND	Northampton	0	ND
Armstrong	0	ND	Fayette	0	ND	Northumberland	0	ND
Beaver	0	ND	Forest	0	ND	Perry	0	ND
Bedford	0	ND	Franklin	0	ND	Philadelphia	0	ND
Berks	0	ND	Fulton	0	ND	Pike	0	ND
Blair	0	ND	Greene	0	ND	Potter	0	ND
Bradford	0	ND	Huntingdon	0	ND	Schuylkill	0	ND
Bucks	0	ND	Indiana	0	ND	Snyder	0	ND
Butler	0	ND	Jefferson	0	ND	Somerset	0	ND
Cambria	0	ND	Juniata	0	ND	Sullivan	0	ND
Cameron	0	ND	Lackawanna	0	ND	Susquehanna	0	ND
Carbon	0	ND	Lancaster	0	ND	Tioga	0	ND
Centre	0	ND	Lawrence	0	ND	Union	0	ND
Chester	0	ND	Lebanon	0	ND	Venango	0	ND
Clarion	0	ND	Lehigh	0	ND	Warren	0	ND
Clearfield	0	ND	Luzerne	0	ND	Washington	0	ND
Clinton	0	ND	Lycoming	2	ND	Wayne	1	ND
Columbia	0	ND	McKean	0	ND	Westmoreland	1	ND
Crawford	0	ND	Mercer	0	ND	Wyoming	0	ND
Cumberland	0	ND	Mifflin	0	ND	York	0	ND
Dauphin	0	ND	Monroe	0	ND			
Delaware	0	ND	Montgomery	0	ND	Pennsylvania	5	ND
						U.S. (2007)	43	0.01

## Average Annual Work-Related Injury Death Rate, 2005-2007

<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	8	ND	Elk	1	ND	Montour	2	ND
Allegheny	45	1.2	Erie	10	1.2	Northampton	9	ND
Armstrong	10	4.8	Fayette	8	ND	Northumberland	4	ND
Beaver	9	ND	Forest	0	ND	Perry	4	ND
Bedford	3	ND	Franklin	7	ND	Philadelphia	87	2.0
Berks	20	1.7	Fulton	1	ND	Pike	3	ND
Blair	9	ND	Greene	8	ND	Potter	0	ND
Bradford	5	ND	Huntingdon	2	ND	Schuylkill	13	2.9
Bucks	19	1.0	Indiana	4	ND	Snyder	7	ND
Butler	6	ND	Jefferson	5	ND	Somerset	9	ND
Cambria	8	ND	Juniata	3	ND	Sullivan	1	ND
Cameron	0	ND	Lackawanna	13	2.1	Susquehanna	5	ND
Carbon	5	ND	Lancaster	24	1.6	Tioga	2	ND
Centre	7	ND	Lawrence	6	ND	Union	2	ND
Chester	24	1.7	Lebanon	7	ND	Venango	4	ND
Clarion	2	ND	Lehigh	19	1.9	Warren	3	ND
Clearfield	8	ND	Luzerne	11	1.2	Washington	18	2.9
Clinton	10	8.9	Lycoming	5	ND	Wayne	3	ND
Columbia	9	ND	McKean	7	ND	Westmoreland	11	1.0
Crawford	8	ND	Mercer	9	ND	Wyoming	0	ND
Cumberland	20	3.0	Mifflin	5	ND	York	11	0.9
Dauphin	22	2.9	Monroe	9	ND			
Delaware	32	1.9	Montgomery	33	1.4	Pennsylvania	684	1.8
						U.S. (2007)	5,657	1.9

NOTES: Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). See the Technical Notes.

## Selected Birth Statistics by Race and Hispanic Origin of Mother, 2007

<b>Low Birth Weight</b>			<b>No Prenatal Care First Trimester</b>			<b>Births to Mother &lt;18</b>		
	<b>No.</b>	<b>Pct.</b>		<b>No.</b>	<b>Pct.</b>		<b>No.</b>	<b>Pct.</b>
<b>White:</b>			<b>White:</b>			<b>White:</b>		
Allegheny	693	7.1	Allegheny	704	8.3	Allegheny	113	1.2
Berks	246	6.9	Berks	545	17.3	Berks	84	2.4
Bucks	314	6.4	Bucks	505	13.2	Bucks	37	0.7
Chester	343	7.0	Chester	647	15.5	Chester	45	0.9
Dauphin	161	7.5	Dauphin	319	17.8	Dauphin	28	1.3
Delaware	269	6.3	Delaware	516	14.0	Delaware	54	1.3
Erie	213	7.5	Erie	480	19.3	Erie	92	3.2
Lancaster	375	6.2	Lancaster	1,231	22.5	Lancaster	81	1.3
Lehigh	204	7.6	Lehigh	324	14.7	Lehigh	51	1.9
Montgomery	464	6.5	Montgomery	847	14.3	Montgomery	56	0.8
Northampton	194	7.9	Northampton	272	13.9	Northampton	35	1.4
Philadelphia	467	7.6	Philadelphia	961	24.4	Philadelphia	116	1.9
Pennsylvania	7,741	7.1	Pennsylvania	14,990	16.4	Pennsylvania	1,940	1.8
U.S. (2006)	238,404	7.2	U.S. (2006)	NA	NA	U.S. (2006)	98,410	3.0
<b>Black:</b>			<b>Black:</b>			<b>Black:</b>		
Allegheny	394	14.1	Allegheny	364	17.6	Allegheny	233	8.3
Bucks	30	10.8	Bucks	67	34.5	Bucks	11	3.3
Chester	37	10.7	Chester	98	32.1	Chester	22	6.4
Dauphin	98	11.8	Dauphin	199	33.3	Dauphin	49	5.9
Delaware	242	13.2	Delaware	488	35.3	Delaware	118	6.4
Erie	60	13.3	Erie	125	32.8	Erie	66	14.6
Montgomery	87	10.5	Montgomery	234	37.6	Montgomery	45	5.4
Philadelphia	1,704	15.0	Philadelphia	2,790	41.9	Philadelphia	900	7.9
Pennsylvania	3,048	13.9	Pennsylvania	5,156	35.1	Pennsylvania	1,660	7.5
U.S. (2006)	90,445	13.6	U.S. (2006)	NA	NA	U.S. (2006)	41,474	6.2
<b>Hispanic:</b>			<b>Hispanic:</b>			<b>Hispanic:</b>		
Berks	124	8.6	Berks	476	38.3	Berks	120	8.3
Chester	51	6.9	Chester	260	39.1	Chester	39	5.2
Lancaster	88	10.1	Lancaster	149	21.9	Lancaster	66	7.6
Lehigh	133	9.7	Lehigh	349	34.5	Lehigh	113	8.2
Montgomery	55	7.4	Montgomery	250	41.7	Montgomery	35	4.7
Northampton	44	8.0	Northampton	114	25.9	Northampton	36	6.5
Philadelphia	375	9.6	Philadelphia	988	38.2	Philadelphia	316	8.1
Pennsylvania	1,216	8.9	Pennsylvania	3,685	35.0	Pennsylvania	955	7.0
U.S. (2006)	72,538	7.0	U.S. (2006)	NA	42.3	U.S. (2006)	54,446	5.2
<b>Asian and Pacific Islander:</b>			<b>Asian and Pacific Islander:</b>			<b>Asian and Pacific Islander:</b>		
Allegheny	43	7.7	Allegheny	42	8.8	Allegheny	0	ND
Delaware	32	7.5	Delaware	107	30.3	Delaware	2	ND
Montgomery	79	9.2	Montgomery	155	21.4	Montgomery	0	ND
Philadelphia	127	9.0	Philadelphia	389	40.9	Philadelphia	15	1.0
Pennsylvania	457	8.5	Pennsylvania	1,019	23.8	Pennsylvania	25	0.5
U.S. (2006)	19,539	8.1	U.S. (2006)	NA	NA	U.S. (2006)	2,511	1.0

NOTES: Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). 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, 2005-2007

All Causes	No.	Rate	CI (95%)	
North Central	19,926	830.5	818.97-842.03	-
Northeastern	48,538	846.7	839.17-854.23	
Northwestern	30,312	853.9	844.29-863.51	+
South Central	45,542	825.7	818.12-833.28	-
Southeastern	138,501	844.6	840.15-849.05	
Southwestern	94,055	846.2	840.79-851.61	
Pennsylvania	376,874	842.9	840.21-845.59	+
U.S. (2007)	2,424,059	760.3	759.34-761.26	

### Cardiovascular Disease

	No.	Rate	CI (95%)	
North Central	7,196	295.4	288.57-302.23	+
Northeastern	17,411	296.9	292.49-301.31	+
Northwestern	10,901	299.5	293.88-305.12	+
South Central	16,003	288.3	283.83-292.77	
Southeastern	46,732	280.6	278.06-283.14	-
Southwestern	33,372	289.4	286.29-292.51	
Pennsylvania	131,615	288.0	286.44-289.56	+
U.S. (2007)	803,504	249.1	248.56-249.64	

Lung Cancer	No.	Rate	CI (95%)	
North Central	1,223	50.1	47.29-52.91	-
Northeastern	2,954	50.7	48.87-52.53	-
Northwestern	1,966	54.9	52.47-57.33	
South Central	2,876	50.2	48.37-52.03	-
Southeastern	8,764	53.4	52.28-54.52	
Southwestern	6,090	55.0	53.62-56.38	+
Pennsylvania	23,873	53.0	52.33-53.67	+
U.S. (2007)	158,258	50.5	50.25-50.75	

### Diseases of Heart

	No.	Rate	CI (95%)	
North Central	5,636	231.7	225.65-237.75	+
Northeastern	13,670	233.1	229.19-237.01	+
Northwestern	8,308	228.6	223.68-233.52	+
South Central	12,450	224.1	220.16-228.04	
Southeastern	35,555	213.6	211.38-215.82	-
Southwestern	26,208	227.7	224.94-230.46	+
Pennsylvania	101,827	223.0	221.63-224.37	+
U.S. (2007)	615,651	190.7	190.22-191.18	

### Female

Breast Cancer	No.	Rate	CI (95%)	
North Central	319	24.1	21.46-26.74	
Northeastern	771	23.3	21.66-24.94	
Northwestern	481	24.3	22.13-26.47	
South Central	712	22.2	20.57-23.83	-
Southeastern	2,450	26.1	25.07-27.13	+
Southwestern	1,523	24.7	23.46-25.94	
Pennsylvania	6,256	24.6	23.99-25.21	+
U.S. (2006)	40,821	23.5	23.27-23.73	

### Stroke

	No.	Rate	CI (95%)	
North Central	1,156	47.3	44.57-50.03	
Northeastern	2,438	41.7	40.04-43.36	-
Northwestern	1,876	51.3	48.98-53.62	+
South Central	2,619	47.4	45.58-49.22	
Southeastern	8,437	50.6	49.52-51.68	+
Southwestern	5,243	45.1	43.88-46.32	-
Pennsylvania	21,769	47.5	46.87-48.13	+
U.S. (2007)	133,990	41.6	41.38-41.82	

### Intentional Self-harm

(Suicide)	No.	Rate	CI (95%)	
North Central	227	11.1	9.66-12.54	
Northeastern	629	13.3	12.26-14.34	+
Northwestern	357	12.5	11.20-13.80	+
South Central	525	10.5	9.60-11.40	
Southeastern	1,484	9.8	9.30-10.30	-
Southwestern	970	11.4	10.68-12.12	
Pennsylvania	4,192	10.9	10.57-11.23	
U.S. (2007)	33,185	10.8	10.68-10.92	

### Motor Vehicle

Accidents	No.	Rate	CI (95%)	
North Central	366	17.1	15.35-18.85	+
Northeastern	713	14.9	13.81-15.99	+
Northwestern	465	16.3	14.82-17.78	+
South Central	800	16.3	15.17-17.43	+
Southeastern	1,460	9.6	9.11-10.09	-
Southwestern	991	11.8	11.07-12.53	
Pennsylvania	4,795	12.5	12.15-12.85	-
U.S. (2007)	43,098	14.1	13.97-14.23	

Assault (Homicide)	No.	Rate	CI (95%)	
North Central	28	1.4	0.88-1.92	-
Northeastern	157	3.5	2.95-4.05	-
Northwestern	62	2.3	1.73-2.87	-
South Central	126	2.7	2.23-3.17	-
Southeastern	1,494	10.2	9.68-10.72	+
Southwestern	370	4.9	4.40-5.40	-
Pennsylvania	2,237	6.2	5.94-6.46	+
U.S. (2007)	17,520	5.8	5.71-5.89	

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, 2005-2007

All Infant Deaths	No.	Rate	$\mu$ (95%)
North Central	127	5.8	-2.76 -
Northeastern	326	6.4	-2.63 -
Northwestern	241	7.9	1.02
South Central	417	7.0	-1.14
Southeastern	1,623	8.2	4.15 +
Southwestern	558	6.7	-2.37 -
Pennsylvania	3,292	7.4	4.87 +
U.S. (2007)	29,241	6.8	

White	No.	Rate	Black	No.	Rate	Hispanic	No.	Rate
North Central	119	5.8	North Central	6	ND	North Central	1	ND
Northeastern	266	6.7	Northeastern	40	14.6	Northeastern	42	5.3
Northwestern	199	7.2	Northwestern	35	19.7	Northwestern	4	ND
South Central	341	6.8	South Central	68	16.2	South Central	36	7.9
Southeastern	751	6.3	Southeastern	745	16.5	Southeastern	164	6.7
Southwestern	369	5.2	Southwestern	168	17.5	Southwestern	7	ND
Pennsylvania	2,045	6.2	Pennsylvania	1062	16.6	Pennsylvania	254	6.5
U.S. (2007)	19,049	5.7	U.S. (2007)	8,793	12.9	U.S. (2007)	6,063	5.7

## Infant Deaths, Number and Rate By Race and Hispanic Origin, 2007

All Infant Deaths	No.	Rate	$\mu$ (95%)
North Central	52	7.1	-0.39
Northeastern	117	6.7	-1.22
Northwestern	79	7.7	0.24
South Central	132	6.5	-1.65
Southeastern	555	8.3	2.39 +
Southwestern	188	6.6	-1.76
Pennsylvania	1,123	7.5	3.30 +
U.S. (2007)	29,241	6.8	

White	No.	Rate	Black	No.	Rate	Hispanic	No.	Rate
North Central	51	7.4	North Central	1	ND	North Central	1	ND
Northeastern	94	7.1	Northeastern	16	16.1	Northeastern	18	6.3
Northwestern	62	6.7	Northwestern	14	21.7	Northwestern	1	ND
South Central	112	6.6	South Central	19	12.8	South Central	15	9.4
Southeastern	236	6.0	Southeastern	265	17.2	Southeastern	56	6.6
Southwestern	121	5.1	Southwestern	60	18.0	Southwestern	0	ND
Pennsylvania	676	6.2	Pennsylvania	375	17.0	Pennsylvania	91	6.6
U.S. (2007)	19,049	5.7	U.S. (2007)	8,793	12.9	U.S. (2007)	6,063	5.7

Note: A + or - after the value of  $\mu$  denotes if the district rate was significantly higher or lower than the state rate. No + or - after the  $\mu$  value denotes no significant difference. State data were compared to U.S. data. Two separate formulas computed the  $\mu$  values, depending on the number of events. The value of  $\mu$  was not calculated for rates based on less than 10 events or for rates by race and Hispanic origin. Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). See Technical Notes.

# Health Status Indicators by Department of Health District

## Selected Diseases

### Total Number and Average Annual Rate, 2005-2007

<b>Syphilis</b>	<b>No.</b>	<b>Rate</b>	<b>Tuberculosis</b>	<b>No.</b>	<b>Rate</b>
North Central	5	ND	North Central	11	0.5
Northeastern	25	0.5	Northeastern	66	1.4
Northwestern	10	0.4	Northwestern	39	1.4
South Central	21	0.4	South Central	94	1.9
Southeastern	443	3.0	Southeastern	616	4.2
Southwestern	222	2.7	Southwestern	112	1.4
Pennsylvania	726	1.9	Pennsylvania	938	2.5
U.S. (2007)	11,466	3.8	U.S. (2007)	13,299	4.4
<b>AIDS</b>	<b>No.</b>	<b>Rate</b>	<b>Measles</b>	<b>No.</b>	<b>Rate</b>
North Central	93	4.6	North Central	2	ND
Northeastern	355	7.6	Northeastern	1	ND
Northwestern	86	3.1	Northwestern	0	ND
South Central	330	6.8	South Central	0	ND
Southeastern	2,825	19.1	Southeastern	0	ND
Southwestern	367	4.5	Southwestern	2	ND
Pennsylvania	4,056	10.9	Pennsylvania	5	ND
U.S. (2007)	37,503	12.5	U.S. (2007)	43	0.01

### Low Birth Weight, Number and Percent, By Race and Hispanic Origin, 2007

<b>All Births</b>	<b>No.</b>	<b>Pct.</b>	<b>μ (95%)</b>
North Central	506	6.9	-4.63 -
Northeastern	1,446	8.4	0.00
Northwestern	778	7.6	-2.92 -
South Central	1,564	7.7	-3.60 -
Southeastern	5,896	9.0	5.54 +
Southwestern	2,306	8.1	-1.82
Pennsylvania	12,496	8.4	1.40
U.S. (2006)	351,974	8.3	

<b>White</b>	<b>No.</b>	<b>Pct.</b>	<b>Black</b>	<b>No.</b>	<b>Pct.</b>	<b>Hispanic</b>	<b>No.</b>	<b>Pct.</b>
North Central	473	6.9	North Central	13	8.0	North Central	12	8.1
Northeastern	1,041	7.8	Northeastern	127	12.9	Northeastern	260	9.1
Northwestern	656	7.1	Northwestern	90	14.0	Northwestern	27	9.9
South Central	1,205	7.1	South Central	178	12.0	South Central	140	8.8
Southeastern	2,601	6.8	Southeastern	2,180	14.3	Southeastern	749	8.9
Southwestern	1,765	7.4	Southwestern	460	13.8	Southwestern	28	7.8
Pennsylvania	7,741	7.1	Pennsylvania	3,048	13.9	Pennsylvania	1,216	8.9
U.S. (2006)	238,404	7.2	U.S. (2006)	90,445	13.6	U.S. (2006)	72,538	7.0

Note: A + or - after the value of  $\mu$  denotes if the district rate was significantly higher or lower than the state rate. No + or - after the  $\mu$  value denotes no significant difference. State data were compared to U.S. data. Two separate formulas computed the  $\mu$  values, depending on the number of events. The value of  $\mu$  was not calculated for rates based on less than 10 events or for rates by race and Hispanic origin. Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). 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, 2007

All Births	No.	Pct.	$\mu$ (95%)
North Central	1,140	17.5	-5.81 -
Northeastern	2,726	19.8	-1.75
Northwestern	1,910	21.1	1.65
South Central	3,447	20.4	0.00
Southeastern	12,186	24.5	22.69 +
Southwestern	3,190	13.1	-28.27 -
Pennsylvania	24,599	20.4	-79.59 -
U.S. (2006)	NA	31.0	

White	No.	Pct.	Black	No.	Pct.	Hispanic	No.	Pct.
North Central	1,020	16.7	North Central	63	44.4	North Central	35	26.3
Northeastern	1,729	16.1	Northeastern	260	35.8	Northeastern	746	33.4
Northwestern	1,660	20.3	Northwestern	170	31.0	Northwestern	69	29.6
South Central	2,632	18.5	South Central	347	31.1	South Central	439	33.7
Southeastern	5,381	17.2	Southeastern	3,824	39.6	Southeastern	2,328	36.9
Southwestern	2,568	12.2	Southwestern	492	19.6	Southwestern	68	22.7
Pennsylvania	14,990	16.4	Pennsylvania	5,156	35.1	Pennsylvania	3,685	35.0
U.S. (2006)	NA	NA	U.S. (2006)	NA	NA	U.S. (2006)	NA	42.3

## Live Births to Mothers Under Age 18, Number and Percent, By Race and Hispanic Origin, 2007

All Births	No.	Pct.	$\mu$ (95%)
North Central	158	2.2	-3.97 -
Northeastern	489	2.8	-1.55
Northwestern	354	3.5	2.95 +
South Central	550	2.7	-2.51 -
Southeastern	2,230	3.3	4.57 +
Southwestern	718	2.5	-4.97 -
Pennsylvania	4,499	3.0	-8.55 -
U.S. (2006)	145,339	3.4	

White	No.	Pct.	Black	No.	Pct.	Hispanic	No.	Pct.
North Central	141	2.1	North Central	10	6.1	North Central	6	ND
Northeastern	267	2.0	Northeastern	56	5.7	Northeastern	194	6.8
Northwestern	245	2.7	Northwestern	84	13.0	Northwestern	28	10.3
South Central	368	2.2	South Central	90	6.0	South Central	105	6.6
Southeastern	503	1.3	Southeastern	1,135	7.4	Southeastern	606	7.1
Southwestern	416	1.7	Southwestern	285	8.6	Southwestern	16	4.5
Pennsylvania	1,940	1.8	Pennsylvania	1,660	7.5	Pennsylvania	955	7.0
U.S. (2006)	98,410	3.0	U.S. (2006)	41,474	6.2	U.S. (2006)	54,446	5.2

Note: A + or - after the value of  $\mu$  denotes if the district rate was significantly higher or lower than the state rate. No + or - after the  $\mu$  value denotes no significant difference. State data were compared to U.S. data (prenatal care data are for 18 states only). Two separate formulas were used to compute the  $\mu$  values, depending on the number of events. The value of  $\mu$  was not calculated for rates based on less than 10 events or for rates by race and Hispanic Origin. Rates based on less than 10 events are considered statistically unreliable and are not displayed (ND). 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 2006 data. **Please note that the 2006 U.S. prenatal care data that appear in this report are limited and are based on only the eighteen states [Delaware, Florida, Idaho, Kansas, Kentucky, Nebraska, New Hampshire, New York (excluding New York City), North Dakota, Ohio, Pennsylvania, South Carolina, South Dakota, Tennessee, Texas, Vermont, Washington, and Wyoming] 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 2007 data (female breast cancer are final 2006 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.

Population estimates, for the years 2005 through 2007, 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

The U.S. Census Bureau 2007 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](http://www.census.gov) to review complete data tables, including confidence intervals and data limitations.

## 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 mortality 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 previously). 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 (2005-2007) age-adjusted death rate for suicide (10.9) to calculate an estimated SE. The rate was based on 4,192 suicides. The square root of 4,192 is 64.75. By dividing the rate of 10.9 by 64.75, one obtains the estimated SE of 0.1684. 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  $10.9 \pm (1.96 \times 0.1684)$  and the result is  $10.9 \pm 0.33$ . 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 2005-2007 was between 10.57 and 11.23.

To compare a particular county's age-adjusted suicide rate for 2005-2007 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, Perry County's age-adjusted suicide rate for

2005-2007 of 15.0 (based on 21 deaths) seems much higher than the corresponding state rate of 10.9. However, calculation of a 95 percent CI for Perry County's rate would produce a rather wide range of 8.58-21.42. Since this range for Perry 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, age-adjusted rates and CIs were not computed, compared and shown in this report when the number of events was less than twenty.

## 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. Please note that when the number of

events is less than 10, then crude rates are not displayed and significance testing is not performed due to the unreliability of rates based on small numbers. The formulas for determining significance 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  $\mu$  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 mortality 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  $\mu$

Since the value of  $\mu$  in the previous computation exceeds the value of 1.96, it can be stated that the difference between the county's infant mortality 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 mortality rate that year was significantly higher than the infant mortality 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  $\mu$  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:

- r<sub>1</sub> = rate for County 1
- r<sub>2</sub> = 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:

- CL<sub>1</sub> = confidence limit for County 1 rate
- CL<sub>2</sub> = 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 r<sub>2</sub> in the following formula.

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

$$R = (r_1 / r_2)$$

where:

- r<sub>1</sub> = rate for County 1
- r<sub>2</sub> = 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:

- d<sub>1</sub> = number of events for County 1
- d<sub>2</sub> = 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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## References

1. **Centers for Disease Control and Prevention**, *Summary of Notifiable Diseases, United States 2007*. Morbidity and Mortality Weekly Report: Vol. 56 No. 53. Atlanta, Georgia: July 09, 2009.
2. **Chaing CL**. *Standard Error of the Age-Adjusted Rate*. Vital Statistics Special Reports 1961;47(9).
3. **Curtin LP** and **Klein RJ**. *Direct Standardization (Age-Adjusted Death Rates)*. Statistical Notes; Number 6. Hyattsville, Maryland: National Center for Health Statistics. March 1995.
4. **Dever, Alan GE**. *Epidemiology in Health Services Management*. Rockville, Maryland: Aspen Systems Corporation. 1984.
5. **Freedman MA**. *Health Status Indicators for the Year 2000*. Statistical Notes; Vol. 1 No. 1. Hyattsville, Maryland: National Center for Health Statistics. 1991.
6. **Keyfitz N**. *Sampling Variance of Standardized Mortality Rates*. Human Biology, 38:309-317, 1966.
7. **Klein RJ** and **Hawk SA**. *Health Status Indicators: Definitions and National Data*. Statistical Notes; Vol. 1 No. 3. Hyattsville, Maryland: National Center for Health Statistics. 1992.
8. **National Center for Health Statistics**, *Births: Final Data for 2006*, National Vital Statistics Report Vol. 57 No. 7; Hyattsville, Maryland. DHHS Publication No. (PHS) 2009-1120 (1/2009).
9. **Centers for Disease Control and Prevention. National Center for Health Statistics**. *Vital Stats*. <http://www.cdc.gov/nchs/vitalstats.htm>. May 12, 2009.
10. **National Center for Health Statistics**, *Deaths: Preliminary Data for 2007*, National Vital Statistics Report Vol. 58 No. 1; Hyattsville, Maryland. DHHS Publication No. (PHS) 2009-1120 (8/2009).
11. **National Center for Health Statistics**, *Deaths: Final Data for 2006*, National Vital Statistics Report Vol. 57 No. 14; Hyattsville, Maryland. DHHS Publication No. (PHS) 2009-1120 (4/2009).
12. **Pennsylvania Department of Health**. *Comparing Rates – Part 1: Dependant Rates*. Statistical News from the State Health Data Center; Vol. 12 No. 3, pp. 4-5. Harrisburg, Pennsylvania: State Health Data Center. 1989.
13. **Pennsylvania Department of Health**. *Comparing Rates – Part 2: Independent Rates*. Statistical News from the State Health Data Center; Vol. 12 No. 4, pp. 4-5, 8. Harrisburg, Pennsylvania: State Health Data Center. 1989.
14. **U.S. Department of Health and Human Services**. *Healthy People 2000: National Health Promotion and Disease Prevention Objectives for the Nation*. Washington DC: Public Health Service. 1991.
15. **U.S. Department of Health and Human Services**. *Healthy People 2010*. 2<sup>nd</sup> ed. 2 vols. Washington DC; US Government Printing Office, November 2000.
16. **U.S. Department of Health and Human Services**. *International Statistical Classification of Diseases and Related Health Problems*. Tenth Revision. Prepared by the World Health Organization, Geneva 1992.

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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 2008 data are available, 2004-2008 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](http://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 2007 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](http://www.census.gov).

# Pennsylvania Health Districts and Counties

