susan g. komen.

COMMUNITY PROFILE REPORT 2015

PENNSYLVANIA

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Introduction

About Susan G. Komen®

Susan G. Komen is the world's largest breast cancer organization, funding more breast cancer research than any other nonprofit while providing real-time help to those facing the disease. Since 1982, Komen has funded more than $889 million in research and provided $1.95 billion in funding to screening, education, treatment and psychosocial support programs serving millions of people in more than 30 countries worldwide. Komen was founded by Nancy G. Brinker, who promised her sister, Susan G. Komen, that she would end the disease that claimed Suzy's life.

Since 1982, Komen has contributed to many of the advances made in the fight against breast cancer and transformed how the world treats and talks about this disease and have helped turn millions of breast cancer patients into breast cancer survivors:

- **More early detection and effective treatment.** Currently, about 70 percent of women 40 and older receive regular mammograms, the single most effective screening tool to find breast cancer early. Since 1990, early detection and effective treatment have resulted in a 34 percent decline in breast cancer death in the US.
- **More hope.** In 1980, the five-year relative survival rate for women diagnosed with early stage breast cancer was about 74 percent. Today, it's 99 percent.
- **More research.** The federal government now devotes more than $850 million each year to breast cancer research, treatment and prevention, compared to $30 million in 1982.
- **More survivors.** Today, there are more than three million breast cancers survivors in the US.

Visit komen.org or call 1-877 GO KOMEN. Connect with us on social at ww5.komen.org/social.

Susan G. Komen Affiliate Network

Thanks to survivors, volunteers and activists dedicated to the fight against breast cancer, the Komen Affiliate Network is working to better the lives of those facing breast cancer in the local community. Through events like the Komen Race for the Cure® series, the local Komen Affiliates invest funds raised locally into community health programs to provide evidence-based breast health education and breast cancer screening, diagnostic and treatment programs, and contribute to the more than $889 million invested globally in research.

For more information or to connect with a local Affiliate, contact the following Komen Affiliates that are located in or services the State of Pennsylvania as of February 2017:

Susan G. Komen® Northeastern Pennsylvania
125 North Washington Avenue, Suite 260
Scranton, PA 18503
570- 969-6072
http://komennepa.org/

Susan G. Komen® Philadelphia
125 South 9th Street, Suite 202
Philadelphia, PA 19107
215- 238-8900
https://komenphiladelphia.org/

Susan G Komen® Pittsburgh
1133 S. Braddock Avenue
Pittsburgh, PA 15218
412-342-0500
www.komenpittsburgh.org

Susan G Komen® Twin Tiers Region
244 West Water Street, Suite E
Elmira, NY 14901
607-426-3405
www.komentwintiers.org

Purpose of the State Community Profile Report

The purpose of the Pennsylvania Community Profile is to assess breast cancer burden within the state by identifying areas at highest risk of negative breast cancer outcomes. Through the Community Profile, populations most at-risk of dying from breast cancer and their demographic and socioeconomic characteristics can be identified; as well as, the needs and disparities that exist in availability, access and utilization of quality care.

The Community Profile consists of the following three sections:

- ***Quantitative Data:*** This section provides secondary data on breast cancer rates and trends that include incidence, deaths and late-stage diagnosis along with mammography screening proportions. This section also explores demographic, social and geographic characteristics that influence breast cancer outcomes such as race/ethnicity, socioeconomic status, educational attainment and insurance status.
- ***Health System Analysis:*** This section tells the story of the breast cancer continuum of care and the delivery of quality health care in the community. Key to this section is the observation of potential strengths and weaknesses in the health care system that could compromise a women's health as she works her way through the continuum of care (e.g., screening, diagnosis, treatment and follow-up/survivorship services).
- ***Public Policy Overview***: This section provides an overview of key breast cancer policies that affect the ability of at-risk women in accessing and utilizing quality care. This section covers the state's National Breast and Cervical Cancer Early Detection Program, the state's National Comprehensive Cancer Control Program and the Affordable Care Act.

Quantitative Data: Measuring Breast Cancer Impact in Local Communities

The purpose of the quantitative data report for the State of Pennsylvania is to provide quantitative data from many credible sources and use the data to identify the highest priority areas in the state for evidence-based breast cancer programs.

The quantitative data report provides the following data at the state and county-level as well as for the United States:

- Female breast cancer incidence (new cases)
- Female breast cancer death rates
- Late-stage diagnosis
- Screening mammography proportions
- Population demographics (e.g. age, race/ethnicity)
- Socioeconomic indicators (e.g. income and education level)

The data provided in the report can be used to identify priorities within the state based on estimates of how long it would take an area to achieve Healthy People 2020 objectives for breast cancer late-stage diagnosis and death rates (Healthy People 2020, 2010).

Quantitative Data

This section of the report provides specific information on the major types of data that are included in the report.

Incidence Rates

"Incidence" means the number of new cases of breast cancer that develop in a specific time period.

If the breast cancer incidence rate increases, it may mean that more women are getting breast cancer. However, it could also mean that more breast cancers are being found because of an increase in screening.

The breast cancer incidence rate shows the frequency of new cases of breast cancer among women living in an area during a certain time period. Incidence rates may be calculated for all women or for specific groups of women (e.g. for Asian/Pacific Islander women living in the area).

How incidence rates are calculated

The female breast cancer incidence rate is calculated as the number of females in an area who were diagnosed with breast cancer divided by the total number of females living in that area. Incidence rates are usually expressed in terms of 100,000 people. For example, suppose there are 50,000 females living in an area and 60 of them are diagnosed with breast cancer during a

certain time period. Sixty out of 50,000 is the same as 120 out of 100,000. So the female breast cancer incidence rate would be reported as 120 per 100,000 for that time period.

Adjusting for age

Breast cancer becomes more common as women grow older. When comparing breast cancer rates for an area where many older people live to rates for an area where younger people live, it's hard to know whether the differences are due to age or whether other factors might also be involved.

To account for age, breast cancer rates are usually adjusted to a common standard age distribution. This is done by calculating the breast cancer rates for each age group (such as 45- to 49-year-olds) separately, and then figuring out what the total breast cancer rate would have been if the proportion of people in each age group in the population that's being studied was the same as that of the standard population.

Using age-adjusted rates makes it possible to spot differences in breast cancer rates caused by factors other than differences in age between groups of women.

Trends over time

To show trends (changes over time) in cancer incidence, data for the annual percent change in the incidence rate over a five-year period were included in the report. The annual percent change is the average year-to-year change of the incidence rate. It may be either a positive or negative number.

- A negative value means that the rates are getting lower.
- A positive value means that the rates are getting higher.
- A positive value (rates getting higher) may seem undesirable—and it generally is. However, it's important to remember that an increase in breast cancer incidence could also mean that more breast cancers are being found because more women are getting mammograms. So higher rates don't necessarily mean that there has been an increase in the occurrence of breast cancer.

Confidence intervals

Because numbers for breast cancer rates and trends are not exact, this report includes confidence intervals. A confidence interval is a range of values that gives an idea of how uncertain a value may be. It's shown as two numbers—a lower value and a higher one. It is very unlikely that the true rate is less than the lower value or more than the higher value.
For example, if a breast cancer incidence rate was reported as 120 per 100,000 women, with a confidence interval of 105 to 135, the real rate might not be exactly 120 per 100,000, but it's very unlikely that it's less than 105 or more than 135.

Breast cancer incidence rates and trends

Breast cancer incidence rates and trends are shown in Table 2.1 for:

- United States
- State of Pennsylvania
- Each county of Pennsylvania

For the State of Pennsylvania, rates are also shown by race for Whites, Blacks/African-Americans, Asians and Pacific Islanders (API), and American Indians and Alaska Natives (AIAN). In addition, rates are shown by ethnicity for Hispanics/Latinas and women who are not Hispanic/Latina (regardless of their race).

The rates in Table 2.1 are shown per 100,000 females from 2006 to 2010.

Table 2.1. Female breast cancer incidence rates and trends

Population Group	Female Population (Annual Average)	# of New Cases (Annual Average)	Age-adjusted Incidence Rate /100,000	Confidence Interval of Age-adjusted Incidence Rate	Incidence Trend (Annual Percent Change)	Confidence Interval of Incidence Trend
US (states with available data)	145,332,861	198,602	122.1	121.9 : 122.4	-0.2%	-2.0% : 1.7%
Pennsylvania	6,474,106	10,133	126.0	124.9 : 127.2	0.5%	-1.8% : 2.8%
White	5,502,399	9,006	125.6	124.4 : 126.8	0.4%	-2.3% : 3.1%
Black/African-American	766,641	913	127.8	124.1 : 131.6	1.6%	-1.0% : 4.3%
AIAN	21,340	8	41.9	29.4 : 58.0	-8.6%	-17.5% : 1.2%
API	183,726	101	65.7	59.8 : 71.9	-3.7%	-7.6% : 0.4%
Non-Hispanic/ Latina	6,153,499	9,959	127.0	125.8 : 128.1	0.6%	-1.7% : 2.9%
Hispanic/ Latina	320,607	174	90.9	84.5 : 97.6	-2.4%	-8.9% : 4.6%
Adams County	51,263	79	124.8	112.5 : 138.1	-2.0%	-13.6% : 11.2%
Allegheny County	638,859	1,128	133.8	130.2 : 137.5	0.5%	-3.4% : 4.5%
Armstrong County	35,266	56	115.4	101.8 : 130.4	1.2%	-5.1% : 8.0%
Beaver County	88,887	160	127.3	118.3 : 136.9	1.0%	-9.1% : 12.3%
Bedford County	25,103	42	124.5	107.8 : 143.3	-1.8%	-12.6% : 10.5%
Berks County	207,459	301	122.8	116.6 : 129.3	-0.6%	-2.7% : 1.5%
Blair County	65,497	100	112.7	102.7 : 123.6	3.8%	-1.1% : 8.9%
Bradford County	31,772	53	125.4	110.4 : 142.0	0.0%	-5.7% : 6.0%
Bucks County	317,158	508	129.3	124.2 : 134.5	-0.6%	-6.1% : 5.3%
Butler County	92,759	148	127.3	118.1 : 137.1	1.3%	-10.2% : 14.4%
Cambria County	73,480	118	115.7	106.0 : 126.1	1.5%	-14.3% : 20.1%
Cameron County	2,650	5	127.5	81.3 : 195.5	-2.5%	-13.7% : 10.1%
Carbon County	32,791	55	121.3	107.0 : 137.2	9.6%	0.9% : 19.1%
Centre County	73,125	81	116.8	105.5 : 129.0	-0.5%	-11.9% : 12.3%
Chester County	249,744	385	135.6	129.5 : 141.9	-1.3%	-5.1% : 2.8%
Clarion County	20,781	34	134.2	114.2 : 156.9	-2.1%	NA

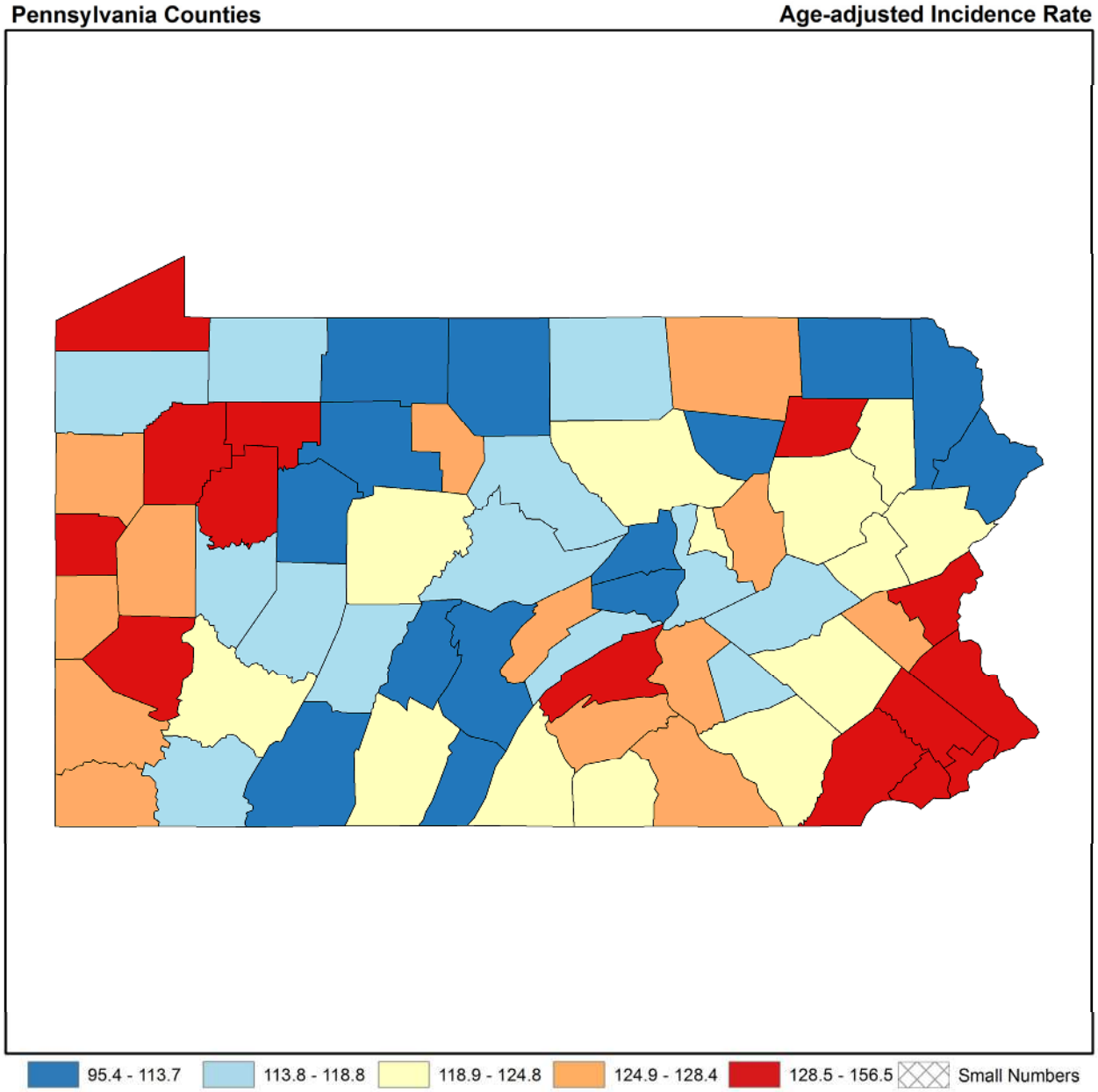
Population Group	Female Population (Annual Average)	# of New Cases (Annual Average)	Age-adjusted Incidence Rate /100,000	Confidence Interval of Age-adjusted Incidence Rate	Incidence Trend (Annual Percent Change)	Confidence Interval of Incidence Trend
Clearfield County	39,959	67	123.5	110.3 : 138.1	-8.4%	-23.4% : 9.5%
Clinton County	19,869	28	114.4	95.5 : 136.1	-7.3%	-32.8% : 27.9%
Columbia County	34,736	51	124.9	109.5 : 141.9	1.6%	-8.4% : 12.8%
Crawford County	45,721	68	114.3	102.2 : 127.5	-6.1%	-11.5% : -0.3%
Cumberland County	118,099	185	126.3	118.1 : 134.9	2.7%	-4.7% : 10.6%
Dauphin County	136,902	210	127.5	119.8 : 135.6	0.7%	-4.7% : 6.5%
Delaware County	290,044	460	133.4	127.9 : 139.1	1.1%	-4.4% : 6.9%
Elk County	16,384	23	99.5	81.4 : 120.8	2.1%	-7.4% : 12.6%
Erie County	142,211	221	128.5	120.8 : 136.5	3.3%	-3.9% : 11.1%
Fayette County	70,942	113	113.8	104.3 : 124.1	3.4%	-5.3% : 12.8%
Forest County	2,558	7	156.5	107.1 : 227.8	-23.1%	NA
Franklin County	74,936	113	121.2	111.2 : 132.0	-8.1%	-16.1% : 0.7%
Fulton County	7,391	9	95.4	69.5 : 128.4	-6.3%	-21.9% : 12.4%
Greene County	18,934	31	128.2	108.2 : 150.9	15.0%	8.6% : 21.8%
Huntingdon County	21,605	28	96.1	80.4 : 114.1	-4.4%	-18.9% : 12.6%
Indiana County	44,890	67	118.8	105.9 : 132.9	-9.4%	-26.4% : 11.3%
Jefferson County	22,923	33	110.2	93.5 : 129.2	6.7%	-19.7% : 41.8%
Juniata County	12,226	17	115.2	91.2 : 143.7	-9.3%	-26.1% : 11.4%
Lackawanna County	111,271	180	120.1	112.1 : 128.6	3.5%	-1.7% : 8.9%
Lancaster County	261,538	362	119.0	113.5 : 124.8	0.5%	-9.4% : 11.6%
Lawrence County	47,562	85	128.9	116.4 : 142.5	2.5%	-5.2% : 10.9%
Lebanon County	67,205	100	114.7	104.5 : 125.7	-1.8%	-6.6% : 3.2%
Lehigh County	177,396	269	125.8	119.1 : 132.9	0.2%	-6.3% : 7.1%
Luzerne County	163,524	278	123.1	116.4 : 130.1	-1.5%	-9.4% : 7.2%
Lycoming County	59,441	94	122.3	111.2 : 134.3	11.6%	0.1% : 24.5%
McKean County	21,543	31	108.6	91.4 : 128.3	-5.2%	-22.1% : 15.3%
Mercer County	59,872	103	125.3	114.2 : 137.2	8.8%	-2.2% : 20.9%
Mifflin County	23,822	42	127.8	110.4 : 147.3	6.2%	-3.2% : 16.6%
Monroe County	84,993	117	121.3	111.5 : 131.6	-2.1%	-9.5% : 5.9%
Montgomery County	407,295	669	134.1	129.5 : 138.8	0.5%	NA
Montour County	9,450	18	124.0	98.3 : 155.1	2.3%	-16.4% : 25.2%
Northampton County	150,529	243	130.1	122.7 : 137.9	2.4%	-0.3% : 5.2%
Northumberland County	47,247	79	114.8	103.2 : 127.4	-5.5%	-17.0% : 7.6%
Perry County	22,751	35	129.1	110.5 : 150.2	-7.5%	-12.9% : -1.6%
Philadelphia County	797,130	1,097	128.5	125.1 : 132.0	0.4%	-3.4% : 4.4%
Pike County	28,510	40	109.9	94.9 : 126.8	11.4%	-13.5% : 43.4%
Potter County	8,787	13	103.3	78.9 : 133.5	-7.3%	-41.1% : 45.8%
Schuylkill County	73,229	124	117.4	107.9 : 127.5	8.1%	-5.4% : 23.5%

Population Group	Female Population (Annual Average)	# of New Cases (Annual Average)	Age-adjusted Incidence Rate /100,000	Confidence Interval of Age-adjusted Incidence Rate	Incidence Trend (Annual Percent Change)	Confidence Interval of Incidence Trend
Snyder County	19,976	27	113.7	95.0 : 135.1	0.5%	-6.3% : 7.9%
Somerset County	38,115	58	108.7	96.0 : 122.7	-4.4%	-17.6% : 10.9%
Sullivan County	3,144	5	98.8	64.2 : 151.0	-15.1%	-44.3% : 29.5%
Susquehanna County	21,615	32	108.4	92.0 : 127.2	3.7%	-17.4% : 30.1%
Tioga County	21,228	33	117.4	99.6 : 137.7	-7.1%	-26.4% : 17.4%
Union County	20,115	27	110.5	91.8 : 132.0	3.0%	-20.3% : 33.3%
Venango County	28,240	50	130.5	114.2 : 148.7	3.0%	NA
Warren County	21,050	35	116.9	99.6 : 136.6	-10.5%	-28.8% : 12.5%
Washington County	106,480	181	126.0	117.6 : 134.8	-3.6%	-12.5% : 6.1%
Wayne County	24,993	35	98.2	83.5 : 115.0	-1.6%	-17.2% : 17.0%
Westmoreland County	187,964	336	124.7	118.5 : 131.1	2.0%	-4.0% : 8.3%
Wyoming County	14,142	25	145.1	120.2 : 173.9	0.8%	-17.2% : 22.7%
York County	217,026	326	126.1	120.0 : 132.5	1.7%	-0.8% : 4.3%

NA – data not available.
SN – data suppressed due to small numbers (15 cases or fewer for the 5-year data period).
Data are for years 2006-2010.
Rates are in cases per 100,000.
Age-adjusted rates are adjusted to the 2000 US standard population.
Source: NAACCR – CINA Deluxe Analytic File.

Map of incidence rates

Figure 2.1 shows a map of breast cancer incidence rates for the counties in Pennsylvania. When the numbers of cases used to compute the rates are small (15 cases or fewer for the five-year data period), those rates are unreliable and are shown as “small numbers” on the map.



*Map with counties labeled is available in Appendix.
Data are for years 2006-2010.
Rates are in cases per 100,000.
Age-adjusted rates are adjusted to the 2000 US standard population.
Source: NAACCR – CINA Deluxe Analytic File.

Figure 2.1. Female breast cancer age-adjusted incidence rates

Conclusions: Breast cancer incidence rates and trends

Overall, the breast cancer incidence rate in the State of Pennsylvania was significantly higher than that observed in the US as a whole and the incidence trend was higher than the US as a whole.

For the United States, breast cancer incidence in Blacks/African-Americans is lower than in Whites overall. The most recent estimated breast cancer incidence rates for APIs and AIANs were lower than for Non-Hispanic Whites and Blacks/African-Americans. The most recent estimated incidence rates for Hispanics/Latinas were lower than for Non-Hispanic Whites and Blacks/African-Americans. For the State of Pennsylvania, the incidence rate was slightly higher among Blacks/African-Americans than Whites, significantly lower among APIs than Whites, and significantly lower among AIANs than Whites. The incidence rate among Hispanics/Latinas was lower than among Non-Hispanics/Latinas.

The following counties had an incidence rate **significantly higher** than the state as a whole:

- Allegheny County (Komen Pittsburgh)
- Chester County (Komen Philadelphia)
- Delaware County (Komen Philadelphia)
- Montgomery County (Komen Philadelphia)

The incidence rate was significantly lower in the following counties:

- Blair County (Komen Pittsburgh)
- Elk County (Komen Pittsburgh)
- Fayette County (Komen Pittsburgh)
- Huntingdon County (Komen Pittsburgh)
- Lancaster County (Komen Philadelphia)
- Somerset County (Komen Pittsburgh)
- Wayne County (Komen Northeastern Pennsylvania)

Significantly less favorable trends in breast cancer incidence rates were observed in the following county:

- Greene County (Komen Pittsburgh)

The rest of the counties had incidence rates and trends that were not significantly different than the state as a whole or did not have enough data available.

It's important to remember that an increase in breast cancer incidence could also mean that more breast cancers are being found because more women are getting mammograms

Death Rates

A fundamental goal is to reduce the number of women dying from breast cancer.

Death rate trends should always be negative: death rates should be getting lower over time.

The breast cancer death rate shows the frequency of death from breast cancer among women living in a given area during a certain time period. Like incidence rates, death rates may be calculated for all women or for specific groups of women (e.g. Black/African-American women).

How death rates are calculated

The death rate is calculated as the number of women from a particular geographic area who died from breast cancer divided by the total number of women living in that area.
Like incidence rates, death rates are often shown in terms of 100,000 women and adjusted for age.

Death rate trends

As with incidence rates, data are included for the annual percent change in the death rate over a five-year period.

The meanings of these data are the same as for incidence rates, with one exception. Changes in screening don't affect death rates in the way that they affect incidence rates. So a negative value, which means that death rates are getting lower, is always desirable. A positive value, which means that death rates are getting higher, is always undesirable.

Confidence intervals

As with incidence rates, this report includes the confidence interval of the age-adjusted breast cancer death rates and trends because the numbers are not exact. The confidence interval is shown as two numbers—a lower value and a higher one. It is very unlikely that the true rate is less than the lower value or more than the higher value.

Breast cancer death rates and trends

Breast cancer death rates and trends are shown in Table 2.2 for:

- United States
- State of Pennsylvania
- Each county of Pennsylvania

For the state, rates are also shown by race for Whites, Blacks/African-Americans, Asians and Pacific Islanders (API), and American Indians and Alaska Natives (AIAN). In addition, rates are shown by ethnicity for Hispanics/Latinas and women who are not Hispanic/Latina (regardless of their race).

The rates in Table 2.2 are shown per 100,000 females from 2006 to 2010. The HP2020 death rate target is included for reference.

Table 2.2. Female breast cancer death rates and trends

Population Group	Female Population (Annual Average)	# of Deaths (Annual Average)	Age-adjusted Death Rate /100,000	Confidence Interval of Age-adjusted Death Rate	Death Trend (Annual Percent Change)	Confidence Interval of Death Rate Trend
US	154,540,194	40,736	22.6	22.5 : 22.7	-1.9%	-2.0% : -1.8%
HP2020	-	-	20.6*	-	-	-
Pennsylvania	6,474,106	2,103	23.8	23.4 : 24.3	-2.3%	-2.5% : -2.1%
White	5,502,399	1,863	23.3	22.8 : 23.8	-2.4%	-2.6% : -2.2%
Black/African-American	766,641	228	32.1	30.3 : 34.1	-1.6%	-2.1% : -1.0%
AIAN	21,340	SN	SN	SN	SN	SN
API	183,726	11	8.3	6.0 : 11.1	-2.7%	-6.0% : 0.7%
Non-Hispanic/ Latina	6,153,499	2,080	24.1	23.6 : 24.5	-2.3%	-2.5% : -2.1%
Hispanic/ Latina	320,607	22	12.6	10.1 : 15.3	-3.4%	-5.1% : -1.7%
Adams County	51,263	14	20.3	15.7 : 26.0	-3.5%	-5.8% : -1.2%
Allegheny County	638,859	231	24.4	23.0 : 25.9	-2.6%	-3.1% : -2.1%
Armstrong County	35,266	11	20.2	15.0 : 26.8	-0.0%	-2.7% : 2.8%
Beaver County	88,887	34	25.1	21.4 : 29.5	-2.3%	-3.8% : -0.8%
Bedford County	25,103	8	22.2	15.9 : 30.5	-1.7%	-4.0% : 0.7%
Berks County	207,459	62	23.0	20.4 : 25.8	-2.2%	-3.1% : -1.2%
Blair County	65,497	25	24.9	20.6 : 30.1	-1.5%	-2.8% : -0.2%
Bradford County	31,772	10	21.3	15.7 : 28.6	-3.0%	-5.6% : -0.4%
Bucks County	317,158	102	24.8	22.6 : 27.1	-2.3%	-3.2% : -1.3%
Butler County	92,759	30	23.8	20.1 : 28.1	-1.9%	-3.5% : -0.2%
Cambria County	73,480	31	25.4	21.3 : 30.2	-2.1%	-3.6% : -0.7%
Cameron County	2,650	SN	SN	SN	SN	SN
Carbon County	32,791	12	24.1	18.3 : 31.4	-2.2%	-4.4% : 0.0%
Centre County	73,125	14	18.8	14.6 : 23.9	-3.5%	-5.6% : -1.3%
Chester County	249,744	66	22.3	19.9 : 24.9	-2.8%	-3.9% : -1.7%
Clarion County	20,781	7	26.3	18.2 : 37.1	-0.3%	-3.4% : 2.9%
Clearfield County	39,959	11	18.8	14.0 : 24.9	-3.8%	-5.6% : -1.9%
Clinton County	19,869	5	17.9	11.2 : 27.4	-12.5%	-19.0% : -5.4%
Columbia County	34,736	10	21.4	15.7 : 28.7	-1.7%	-3.8% : 0.4%
Crawford County	45,721	13	19.6	15.0 : 25.4	-2.1%	-4.5% : 0.3%
Cumberland County	118,099	34	20.7	17.6 : 24.2	-2.4%	-3.6% : -1.1%
Dauphin County	136,902	42	23.9	20.7 : 27.5	-1.9%	-3.0% : -0.8%

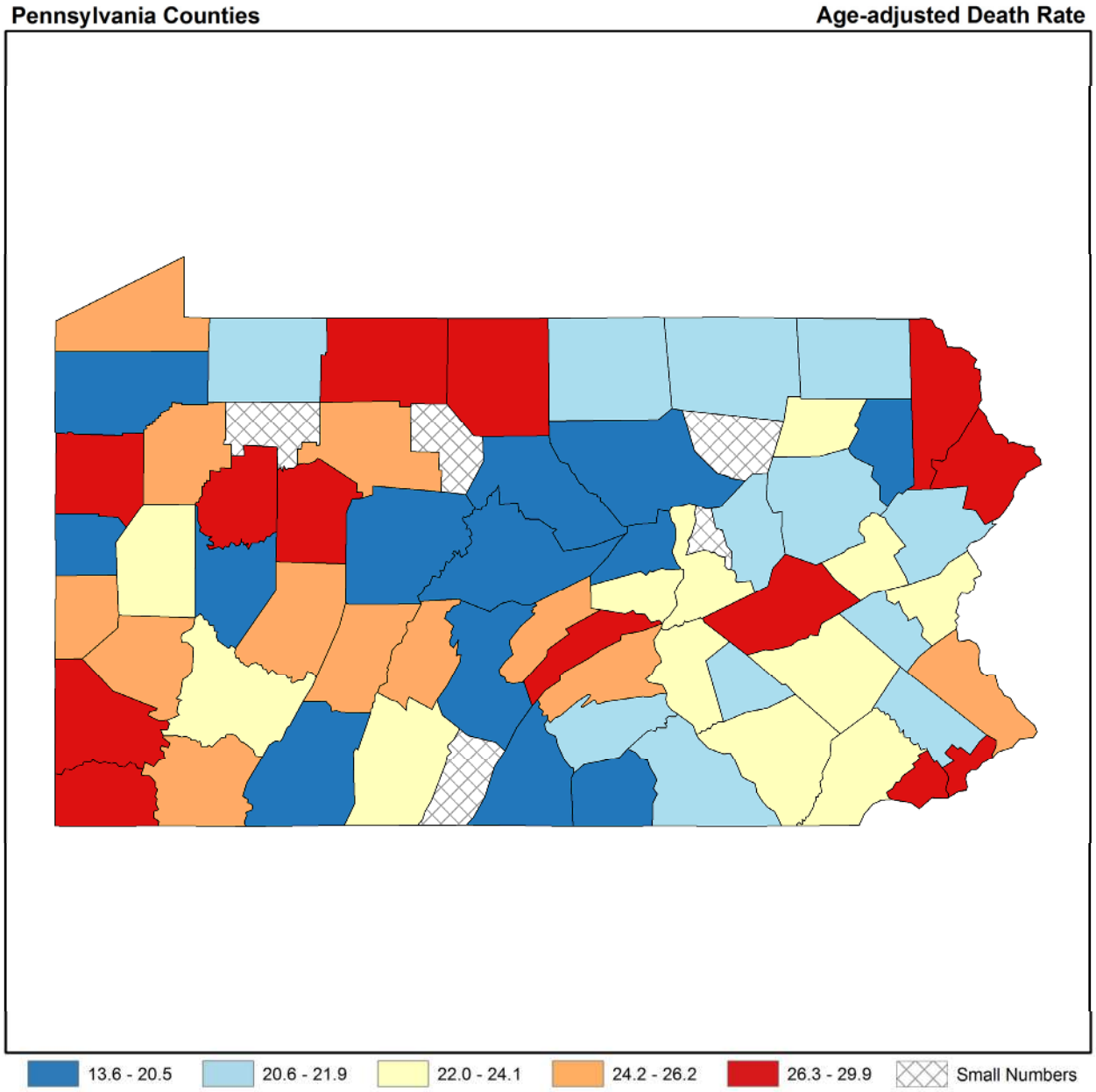
Population Group	Female Population (Annual Average)	# of Deaths (Annual Average)	Age-adjusted Death Rate /100,000	Confidence Interval of Age-adjusted Death Rate	Death Trend (Annual Percent Change)	Confidence Interval of Death Rate Trend
Delaware County	290,044	104	27.5	25.1 : 30.1	-2.1%	-2.9% : -1.2%
Elk County	16,384	7	26.2	17.7 : 37.9	-2.3%	-4.5% : -0.0%
Erie County	142,211	45	24.5	21.3 : 28.1	-3.0%	-4.1% : -1.8%
Fayette County	70,942	29	25.9	21.7 : 30.8	-1.7%	-3.3% : -0.1%
Forest County	2,558	SN	SN	SN	SN	SN
Franklin County	74,936	18	18.1	14.5 : 22.4	-2.6%	-4.3% : -0.9%
Fulton County	7,391	SN	SN	SN	SN	SN
Greene County	18,934	8	29.9	21.0 : 41.7	3.4%	0.0% : 6.9%
Huntingdon County	21,605	6	19.5	13.2 : 28.1	3.1%	-2.6% : 9.2%
Indiana County	44,890	15	25.9	20.1 : 33.0	-1.3%	-3.1% : 0.5%
Jefferson County	22,923	10	28.2	20.5 : 38.2	-1.5%	-4.2% : 1.4%
Juniata County	12,226	4	26.4	16.4 : 40.9	-4.0%	-6.9% : -1.0%
Lackawanna County	111,271	35	19.3	16.4 : 22.7	-2.9%	-4.2% : -1.6%
Lancaster County	261,538	79	23.6	21.3 : 26.1	-2.3%	-3.1% : -1.4%
Lawrence County	47,562	16	20.5	16.0 : 25.9	-3.3%	-4.5% : -2.1%
Lebanon County	67,205	21	21.3	17.3 : 26.1	-1.9%	-3.5% : -0.2%
Lehigh County	177,396	50	21.7	19.0 : 24.6	-2.7%	-3.6% : -1.8%
Luzerne County	163,524	57	21.8	19.2 : 24.7	-2.8%	-3.8% : -1.9%
Lycoming County	59,441	15	18.8	14.7 : 23.8	-2.8%	-4.2% : -1.3%
McKean County	21,543	8	27.5	19.6 : 37.8	-2.2%	-4.5% : 0.0%
Mercer County	59,872	24	27.3	22.5 : 33.0	-1.1%	-2.6% : 0.5%
Mifflin County	23,822	9	24.9	18.1 : 33.8	-0.3%	-3.0% : 2.5%
Monroe County	84,993	21	21.5	17.5 : 26.2	-6.9%	-11.4% : -2.2%
Montgomery County	407,295	119	21.6	19.8 : 23.4	-3.1%	-3.7% : -2.5%
Montour County	9,450	SN	SN	SN	SN	SN
Northampton County	150,529	48	22.7	19.8 : 25.9	-2.0%	-3.0% : -1.0%
Northumberland County	47,247	17	22.5	17.7 : 28.3	-2.5%	-4.3% : -0.7%
Perry County	22,751	7	24.2	16.7 : 34.3	-0.7%	-3.7% : 2.4%
Philadelphia County	797,130	264	29.0	27.4 : 30.6	-2.2%	-2.6% : -1.7%
Pike County	28,510	10	27.7	20.5 : 37.0	9.8%	-5.2% : 27.1%
Potter County	8,787	4	27.3	16.2 : 44.6	-2.8%	-6.6% : 1.0%
Schuylkill County	73,229	35	28.6	24.3 : 33.5	-0.2%	-2.0% : 1.6%
Snyder County	19,976	6	23.3	15.5 : 34.0	-2.2%	-4.8% : 0.6%
Somerset County	38,115	11	18.2	13.6 : 24.2	-1.6%	-3.9% : 0.8%

Population Group	Female Population (Annual Average)	# of Deaths (Annual Average)	Age-adjusted Death Rate /100,000	Confidence Interval of Age-adjusted Death Rate	Death Trend (Annual Percent Change)	Confidence Interval of Death Rate Trend
Sullivan County	3,144	SN	SN	SN	SN	SN
Susquehanna County	21,615	6	20.6	14.0 : 29.8	-3.0%	-5.7% : -0.2%
Tioga County	21,228	6	21.1	13.9 : 31.0	-1.9%	-4.5% : 0.9%
Union County	20,115	4	13.6	8.0 : 21.9	-2.4%	-5.8% : 1.0%
Venango County	28,240	11	25.6	18.9 : 34.1	-2.2%	-4.6% : 0.3%
Warren County	21,050	7	20.9	14.4 : 29.9	-2.3%	-4.6% : 0.0%
Washington County	106,480	45	27.9	24.3 : 32.0	-0.6%	-1.7% : 0.5%
Wayne County	24,993	11	27.5	20.4 : 36.8	-0.7%	-3.4% : 2.0%
Westmoreland County	187,964	71	23.4	20.9 : 26.1	-2.1%	-3.0% : -1.1%
Wyoming County	14,142	4	22.6	14.1 : 35.1	NA	NA
York County	217,026	57	21.1	18.7 : 23.7	-2.3%	-3.3% : -1.4%

*Target as of the writing of this report.
NA – data not available.
SN – data suppressed due to small numbers (15 deaths or fewer for the 5-year data period).
Data are for years 2006-2010.
Rates are in deaths per 100,000.
Age-adjusted rates are adjusted to the 2000 US standard population.
Source of death rate data: CDC – NCHS death data in SEER*Stat.
Source of death trend data: NCI/CDC State Cancer Profiles.

Map of death rates

Figure 2.2 shows a map of breast cancer death rates for the counties in Pennsylvania. When the numbers of deaths used to compute the rates are small (15 cases or fewer for the five-year data period), those rates are unreliable and are shown as "small numbers" on the map.



*Map with counties labeled is available in Appendix.
Data are for years 2006-2010.
Rates are in deaths per 100,000.
Age-adjusted rates are adjusted to the 2000 US standard population.
Source: CDC – NCHS death data in SEER*Stat.

Figure 2.2. Female breast cancer age-adjusted death rates

Conclusions: Breast cancer death rates and trends

Overall, the breast cancer death rate in the State of Pennsylvania was significantly higher than that observed in the US as a whole and the death rate trend was slightly lower than the US as a whole.

For the United States, breast cancer death rates in Blacks/African-Americans are substantially higher than in Whites overall. The most recent estimated breast cancer death rates for APIs and AIANs were lower than for Non-Hispanic/Latina Whites and Blacks/African-Americans. The most recent estimated death rates for Hispanics/Latinas were lower than for Non-Hispanic/Latina Whites and Blacks/African-Americans. For the State of Pennsylvania, the death rate was higher among Blacks/African-Americans than Whites and significantly lower among APIs than Whites. There were not enough data available within the state to report on AIANs so comparisons cannot be made for this racial group. The death rate among Hispanics/Latinas was significantly lower than among Non-Hispanics/Latinas.

The following counties had a death rate **significantly higher** than the state as a whole:

- Delaware County (Komen Philadelphia)
- Philadelphia County (Komen Philadelphia)

The death rate was significantly lower in the following counties:

- Franklin County (Komen Pittsburgh)
- Lackawanna County (Komen Northeastern Pennsylvania)
- Union County (Komen Northeastern Pennsylvania)

Significantly less favorable trends in breast cancer death rates were observed in the following counties:

- Greene County (Komen Pittsburgh)
- Schuylkill County (Komen Northeastern Pennsylvania)
- Washington County (Komen Pittsburgh)

Significantly more favorable trends in breast cancer death rates were observed in the following county:

- Clinton County (Komen Northeastern Pennsylvania)

The rest of the counties had death rates and trends that were not significantly different than the state as a whole or did not have enough data available.

Late-Stage Diagnosis

People with breast cancer have a better chance of survival if their disease is found early and treated.

The stage of cancer indicates the extent of the disease within the body. Most often, the higher the stage of the cancer, the poorer the chances for survival will be.

If a breast cancer is determined to be regional or distant stage, it's considered a late-stage diagnosis.

Medical experts agree that it's best for breast cancer to be detected early. Women whose breast cancers are found at an early stage usually need less aggressive treatment and do better overall than those whose cancers are found at a late-stage (US Preventive Services Task Force, 2009).

How late-stage breast cancer incidence rates are calculated

For this report, late-stage breast cancer is defined as regional or distant stage using the Surveillance, Epidemiology and End Results (SEER) Summary Stage definitions (SEER Summary Stage, 2001). State and national reporting usually uses the SEER Summary Stage. It provides a consistent set of definitions of stages for historical comparisons.

The late-stage breast cancer incidence rate is calculated as the number of women with regional or distant breast cancer in a particular geographic area divided by the number of women living in that area.

Like incidence and death rates, late-stage incidence rates are often shown in terms of 100,000 women and adjusted for age.

Proportion of late-stage diagnoses

Another way to assess the impact of late-stage breast cancer diagnosis on a community is to look at the proportion (percentage) of breast cancers that are diagnosed at late-stage. By lowering the proportion of female breast cancer cases that are diagnosed at late-stage in a given community, it is reasonable to expect that the community will observe a lower breast cancer death rate.

A change in the proportion of late-stage breast cancer cases can be a good indicator of the direction the breast cancer death rate will move over time. In addition, the proportion of late-stage breast cancer is an indicator of the success of early detection efforts (Taplin et al., 2004). So, in addition to the late-stage breast cancer incidence rate, this report includes the late-stage breast cancer proportion (the ratio of late-stage cases to total cases). Note that the late-stage incidence rate may go down over time yet the late-stage proportion may not if the overall incidence rate is declining as well.

How late-stage breast cancer proportions are calculated

The late-stage breast cancer proportion is the ratio between the number of cases diagnosed at regional or distant stages and the total number of breast cancer cases that have been diagnosed and staged in a particular geographic area. It is important to note that cases with unknown stage are excluded from this calculation. However, assuming the size and distribution of cases with unknown stage does not change significantly, the late-stage proportion can be a very good indicator of the need for or effectiveness of early detection interventions.

Confidence intervals

As with incidence and death rates, this report includes the confidence interval of the late-stage incidence rates and trends, and the late-stage proportions and trends because the numbers are not exact. The confidence interval is shown as two numbers—a lower value and a higher one. It is very unlikely that the true rate is less than the lower value or more than the higher value.

Late-stage breast cancer incidence, proportions and trends

Late-stage breast cancer incidence rates, proportions and trends are shown in Tables 2.3 and 2.4 for:

- United States
- State of Pennsylvania
- Each county of Pennsylvania

For the State of Pennsylvania, rates are also shown by race for Whites, Blacks/African-Americans, Asians and Pacific Islanders (API), and American Indians and Alaska Natives (AIAN). In addition, rates are shown by ethnicity for Hispanics/Latinas and women who are not Hispanic/Latina (regardless of their race).

The rates in Table 2.3 are shown per 100,000 females from 2006 to 2010. The HP2020 late-state incidence rate target is included for reference.

Table 2.3. Female breast cancer late-stage incidence rates and trends

Population Group	Female Population (Annual Average)	# of New Late-stage Cases (Annual Average)	Age-adjusted Late-stage Incidence rate /100,000	Confidence Interval of Age-adjusted Incidence Rate	Late stage Trend (Annual Percent Change)	Confidence Interval of Late-stage Trend
US (states with available data)	145,332,861	70,218	43.7	43.5 : 43.8	-1.2%	-3.1% : 0.8%
HP2020	-	-	41.0*	-	-	-
Pennsylvania	6,474,106	3,566	45.4	44.7 : 46.1	-0.4%	-4.4% : 3.8%
White	5,502,399	3,099	44.3	43.6 : 45.1	-0.4%	-5.0% : 4.3%
Black/African-American	766,641	397	55.4	53.0 : 57.9	1.0%	NA
AIAN	21,340	3	17.1	9.6 : 28.2	-7.1%	-18.2% : 5.4%
API	183,726	37	23.3	19.9 : 27.1	-5.1%	NA
Non-Hispanic/ Latina	6,153,499	3,496	45.7	45.0 : 46.4	-0.2%	-4.0% : 3.7%
Hispanic/ Latina	320,607	70	35.4	31.5 : 39.6	-3.6%	-11.0% : 4.6%
Adams County	51,263	28	46.1	38.7 : 54.6	3.0%	-7.8% : 15.1%
Allegheny County	638,859	374	45.7	43.5 : 47.9	1.1%	-6.2% : 8.9%
Armstrong County	35,266	20	42.6	34.3 : 52.4	9.0%	-18.4% : 45.6%
Beaver County	88,887	53	43.2	37.9 : 49.0	-0.3%	-12.6% : 13.6%
Bedford County	25,103	17	49.7	39.4 : 62.1	-4.2%	-20.2% : 14.9%
Berks County	207,459	113	46.5	42.7 : 50.6	-1.3%	-11.6% : 10.3%
Blair County	65,497	36	42.8	36.6 : 49.8	-4.3%	-10.9% : 2.9%
Bradford County	31,772	20	49.4	40.0 : 60.5	1.8%	-7.1% : 11.5%
Bucks County	317,158	188	48.4	45.3 : 51.6	1.0%	-3.5% : 5.6%
Butler County	92,759	48	41.8	36.5 : 47.6	2.7%	-7.9% : 14.4%
Cambria County	73,480	48	46.8	40.7 : 53.6	-1.5%	-14.4% : 13.4%
Cameron County	2,650	SN	SN	SN	SN	SN
Carbon County	32,791	21	49.9	40.6 : 60.8	-0.4%	-16.4% : 18.8%
Centre County	73,125	24	35.1	29.0 : 42.1	-8.4%	-27.4% : 15.5%
Chester County	249,744	127	44.8	41.3 : 48.4	-2.1%	-3.8% : -0.4%
Clarion County	20,781	11	44.4	33.1 : 58.4	-9.4%	-28.3% : 14.5%
Clearfield County	39,959	21	40.1	32.7 : 48.9	-8.1%	NA
Clinton County	19,869	10	40.8	29.9 : 54.6	-19.5%	-35.7% : 0.6%
Columbia County	34,736	21	52.6	42.5 : 64.4	1.4%	-24.4% : 36.1%
Crawford County	45,721	18	29.4	23.5 : 36.4	-3.9%	-34.7% : 41.6%
Cumberland County	118,099	58	40.2	35.6 : 45.3	7.4%	2.4% : 12.6%
Dauphin County	136,902	70	43.6	39.1 : 48.5	2.5%	-15.4% : 24.3%
Delaware County	290,044	156	46.3	43.0 : 49.8	-0.1%	-13.8% : 15.9%
Elk County	16,384	8	38.2	27.1 : 52.7	0.7%	-29.5% : 43.9%
Erie County	142,211	70	41.9	37.5 : 46.6	7.4%	-0.9% : 16.5%
Fayette County	70,942	44	44.7	38.8 : 51.4	2.9%	-3.6% : 9.8%

Population Group	Female Population (Annual Average)	# of New Late-stage Cases (Annual Average)	Age-adjusted Late-stage Incidence rate /100,000	Confidence Interval of Age-adjusted Incidence Rate	Late stage Trend (Annual Percent Change)	Confidence Interval of Late-stage Trend
Forest County	2,558	4	98.0	59.2 : 160.0	NA	NA
Franklin County	74,936	38	42.4	36.5 : 49.0	-5.6%	-24.2% : 17.6%
Fulton County	7,391	3	33.7	19.4 : 55.6	-3.8%	-17.3% : 12.0%
Greene County	18,934	12	49.3	37.1 : 64.4	-2.0%	-23.6% : 25.6%
Huntingdon County	21,605	10	36.1	26.5 : 48.3	-4.2%	-28.3% : 28.2%
Indiana County	44,890	25	45.0	37.1 : 54.0	-12.1%	-31.2% : 12.2%
Jefferson County	22,923	13	44.8	34.1 : 57.9	5.8%	-30.9% : 61.8%
Juniata County	12,226	6	40.8	27.0 : 59.3	-15.1%	-35.8% : 12.4%
Lackawanna County	111,271	60	42.2	37.4 : 47.5	0.1%	-10.5% : 11.8%
Lancaster County	261,538	125	42.0	38.7 : 45.5	0.0%	NA
Lawrence County	47,562	31	50.8	42.8 : 59.9	-1.5%	-17.0% : 17.0%
Lebanon County	67,205	34	38.8	33.0 : 45.5	1.7%	-15.4% : 22.2%
Lehigh County	177,396	91	44.1	40.0 : 48.4	-3.6%	-14.4% : 8.5%
Luzerne County	163,524	102	47.1	42.9 : 51.6	-3.9%	-7.7% : 0.0%
Lycoming County	59,441	30	41.0	34.5 : 48.3	13.8%	NA
McKean County	21,543	9	34.4	24.7 : 46.6	-22.5%	-48.5% : 16.8%
Mercer County	59,872	37	46.3	39.5 : 54.0	9.3%	-17.9% : 45.7%
Mifflin County	23,822	16	50.2	39.4 : 63.3	3.0%	-13.7% : 22.9%
Monroe County	84,993	44	44.8	39.0 : 51.3	-3.4%	NA
Montgomery County	407,295	230	47.3	44.5 : 50.2	-4.1%	-11.0% : 3.4%
Montour County	9,450	5	36.9	23.3 : 56.3	17.0%	-3.2% : 41.3%
Northampton County	150,529	87	47.8	43.3 : 52.7	5.6%	-0.5% : 12.2%
Northumberland County	47,247	22	33.1	27.0 : 40.3	-7.2%	-24.4% : 13.9%
Perry County	22,751	12	44.4	33.8 : 57.5	-9.3%	-31.8% : 20.6%
Philadelphia County	797,130	434	51.6	49.4 : 53.9	-0.6%	NA
Pike County	28,510	18	49.8	39.8 : 61.9	7.7%	-2.1% : 18.5%
Potter County	8,787	4	34.2	20.9 : 53.8	-15.6%	NA
Schuylkill County	73,229	49	46.9	40.9 : 53.6	4.9%	-17.8% : 33.9%
Snyder County	19,976	10	41.7	30.5 : 55.7	-11.8%	-17.2% : -6.0%
Somerset County	38,115	19	38.0	30.5 : 46.9	-10.7%	-30.1% : 14.1%
Sullivan County	3,144	SN	SN	SN	SN	SN
Susquehanna County	21,615	11	38.6	28.8 : 51.0	9.2%	-24.4% : 57.6%
Tioga County	21,228	12	45.5	34.6 : 59.1	-4.4%	-28.0% : 27.0%
Union County	20,115	8	35.7	25.2 : 49.1	5.1%	-14.4% : 29.1%
Venango County	28,240	17	47.9	37.9 : 59.9	1.2%	-33.1% : 53.3%
Warren County	21,050	14	45.0	34.7 : 57.8	2.6%	-27.8% : 45.7%
Washington County	106,480	67	47.6	42.5 : 53.2	-2.6%	-21.1% : 20.1%

Population Group	Female Population (Annual Average)	# of New Late-stage Cases (Annual Average)	Age-adjusted Late-stage Incidence rate /100,000	Confidence Interval of Age-adjusted Incidence Rate	Late stage Trend (Annual Percent Change)	Confidence Interval of Late-stage Trend
Wayne County	24,993	12	36.4	27.3 : 47.9	-0.5%	-27.1% : 35.7%
Westmoreland County	187,964	113	43.7	40.0 : 47.6	-0.2%	-14.4% : 16.3%
Wyoming County	14,142	9	55.8	40.4 : 75.3	-8.7%	-39.8% : 38.4%
York County	217,026	112	43.5	39.9 : 47.3	2.5%	-6.0% : 11.7%

* Target as of the writing of this report.
NA – data not available.
SN – data suppressed due to small numbers (15 cases or fewer for the 5-year data period).
Data are for years 2006-2010.
Rates are in cases per 100,000.
Age-adjusted rates are adjusted to the 2000 US standard population.
Source: NAACCR – CINA Deluxe Analytic Files

Table 2.4. Female breast cancer late-stage proportion and trends and distant-stage proportion for women age 50-74

Population Group	# of New Staged Cases (Annual Average)	# of Cases Diagnosed at Late-stage (Annual Average)	Proportion Diagnosed at Late-stage	Confidence Interval of Late-stage Proportion	Late-stage Proportion Trend (Annual Percent Change)	Confidence Interval of Late-stage Proportion Trend	Proportion Diagnosed at Distant-stage
US	111,487	39,543	35.5%	35.3% : 35.6%	-1.4%	-1.7% : -1.1%	5.6%
Pennsylvania	5,515	1,943	35.2%	34.7% : 35.8%	-1.3%	-3.4% : 0.8%	6.6%
White	4,913	1,691	34.4%	33.8% : 35.0%	-1.5%	-3.8% : 0.9%	6.4%
Black/African-American	496	214	43.2%	41.2% : 45.1%	-1.2%	-7.2% : 5.1%	9.3%
AIAN	5	2	38.5%	19.8% : 57.2%	13.4%	-3.1% : 32.6%	SN
API	53	21	38.7%	32.9% : 44.6%	8.0%	-2.0% : 18.9%	4.1%
Non-Hispanic/Latina	5,425	1,908	35.2%	34.6% : 35.7%	-1.3%	-3.2% : 0.6%	6.6%
Hispanic/Latina	90	35	39.1%	34.5% : 43.6%	-2.8%	-16.6% : 13.3%	5.4%
Adams County	42	13	31.6%	25.3% : 37.9%	5.7%	-16.2% : 33.4%	5.2%
Allegheny County	609	200	32.8%	31.2% : 34.5%	-0.5%	-8.9% : 8.7%	7.2%
Armstrong County	32	10	32.1%	24.9% : 39.3%	8.2%	-26.3% : 59.0%	8.6%
Beaver County	92	29	31.2%	27.0% : 35.5%	-3.1%	-10.5% : 5.0%	4.8%
Bedford County	23	9	40.2%	31.3% : 49.1%	9.1%	NA	7.7%
Berks County	165	61	37.0%	33.7% : 40.3%	2.8%	-11.5% : 19.4%	5.4%
Blair County	54	21	38.7%	32.9% : 44.5%	-6.5%	-19.4% : 8.5%	7.4%
Bradford County	30	12	40.1%	32.3% : 47.9%	3.2%	-14.5% : 24.6%	6.6%
Bucks County	280	101	36.1%	33.6% : 38.6%	0.0%	NA	6.3%
Butler County	79	24	31.0%	26.5% : 35.6%	3.6%	-13.5% : 24.2%	5.3%
Cambria County	63	27	42.1%	36.6% : 47.5%	-0.3%	-12.5% : 13.7%	9.8%
Cameron County	SN	SN	SN	SN	SN	SN	SN

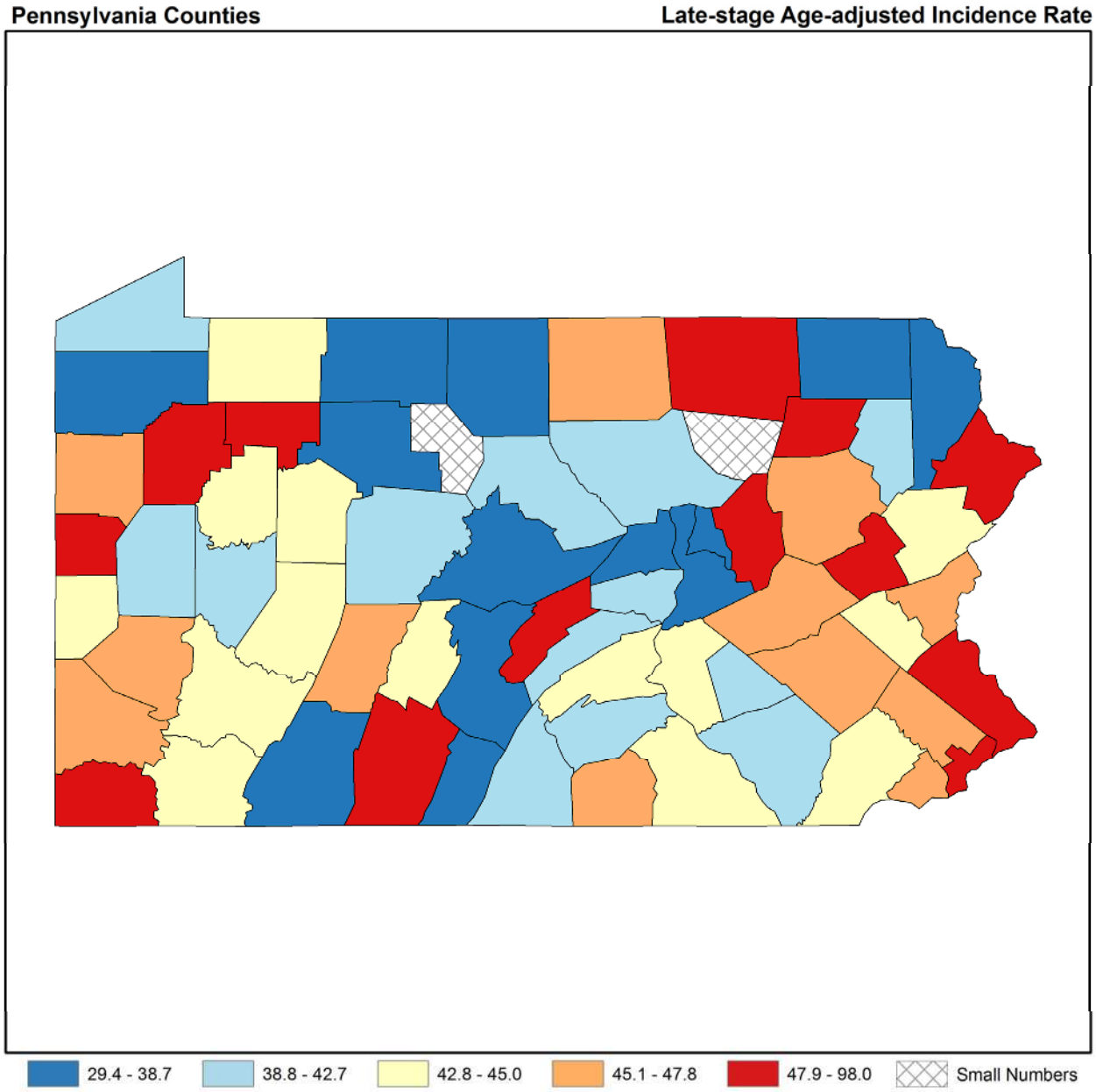
Population Group	# of New Staged Cases (Annual Average)	# of Cases Diagnosed at Late-stage (Annual Average)	Proportion Diagnosed at Late-stage	Confidence Interval of Late-stage Proportion	Late-stage Proportion Trend (Annual Percent Change)	Confidence Interval of Late-stage Proportion Trend	Proportion Diagnosed at Distant-stage
Carbon County	31	12	39.0%	31.3% : 46.7%	-8.0%	-21.4% : 7.6%	7.1%
Centre County	43	13	29.4%	23.3% : 35.5%	-7.9%	-33.9% : 28.4%	5.1%
Chester County	209	70	33.4%	30.6% : 36.3%	-2.9%	-12.7% : 8.1%	5.2%
Clarion County	20	7	36.4%	26.9% : 45.8%	-8.1%	-24.5% : 11.9%	6.1%
Clearfield County	41	13	31.9%	25.5% : 38.2%	-4.2%	-21.9% : 17.5%	6.3%
Clinton County	16	6	40.0%	29.3% : 50.7%	-16.0%	-35.8% : 10.0%	6.3%
Columbia County	28	11	37.6%	29.6% : 45.6%	4.0%	-24.2% : 42.7%	9.9%
Crawford County	39	11	27.0%	20.8% : 33.3%	-0.5%	-23.4% : 29.2%	5.1%
Cumberland County	99	35	35.1%	30.9% : 39.3%	8.7%	-5.3% : 24.8%	3.7%
Dauphin County	117	37	31.8%	28.1% : 35.6%	4.2%	-12.9% : 24.7%	4.3%
Delaware County	245	82	33.4%	30.8% : 36.1%	-3.1%	-12.8% : 7.6%	6.1%
Elk County	11	4	34.5%	22.0% : 47.1%	1.6%	-39.0% : 69.1%	SN
Erie County	124	40	32.1%	28.4% : 35.8%	4.7%	-21.9% : 40.3%	6.5%
Fayette County	61	24	39.3%	33.9% : 44.8%	1.8%	-7.6% : 12.1%	9.2%
Forest County	5	3	56.0%	36.5% : 75.5%	NA	NA	SN
Franklin County	62	21	34.4%	29.1% : 39.7%	5.6%	-17.9% : 35.9%	3.2%
Fulton County	6	2	39.3%	21.2% : 57.4%	NA	NA	SN
Greene County	18	6	31.9%	22.3% : 41.4%	-23.9%	-43.3% : 2.0%	8.8%
Huntingdon County	16	6	38.0%	27.3% : 48.7%	NA	NA	5.1%
Indiana County	36	15	41.6%	34.3% : 48.8%	3.2%	NA	9.6%
Jefferson County	19	7	37.1%	27.5% : 46.7%	-2.6%	-25.7% : 27.9%	6.2%
Juniata County	8	3	40.5%	25.6% : 55.3%	-8.5%	-31.5% : 22.2%	SN
Lackawanna County	94	32	33.9%	29.6% : 38.2%	-5.4%	-17.0% : 7.8%	7.0%
Lancaster County	201	67	33.3%	30.4% : 36.2%	-2.0%	-11.6% : 8.7%	6.6%
Lawrence County	47	17	35.4%	29.4% : 41.5%	-1.3%	-18.9% : 20.0%	6.3%
Lebanon County	54	16	29.9%	24.4% : 35.3%	2.7%	-24.6% : 39.8%	5.5%
Lehigh County	145	46	32.0%	28.6% : 35.3%	0.4%	-7.2% : 8.7%	5.3%
Luzerne County	147	57	38.8%	35.3% : 42.4%	-5.1%	-6.5% : -3.5%	6.1%
Lycoming County	51	17	33.2%	27.4% : 39.0%	-6.4%	-28.3% : 22.3%	5.5%
McKean County	14	5	33.3%	22.4% : 44.2%	-16.4%	-51.4% : 43.9%	SN
Mercer County	56	21	36.9%	31.3% : 42.6%	-4.0%	-29.4% : 30.5%	7.9%
Mifflin County	25	9	36.6%	28.1% : 45.1%	-6.8%	-28.6% : 21.6%	4.9%
Monroe County	65	27	41.6%	36.2% : 46.9%	1.1%	-3.1% : 5.5%	9.5%
Montgomery County	350	117	33.6%	31.4% : 35.8%	-2.4%	-10.3% : 6.1%	5.3%
Montour County	8	3	31.0%	17.0% : 44.9%	NA	NA	SN
Northampton County	132	48	36.5%	32.8% : 40.2%	0.0%	-7.8% : 8.5%	7.3%
Northumberland County	38	12	31.7%	25.1% : 38.4%	-2.9%	-19.6% : 17.2%	7.9%

Population Group	# of New Staged Cases (Annual Average)	# of Cases Diagnosed at Late-stage (Annual Average)	Proportion Diagnosed at Late-stage	Confidence Interval of Late-stage Proportion	Late-stage Proportion Trend (Annual Percent Change)	Confidence Interval of Late-stage Proportion Trend	Proportion Diagnosed at Distant-stage
Perry County	18	7	38.0%	28.1% : 48.0%	-13.8%	-36.8% : 17.7%	SN
Philadelphia County	598	238	39.8%	38.0% : 41.5%	-1.2%	-8.3% : 6.4%	8.5%
Pike County	23	11	45.7%	36.6% : 54.8%	4.3%	-11.2% : 22.6%	9.5%
Potter County	7	2	31.4%	16.0% : 46.8%	-2.2%	-32.0% : 40.6%	SN
Schuylkill County	65	25	38.8%	33.5% : 44.1%	-5.9%	-20.4% : 11.2%	9.5%
Snyder County	15	7	44.7%	33.6% : 55.9%	-17.3%	-35.7% : 6.4%	7.9%
Somerset County	35	12	33.0%	26.0% : 39.9%	-13.8%	-27.9% : 3.1%	8.5%
Sullivan County	4	1	36.8%	15.2% : 58.5%	NA	NA	SN
Susquehanna County	18	6	32.6%	22.8% : 42.3%	-4.5%	-20.0% : 14.1%	5.6%
Tioga County	18	7	37.5%	27.4% : 47.6%	-0.6%	-16.7% : 18.6%	9.1%
Union County	13	4	31.8%	20.6% : 43.1%	1.3%	-41.0% : 74.0%	9.1%
Venango County	30	10	34.9%	27.2% : 42.6%	4.1%	-28.9% : 52.5%	7.4%
Warren County	20	9	44.1%	34.5% : 53.8%	7.1%	-29.9% : 63.6%	6.9%
Washington County	106	40	37.8%	33.7% : 41.9%	-3.6%	-17.4% : 12.4%	7.2%
Wayne County	18	6	32.6%	22.8% : 42.3%	-11.4%	-31.8% : 15.3%	7.9%
Westmoreland County	180	61	33.7%	30.6% : 36.8%	-1.2%	-11.5% : 10.1%	6.7%
Wyoming County	14	5	32.9%	21.9% : 43.9%	-0.9%	-19.0% : 21.2%	8.6%
York County	180	64	35.6%	32.4% : 38.7%	0.2%	-7.5% : 8.5%	5.8%

NA – data not available.
SN – data suppressed due to small numbers (15 cases or fewer for the 5-year data period).
Data are for years 2006-2010.
Source: NAACCR – CINA Deluxe Analytic File.

Map of late-stage incidence rates

Figure 2.3 shows a map of late-state incidence rates for the counties in Pennsylvania. When the numbers of cases used to compute the rates are small (15 cases or fewer for the five-year data period), those rates are unreliable and are shown as "small numbers" on the map.



*Map with counties labeled is available in Appendix.
Data are for years 2006-2010.
Rates are in cases per 100,000.
Age-adjusted rates are adjusted to the 2000 US standard population.
Source: NAACCR – CINA Deluxe Analytic File.

Figure 2.3. Female breast cancer age-adjusted late-stage incidence rates

Conclusions: Breast cancer late-stage rates, proportions and trends

Late-stage incidence rates and trends

Overall, the breast cancer late-stage incidence rate in the State of Pennsylvania was significantly higher than that observed in the US as a whole and the late-stage incidence trend was higher than the US as a whole.

For the United States, late-stage incidence rates in Blacks/African-Americans are higher than among Whites. Hispanics/Latinas tend to be diagnosed with late-stage breast cancers more often than Whites. For the State of Pennsylvania, the late-stage incidence rate was significantly higher among Blacks/African-Americans than Whites, significantly lower among APIs than Whites, and significantly lower among AIANs than Whites. The late-stage incidence rate among Hispanics/Latinas was significantly lower than among Non-Hispanics/Latinas.

The following counties had a late-stage incidence rate **significantly higher** than the state as a whole:

- Forest County (Komen Pittsburgh)
- Philadelphia County (Komen Philadelphia)

The late-stage incidence rate was significantly lower in the following counties:

- Centre County (Komen Pittsburgh)
- Crawford County (Komen Pittsburgh)
- Northumberland County (Komen Northeastern Pennsylvania)

Significantly more favorable trends in breast cancer late-stage incidence rates were observed in the following county:

- Snyder County (Komen Northeastern Pennsylvania)

The rest of the counties had late-stage incidence rates and trends that were not significantly different than the state as a whole or did not have enough data available.

Late-stage proportions and trends

Overall, the breast cancer late-stage proportion and trend in the State of Pennsylvania were similar to that observed in the US as a whole.

For the State of Pennsylvania, the late-stage proportion was significantly higher among Blacks/African-Americans than Whites, higher among APIs than Whites, and higher among AIANs than Whites. The late-stage proportion among Hispanics/Latinas was slightly higher than among Non-Hispanics/Latinas.

The following counties had a late-stage proportion **significantly higher** than the state as a whole:

- Cambria County (Komen Pittsburgh)
- Forest County (Komen Pittsburgh)
- Monroe County (Komen Northeastern Pennsylvania)

- Philadelphia County (Komen Philadelphia)
- Pike County (Komen Northeastern Pennsylvania)

The late-stage proportion was significantly lower in the following counties:

- Allegheny County (Komen Pittsburgh)
- Crawford County (Komen Pittsburgh)

Significantly more favorable trends in breast cancer late-stage proportions were observed in the following county:

- Luzerne County (Komen Northeastern Pennsylvania)

The rest of the counties had late-stage proportions and trends that were not significantly different than the state as a whole or did not have enough data available.

Mammography Screening

Getting regular screening mammograms (along with treatment if diagnosed) lowers the risk of dying from breast cancer.

Knowing whether or not women are getting regular screening mammograms as recommended by their health care providers can be used to identify groups of women who need help in meeting screening recommendations.

Why mammograms matter

Getting regular screening mammograms (and treatment if diagnosed) lowers the risk of dying from breast cancer. Screening mammography can find breast cancer early, when the chances of survival are highest. The US Preventive Services Task Force found that having screening mammograms reduces the breast cancer death rate for women age 40 to 74. The benefit of mammograms is greater for women age 50 to 74. It's especially high for women age 60 to 69 (Nelson et al., 2009). Because having mammograms lowers the chances of dying from breast cancer, it's important to know whether women are having mammograms when they should. This information can be used to identify groups of women who should be screened who need help in meeting the current recommendations for screening mammography.

Mammography recommendations

Table 2.5 shows some screening recommendations among major organizations for women at average risk.

Table 2.5. Breast cancer screening recommendations for women at average risk.*

American Cancer Society	National Comprehensive Cancer Network	US Preventive Services Task Force
Informed decision-making with a health care provider at age 40 Mammography every year starting at age 45 Mammography every other year beginning at age 55	Mammography every year starting at age 40	Informed decision-making with a health care provider ages 40-49 Mammography every 2 years ages 50-74

*As of October 2015

Where the data come from

The Centers for Disease Control and Prevention's (CDC) Behavioral Risk Factors Surveillance System (BRFSS) collected the data on mammograms that are used in this report. The data come from interviews with women age 50 to 74 from across the United States. During the interviews, each woman was asked how long it has been since she has had a mammogram. BRFSS is the best and most widely used source available for information on mammography usage among women in the United States, although it does not collect data matching Komen screening recommendations (i.e., from women age 40 and older).

For some counties, data about mammograms are not shown because not enough women were included in the survey (less than 10 survey responses).

The data have been weighted to account for differences between the women who were interviewed and all the women in the area. For example, if 20 percent of the women interviewed are Hispanic/Latina, but only 10 percent of the total women in the area are Hispanic/Latina, weighting is used to account for this difference.

Calculating the mammography screening proportion

This report uses the mammography screening proportion to show whether the women in an area are getting screening mammograms when they should.

Mammography screening proportion is calculated from two pieces of information:

- The number of women living in an area whom the BRFSS determines should have mammograms (i.e., women age 50 to 74).
- The number of these women who actually had a mammogram during the past two years.

The number of women who had a mammogram is divided by the number who should have had one. For example, if there are 500 women in an area who should have had mammograms and 250 of those women actually had a mammogram in the past two years, the mammography screening proportion is 50.0 percent.

Confidence intervals

As with incidence and death rates, this report includes the confidence interval of the screening proportions because numbers are not exact. The confidence interval is shown as two numbers—a lower value and a higher one. It is very unlikely that the true rate is less than the lower value or more than the higher value.

In general, screening proportions at the county level have fairly wide confidence intervals. The confidence interval should always be considered before concluding that the screening proportion in one county is higher or lower than that in another county.

Breast cancer screening proportions

Breast cancer screening proportions are shown in Table 2.6 for:

- United States
- State of Pennsylvania
- Each county in Pennsylvania

For the State of Pennsylvania, proportions are also shown for Whites, Blacks/African-Americans, Asians and Pacific Islanders (API), and American Indians and Alaska Natives (AIAN). In addition, proportions are shown for Hispanics/Latinas and women who are not Hispanic/Latina (regardless of their race).

The proportions in Table 2.6 are based on the number of women age 50 to 74 who reported in 2012 having had a mammogram in the last two years. The data source is the BRFSS, which only surveys women in this age range for mammography usage. The data on the proportion of women who had a mammogram in the last two years have been weighted to account for differences between the women who were interviewed and all the women in the area. For example, if 20.0 percent of the women interviewed are Hispanic/Latina, but only 10.0 percent of the total women in the area are Hispanic/Latina, weighting is used to account for this difference.

Table 2.6. Proportion of women ages 50-74 with screening mammography in the last two years, self-report

Population Group	# of Women Interviewed (Sample Size)	# w/ Self-Reported Mammogram	Proportion Screened (Weighted Average)	Confidence Interval of Proportion Screened
US	174,796	133,399	77.5%	77.2% : 77.7%
Pennsylvania	7,404	5,654	77.8%	76.6% : 78.9%
White	6,715	5,104	77.3%	76.1% : 78.5%
Black/African-American	509	429	87.4%	83.0% : 90.8%
AIAN	34	19	56.8%	33.9% : 77.0%
API	31	22	57.1%	35.8% : 76.0%
Hispanic/ Latina	114	88	72.9%	61.4% : 81.9%
Non-Hispanic/ Latina	7,244	5,534	78.0%	76.8% : 79.1%
Adams County	49	40	79.9%	63.3% : 90.2%
Allegheny County	711	523	73.4%	69.3% : 77.2%
Armstrong County	42	29	78.8%	59.3% : 90.5%
Beaver County	82	70	83.3%	72.7% : 90.3%
Bedford County	79	54	56.7%	42.0% : 70.4%
Berks County	87	66	80.4%	69.8% : 87.9%
Blair County	74	47	57.5%	44.1% : 69.9%
Bradford County	732	548	74.1%	70.5% : 77.4%
Bucks County	140	104	76.3%	67.5% : 83.3%
Butler County	92	61	64.6%	52.4% : 75.1%
Cambria County	64	40	67.3%	52.3% : 79.5%
Cameron County	SN	SN	SN	SN
Carbon County	29	23	82.5%	60.0% : 93.6%
Centre County	97	81	87.8%	76.2% : 94.2%
Chester County	102	82	82.0%	72.4% : 88.9%
Clarion County	29	27	97.2%	79.4% : 99.7%
Clearfield County	68	58	85.9%	73.1% : 93.2%
Clinton County	45	31	66.9%	46.8% : 82.3%
Columbia County	67	50	75.7%	58.4% : 87.4%
Crawford County	65	44	70.5%	55.4% : 82.1%
Cumberland County	95	80	82.7%	71.3% : 90.2%
Dauphin County	109	89	81.7%	70.9% : 89.1%
Delaware County	122	94	83.0%	74.5% : 89.1%
Elk County	29	22	77.7%	57.0% : 90.1%
Erie County	180	137	77.1%	68.8% : 83.7%

Population Group	# of Women Interviewed (Sample Size)	# w/ Self-Reported Mammogram	Proportion Screened (Weighted Average)	Confidence Interval of Proportion Screened
Fayette County	67	39	62.6%	48.6% : 74.8%
Forest County	SN	SN	SN	SN
Franklin County	69	54	79.6%	66.4% : 88.5%
Fulton County	11	9	82.0%	49.7% : 95.5%
Greene County	22	16	84.5%	58.7% : 95.4%
Huntingdon County	31	25	83.5%	62.1% : 94.0%
Indiana County	36	29	85.2%	68.3% : 93.9%
Jefferson County	40	26	67.0%	48.1% : 81.7%
Juniata County	13	8	74.6%	43.3% : 91.9%
Lackawanna County	92	63	71.4%	59.7% : 80.9%
Lancaster County	114	83	73.5%	63.1% : 81.8%
Lawrence County	63	46	66.5%	52.3% : 78.2%
Lebanon County	50	36	70.7%	54.7% : 82.9%
Lehigh County	142	100	70.8%	61.7% : 78.5%
Luzerne County	163	131	79.4%	70.9% : 85.9%
Lycoming County	140	126	92.1%	84.4% : 96.2%
McKean County	34	25	81.2%	62.7% : 91.7%
Mercer County	78	69	89.9%	78.3% : 95.6%
Mifflin County	28	22	88.4%	65.5% : 96.8%
Monroe County	88	73	81.4%	70.9% : 88.7%
Montgomery County	156	126	78.3%	70.6% : 84.5%
Montour County	17	13	84.9%	55.9% : 96.1%
Northampton County	130	94	74.2%	64.6% : 82.0%
Northumberland County	117	101	85.5%	76.2% : 91.6%
Perry County	14	12	88.1%	50.7% : 98.2%
Philadelphia County	717	574	82.6%	78.7% : 86.0%
Pike County	753	547	72.3%	69.1% : 75.4%
Potter County	28	22	81.3%	54.2% : 94.1%
Schuylkill County	36	24	76.8%	59.2% : 88.3%
Snyder County	50	43	88.2%	70.5% : 95.9%
Somerset County	41	27	63.4%	44.8% : 78.7%
Sullivan County	SN	SN	SN	SN
Susquehanna County	30	25	88.7%	65.9% : 96.9%
Tioga County	65	53	77.1%	59.8% : 88.4%
Union County	39	32	89.1%	67.8% : 97.0%

Population Group	# of Women Interviewed (Sample Size)	# w/ Self-Reported Mammogram	Proportion Screened (Weighted Average)	Confidence Interval of Proportion Screened
Venango County	47	40	90.7%	76.2% : 96.8%
Warren County	37	28	82.7%	64.1% : 92.7%
Washington County	98	80	82.5%	72.3% : 89.5%
Wayne County	31	24	78.9%	57.6% : 91.2%
Westmoreland County	187	149	80.2%	72.7% : 86.1%
Wyoming County	15	12	75.9%	40.8% : 93.5%
York County	173	135	78.8%	70.8% : 85.1%

Data are for 2012.
Source: CDC – Behavioral Risk Factor Surveillance System (BRFSS).

Conclusions: Breast cancer screening proportions

The breast cancer screening proportion in the State of Pennsylvania was not significantly different than that observed in the US as a whole.

For the United States, breast cancer screening proportions among Blacks/African-Americans are similar to those among Whites overall. APIs have somewhat lower screening proportions than Whites and Blacks/African-Americans. Although data are limited, screening proportions among AIANs are similar to those among Whites. Screening proportions among Hispanics/Latinas are similar to those among Non-Hispanic Whites and Blacks/African-Americans. For the State of Pennsylvania, the screening proportion was significantly higher among Blacks/African-Americans than Whites, **significantly lower** among APIs than Whites, and not significantly different among AIANs and Whites. The screening proportion among Hispanics/Latinas was not significantly different from the proportion among Non-Hispanics/Latinas.

The following counties had a screening proportion **significantly lower** than the state as a whole:

- Bedford County (Komen Pittsburgh)
- Blair County (Komen Pittsburgh)
- Butler County (Komen Pittsburgh)
- Fayette County (Komen Pittsburgh)
- Pike County (Komen Northeastern Pennsylvania)

The following counties had a screening proportion significantly higher than the state as a whole:

- Clarion County (Komen Pittsburgh)
- Lycoming County (Komen Northeastern Pennsylvania)

The remaining counties had screening proportions that were not significantly different than the state as a whole.

Demographic and Socioeconomic Measures

> **Demographic and socioeconomic data can be used to identify which groups of women are most in need of help and to figure out the best ways to help them.**

The report includes basic information about the women in each area (demographic measures) and about factors like education, income, and unemployment (socioeconomic measures) in the areas where they live.
Demographic measures in the report include:

- Age
- Race
- Ethnicity (whether or not a woman is Hispanic/Latina – can be of any race)

It is important to note that the report uses the race and ethnicity categories used by the US Census Bureau, and that race and ethnicity are separate and independent categories. This means that everyone is classified as both a member of one of the four race groups as well as either Hispanic/Latina or Non-Hispanic/Latina.

Socioeconomic measures for the areas covered in this report include:

- Education level
- Income
- Unemployment
- Immigration (how many of the people living in an area were born in another country)
- Use of the English language
- Proportion of people who have health insurance
- Proportion of people who live in rural areas
- Proportion of people who in areas that don't have enough doctors or health care facilities (medically underserved areas)

Why these data matter

Demographic and socioeconomic data can be used to identify which groups of women need the most help and to figure out the best ways to help them.

Important details about these data

The demographic and socioeconomic data in this report are the most recent data available for US counties. All the data are shown as percentages. However, the percentages weren't all calculated in the same way.

- The race, ethnicity, and age data are based on the total female population in the area (e.g. the percent of females over the age of 40).
- The socioeconomic data are based on all of the people in the area, not just women.
- Income, education and unemployment data don't include children. They're based on people age 15 and older for income and unemployment and age 25 and older for education.

- The data on the use of English, called “linguistic isolation”, are based on the total number of households in the area. The Census Bureau defines a linguistically isolated household as one in which all the adults have difficulty with English.

Where the data come from

The demographic and socioeconomic sources of data are:

- Race/ethnicity, age, and sex data come from the US Census Bureau estimates for July 1, 2011.
- Most of the other data come from the US Census Bureau’s American Community Survey program. The most recent data for counties are for 2007 to 2011.
- Health insurance data come from the US Census Bureau’s Small Area Health Insurance Estimates program. The most recent data are for 2011.
- Rural population data come from the US Census Bureau’s 2010 population survey.
- Medically underserved area information comes from the US Department of Health and Human Services, Health Resources and Services Administration. The most recent data are for 2013.

Population characteristics

Race, ethnicity, and age data for the US, the state, and each of the counties in the state is presented in Table 2.7:

- Race percentages for four race groups: White, Black/African-American, American Indian and Alaska Native (AIAN), and Asian and Pacific Islander (API).
- Percentages of women of Hispanic/Latina ethnicity (who may be of any race).
- Percentages of women in three age-groups: 40 and older, 50 and older, and 65 and older.

Table 2.8 shows socioeconomic data for the US, the state, and each of the counties in the state:

- Educational attainment as the percentage of the population 25 years and over that did not complete high school
- Income relative to the US poverty level. Two levels are shown – the percentage of people with income less than the poverty level (below 100 percent) and less than 2.5 times the poverty level (below 250 percent).
- Percentage of the population who are unemployed
- Percentage of the population born outside the US
- Percentage of households that are linguistically isolated (all adults in the household have difficulty with English)
- Percentage living in rural areas
- Percentage living in medically underserved areas as determined by the Health Resources and Services Administration (HRSA)
- Percentage between ages 40 and 64 who have no health insurance

Table 2.7. Population characteristics – demographics

Population Group	White	Black/ African-American	AIAN	API	Non-Hispanic/ Latina	Hispanic/ Latina	Female Age 40 Plus	Female Age 50 Plus	Female Age 65 Plus
US	78.8 %	14.1 %	1.4 %	5.8 %	83.8 %	16.2 %	48.3 %	34.5 %	14.8 %
Pennsylvania	84.4 %	12.1 %	0.4 %	3.1 %	94.4 %	5.6 %	52.3 %	38.6 %	17.6 %
Adams County	96.7 %	2.0 %	0.3 %	0.9 %	94.5 %	5.5 %	53.9 %	39.2 %	17.4 %
Allegheny County	82.4 %	14.5 %	0.2 %	3.0 %	98.4 %	1.6 %	54.0 %	41.0 %	19.1 %
Armstrong County	98.5 %	1.0 %	0.1 %	0.3 %	99.4 %	0.6 %	58.1 %	44.1 %	20.9 %
Beaver County	92.2 %	7.0 %	0.2 %	0.7 %	98.8 %	1.2 %	57.8 %	44.1 %	20.9 %
Bedford County	98.8 %	0.7 %	0.2 %	0.3 %	99.1 %	0.9 %	57.3 %	43.6 %	21.6 %
Berks County	90.7 %	6.8 %	0.7 %	1.8 %	83.5 %	16.5 %	50.6 %	36.2 %	16.3 %
Blair County	97.3 %	1.9 %	0.1 %	0.8 %	99.0 %	1.0 %	55.1 %	42.1 %	20.3 %
Bradford County	98.1 %	0.8 %	0.4 %	0.7 %	98.8 %	1.2 %	55.6 %	41.6 %	19.3 %
Bucks County	91.1 %	4.2 %	0.3 %	4.4 %	95.8 %	4.2 %	55.1 %	39.4 %	16.7 %
Butler County	97.4 %	1.2 %	0.1 %	1.2 %	98.9 %	1.1 %	54.5 %	39.3 %	17.4 %
Cambria County	95.9 %	3.3 %	0.1 %	0.7 %	98.8 %	1.2 %	56.7 %	44.4 %	21.8 %
Cameron County	98.4 %	0.9 %	0.4 %	0.4 %	99.4 %	0.6 %	62.9 %	49.5 %	24.1 %
Carbon County	97.1 %	1.9 %	0.2 %	0.8 %	96.8 %	3.2 %	57.6 %	42.8 %	20.0 %
Centre County	91.1 %	3.2 %	0.2 %	5.5 %	97.5 %	2.5 %	40.2 %	29.2 %	13.3 %
Chester County	88.4 %	6.9 %	0.3 %	4.4 %	94.1 %	5.9 %	51.0 %	35.5 %	14.5 %
Clarion County	97.7 %	1.5 %	0.2 %	0.7 %	99.4 %	0.6 %	50.0 %	37.9 %	18.0 %
Clearfield County	98.7 %	0.7 %	0.1 %	0.5 %	99.2 %	0.8 %	57.3 %	42.8 %	20.7 %
Clinton County	97.6 %	1.7 %	0.1 %	0.7 %	98.9 %	1.1 %	50.0 %	37.9 %	17.8 %
Columbia County	96.4 %	2.4 %	0.2 %	1.0 %	97.9 %	2.1 %	50.6 %	38.3 %	18.2 %
Crawford County	96.6 %	2.5 %	0.2 %	0.7 %	98.9 %	1.1 %	53.8 %	40.2 %	18.0 %
Cumberland County	93.3 %	3.1 %	0.2 %	3.5 %	97.5 %	2.5 %	52.7 %	39.0 %	18.0 %
Dauphin County	75.7 %	20.3 %	0.4 %	3.5 %	93.0 %	7.0 %	51.3 %	37.4 %	15.7 %
Delaware County	73.2 %	21.5 %	0.2 %	5.1 %	97.1 %	2.9 %	50.9 %	37.0 %	16.4 %
Elk County	98.9 %	0.6 %	0.1 %	0.4 %	99.3 %	0.7 %	59.3 %	44.3 %	21.4 %
Erie County	90.7 %	7.7 %	0.3 %	1.3 %	96.7 %	3.3 %	50.2 %	37.3 %	16.6 %
Fayette County	95.0 %	4.4 %	0.2 %	0.5 %	99.3 %	0.7 %	57.3 %	43.6 %	20.6 %
Forest County	98.4 %	1.0 %	0.4 %	0.3 %	98.5 %	1.5 %	68.2 %	54.9 %	26.2 %
Franklin County	94.6 %	3.9 %	0.3 %	1.2 %	95.9 %	4.1 %	52.2 %	38.5 %	18.5 %
Fulton County	98.1 %	1.6 %	0.1 %	0.2 %	99.2 %	0.8 %	54.6 %	40.7 %	19.0 %
Greene County	98.5 %	0.9 %	0.2 %	0.4 %	99.3 %	0.7 %	53.4 %	40.4 %	17.8 %
Huntingdon County	97.9 %	1.5 %	0.1 %	0.5 %	99.1 %	0.9 %	54.3 %	41.1 %	19.2 %
Indiana County	96.1 %	2.5 %	0.2 %	1.2 %	98.9 %	1.1 %	49.2 %	37.7 %	17.6 %
Jefferson County	98.7 %	0.7 %	0.2 %	0.3 %	99.3 %	0.7 %	55.8 %	42.6 %	20.6 %
Juniata County	98.3 %	1.0 %	0.3 %	0.5 %	97.5 %	2.5 %	52.4 %	38.7 %	17.9 %

Population Group	White	Black/ African-American	AIAN	API	Non-Hispanic/ Latina	Hispanic/ Latina	Female Age 40 Plus	Female Age 50 Plus	Female Age 65 Plus
Lackawanna County	94.8 %	3.0 %	0.3 %	2.0 %	95.0 %	5.0 %	54.6 %	41.4 %	20.2 %
Lancaster County	92.6 %	4.8 %	0.4 %	2.3 %	91.3 %	8.7 %	49.7 %	36.6 %	16.9 %
Lawrence County	94.8 %	4.5 %	0.1 %	0.6 %	98.9 %	1.1 %	56.9 %	43.9 %	21.2 %
Lebanon County	95.2 %	3.0 %	0.3 %	1.5 %	90.5 %	9.5 %	53.2 %	39.8 %	19.2 %
Lehigh County	87.4 %	8.3 %	0.8 %	3.5 %	80.9 %	19.1 %	51.1 %	36.9 %	16.7 %
Luzerne County	94.6 %	3.7 %	0.4 %	1.3 %	93.0 %	7.0 %	55.8 %	42.2 %	20.9 %
Lycoming County	93.5 %	5.5 %	0.2 %	0.8 %	98.5 %	1.5 %	53.8 %	40.1 %	18.6 %
McKean County	98.2 %	0.9 %	0.3 %	0.6 %	99.0 %	1.0 %	54.6 %	41.5 %	19.6 %
Mercer County	93.2 %	5.8 %	0.2 %	0.9 %	99.0 %	1.0 %	55.8 %	42.9 %	21.2 %
Mifflin County	98.5 %	0.9 %	0.1 %	0.5 %	98.9 %	1.1 %	55.5 %	41.9 %	20.7 %
Monroe County	81.6 %	15.2 %	0.6 %	2.6 %	86.5 %	13.5 %	52.2 %	36.2 %	14.2 %
Montgomery County	83.3 %	9.6 %	0.3 %	6.9 %	96.0 %	4.0 %	53.3 %	38.4 %	17.2 %
Montour County	96.4 %	1.6 %	0.1 %	1.9 %	98.0 %	2.0 %	57.6 %	44.4 %	21.8 %
Northampton County	90.6 %	6.3 %	0.4 %	2.8 %	89.4 %	10.6 %	53.8 %	39.4 %	18.0 %
Northumberland County	97.9 %	1.3 %	0.2 %	0.5 %	97.6 %	2.4 %	57.1 %	43.8 %	21.5 %
Perry County	98.4 %	0.9 %	0.2 %	0.5 %	98.6 %	1.4 %	53.3 %	38.6 %	15.8 %
Philadelphia County	45.2 %	47.1 %	1.0 %	6.8 %	88.0 %	12.0 %	44.1 %	31.8 %	14.0 %
Pike County	91.3 %	6.9 %	0.4 %	1.4 %	90.6 %	9.4 %	57.3 %	40.6 %	17.2 %
Potter County	98.8 %	0.6 %	0.2 %	0.4 %	98.9 %	1.1 %	58.6 %	44.8 %	21.4 %
Schuylkill County	97.7 %	1.4 %	0.2 %	0.7 %	97.7 %	2.3 %	57.3 %	43.3 %	21.3 %
Snyder County	97.8 %	1.3 %	0.2 %	0.7 %	98.2 %	1.8 %	50.9 %	37.5 %	17.4 %
Somerset County	98.9 %	0.5 %	0.1 %	0.5 %	99.3 %	0.7 %	58.6 %	45.2 %	22.0 %
Sullivan County	97.4 %	1.8 %	0.4 %	0.4 %	98.9 %	1.1 %	64.8 %	52.7 %	26.6 %
Susquehanna County	98.8 %	0.7 %	0.1 %	0.4 %	98.7 %	1.3 %	58.4 %	44.3 %	19.7 %
Tioga County	97.8 %	1.2 %	0.3 %	0.6 %	98.8 %	1.2 %	53.8 %	40.9 %	19.3 %
Union County	96.4 %	2.0 %	0.2 %	1.4 %	98.1 %	1.9 %	50.7 %	38.3 %	18.9 %
Venango County	98.0 %	1.2 %	0.2 %	0.5 %	99.1 %	0.9 %	57.4 %	44.4 %	20.3 %
Warren County	98.8 %	0.5 %	0.2 %	0.5 %	99.2 %	0.8 %	58.8 %	44.8 %	20.6 %
Washington County	95.2 %	3.8 %	0.2 %	0.8 %	98.8 %	1.2 %	57.0 %	43.0 %	19.8 %
Wayne County	97.7 %	1.5 %	0.2 %	0.6 %	97.2 %	2.8 %	61.3 %	47.2 %	22.4 %
Westmoreland County	96.4 %	2.5 %	0.1 %	0.9 %	99.1 %	0.9 %	59.5 %	45.3 %	21.3 %
Wyoming County	98.2 %	1.1 %	0.2 %	0.5 %	98.5 %	1.5 %	55.4 %	41.6 %	18.5 %
York County	91.4 %	6.7 %	0.3 %	1.6 %	94.5 %	5.5 %	52.1 %	37.2 %	15.8 %

Data are for 2011.
Data are in the percentage of women in the population.
Source: US Census Bureau – Population Estimates.

Table 2.8. Population characteristics – socioeconomics

Population Group	Less than HS Education	Income Below 100% Poverty	Income Below 250% Poverty (Age: 40-64)	Un-employed	Foreign Born	Linguis-tically Isolated	In Rural Areas	In Medically Under-served Areas	No Health Insurance (Age: 40-64)
US	14.6 %	14.3 %	33.3 %	8.7 %	12.8 %	4.7 %	19.3 %	23.3 %	16.6 %
Pennsylvania	12.1 %	12.6 %	30.3 %	7.9 %	5.7 %	2.2 %	21.3 %	15.2 %	11.0 %
Adams County	14.8 %	7.8 %	26.7 %	5.2 %	4.0 %	1.6 %	53.7 %	0.0 %	10.8 %
Allegheny County	8.0 %	12.4 %	29.1 %	7.2 %	4.7 %	1.2 %	2.5 %	15.1 %	10.0 %
Armstrong County	11.8 %	11.8 %	35.7 %	8.2 %	0.7 %	0.1 %	67.5 %	36.0 %	11.6 %
Beaver County	9.9 %	11.6 %	30.9 %	6.4 %	1.8 %	0.7 %	25.8 %	9.4 %	10.2 %
Bedford County	16.0 %	13.1 %	39.8 %	7.5 %	0.8 %	0.1 %	83.8 %	37.7 %	13.5 %
Berks County	16.2 %	13.1 %	28.9 %	8.7 %	6.3 %	4.0 %	23.7 %	9.8 %	11.8 %
Blair County	10.0 %	13.8 %	36.0 %	7.7 %	1.1 %	0.1 %	23.4 %	0.0 %	11.3 %
Bradford County	14.5 %	13.6 %	37.1 %	6.0 %	1.4 %	0.6 %	72.2 %	1.9 %	12.5 %
Bucks County	7.6 %	5.2 %	17.4 %	6.7 %	8.1 %	2.4 %	8.8 %	0.0 %	8.1 %
Butler County	7.8 %	8.7 %	23.6 %	6.3 %	2.0 %	0.3 %	42.0 %	8.0 %	8.9 %
Cambria County	11.9 %	14.2 %	36.9 %	7.7 %	1.4 %	0.3 %	32.0 %	23.0 %	10.9 %
Cameron County	13.6 %	14.0 %	38.6 %	6.2 %	1.2 %	0.8 %	47.4 %	100.0 %	12.3 %
Carbon County	13.2 %	10.7 %	34.4 %	8.9 %	2.9 %	0.5 %	47.2 %	15.7 %	11.7 %
Centre County	7.1 %	18.9 %	26.2 %	5.9 %	6.9 %	1.7 %	32.2 %	38.7 %	9.3 %
Chester County	7.4 %	6.1 %	15.2 %	5.6 %	8.5 %	2.2 %	13.3 %	3.0 %	7.8 %
Clarion County	12.3 %	15.8 %	36.0 %	8.1 %	1.1 %	0.7 %	76.6 %	13.9 %	11.2 %
Clearfield County	14.0 %	14.8 %	39.1 %	9.1 %	1.2 %	0.4 %	53.8 %	27.3 %	12.6 %
Clinton County	14.0 %	15.8 %	37.2 %	7.7 %	1.3 %	0.3 %	45.7 %	5.1 %	11.8 %
Columbia County	13.0 %	15.2 %	32.8 %	6.0 %	2.2 %	0.6 %	40.9 %	0.0 %	10.3 %
Crawford County	13.8 %	16.2 %	41.0 %	8.4 %	1.2 %	0.7 %	63.7 %	20.1 %	14.0 %
Cumberland County	8.9 %	7.1 %	20.5 %	5.2 %	5.2 %	1.3 %	22.2 %	2.0 %	8.6 %
Dauphin County	11.3 %	12.3 %	27.6 %	6.8 %	5.8 %	2.4 %	13.3 %	11.4 %	9.8 %
Delaware County	9.0 %	9.5 %	23.8 %	7.9 %	8.7 %	2.1 %	0.5 %	3.8 %	9.8 %
Elk County	10.1 %	11.6 %	31.9 %	6.5 %	1.0 %	0.3 %	55.7 %	0.0 %	10.7 %
Erie County	10.5 %	15.8 %	34.7 %	8.3 %	3.9 %	1.5 %	20.0 %	9.9 %	11.4 %
Fayette County	16.7 %	19.2 %	45.0 %	9.8 %	1.1 %	0.1 %	47.9 %	100.0 %	13.2 %
Forest County	19.3 %	13.2 %	44.0 %	9.5 %	1.0 %	0.3 %	100.0 %	100.0 %	13.4 %
Franklin County	15.7 %	8.9 %	29.1 %	6.5 %	3.6 %	1.4 %	40.4 %	3.0 %	12.6 %
Fulton County	17.2 %	13.0 %	36.8 %	9.2 %	0.9 %	0.4 %	100.0 %	100.0 %	12.3 %
Greene County	14.6 %	15.9 %	36.8 %	6.2 %	0.6 %	0.3 %	66.8 %	80.7 %	10.0 %
Huntingdon County	13.4 %	12.0 %	36.6 %	7.6 %	1.1 %	0.2 %	68.7 %	28.5 %	12.4 %

Population Group	Less than HS Education	Income Below 100% Poverty	Income Below 250% Poverty (Age: 40-64)	Un-employed	Foreign Born	Linguis-tically Isolated	In Rural Areas	In Medically Under-served Areas	No Health Insurance (Age: 40-64)
Indiana County	13.0 %	18.6 %	36.0 %	8.6 %	1.8 %	0.6 %	60.1 %	29.3 %	11.2 %
Jefferson County	13.5 %	14.1 %	40.8 %	7.3 %	0.5 %	0.2 %	61.5 %	56.0 %	13.0 %
Juniata County	19.1 %	10.6 %	35.1 %	6.9 %	1.6 %	1.4 %	82.3 %	8.2 %	13.5 %
Lackawanna County	12.1 %	13.3 %	34.0 %	6.8 %	4.4 %	1.9 %	16.3 %	12.2 %	10.4 %
Lancaster County	16.7 %	9.9 %	27.7 %	6.2 %	4.5 %	3.3 %	21.3 %	5.9 %	11.2 %
Lawrence County	12.5 %	13.5 %	36.0 %	7.5 %	1.5 %	1.0 %	40.3 %	23.5 %	12.1 %
Lebanon County	15.1 %	9.6 %	27.8 %	7.3 %	3.1 %	2.3 %	26.6 %	9.0 %	10.3 %
Lehigh County	14.2 %	12.3 %	28.7 %	8.7 %	9.4 %	4.7 %	7.9 %	1.8 %	12.5 %
Luzerne County	12.6 %	14.1 %	34.4 %	7.3 %	4.4 %	1.6 %	20.0 %	18.2 %	11.2 %
Lycoming County	13.8 %	14.2 %	36.2 %	8.1 %	1.6 %	0.3 %	36.3 %	14.4 %	12.7 %
McKean County	11.2 %	14.9 %	38.6 %	10.3 %	0.9 %	0.4 %	63.5 %	17.5 %	11.2 %
Mercer County	12.2 %	12.8 %	35.4 %	8.8 %	1.7 %	0.5 %	44.5 %	7.7 %	11.3 %
Mifflin County	19.1 %	15.2 %	42.4 %	9.0 %	0.6 %	1.1 %	50.5 %	34.9 %	13.8 %
Monroe County	11.0 %	11.3 %	31.3 %	11.6 %	9.8 %	2.7 %	38.4 %	0.0 %	14.1 %
Montgomery County	7.1 %	5.7 %	16.4 %	6.0 %	9.5 %	2.6 %	2.9 %	1.7 %	7.4 %
Montour County	10.9 %	10.4 %	29.6 %	5.7 %	3.7 %	1.3 %	53.8 %	0.0 %	8.8 %
Northampton County	12.7 %	9.1 %	24.0 %	7.5 %	6.6 %	2.4 %	12.8 %	6.7 %	10.2 %
Northumberland County	15.1 %	13.7 %	37.7 %	8.0 %	1.0 %	0.6 %	34.9 %	31.1 %	11.9 %
Perry County	14.8 %	9.5 %	30.2 %	6.9 %	0.9 %	0.3 %	88.5 %	6.6 %	12.2 %
Philadelphia County	20.0 %	25.6 %	49.7 %	13.4 %	11.6 %	6.6 %	0.0 %	40.0 %	16.3 %
Pike County	7.8 %	9.3 %	29.0 %	11.3 %	6.7 %	1.3 %	70.8 %	14.4 %	13.5 %
Potter County	13.0 %	14.6 %	39.4 %	8.5 %	0.9 %	0.4 %	100.0 %	15.3 %	13.3 %
Schuylkill County	15.0 %	11.8 %	34.6 %	8.0 %	1.8 %	0.7 %	36.5 %	37.5 %	10.9 %
Snyder County	17.2 %	11.2 %	36.9 %	5.8 %	1.7 %	1.5 %	66.8 %	7.5 %	13.5 %
Somerset County	16.4 %	12.8 %	39.3 %	7.5 %	0.8 %	0.4 %	70.8 %	36.5 %	13.2 %
Sullivan County	13.1 %	13.2 %	37.4 %	5.7 %	1.3 %	0.3 %	100.0 %	100.0 %	13.0 %
Susquehanna County	12.3 %	11.9 %	35.9 %	7.3 %	1.4 %	0.5 %	84.0 %	48.1 %	13.2 %
Tioga County	12.6 %	15.7 %	37.4 %	8.1 %	1.2 %	0.1 %	90.1 %	46.7 %	13.9 %
Union County	16.3 %	12.0 %	31.1 %	6.7 %	4.2 %	1.0 %	42.8 %	0.0 %	11.5 %
Venango County	12.4 %	15.7 %	38.4 %	7.9 %	0.8 %	0.0 %	54.8 %	11.5 %	11.0 %
Warren County	10.8 %	12.1 %	36.0 %	6.4 %	1.2 %	0.1 %	55.0 %	0.0 %	11.7 %
Washington County	10.5 %	10.2 %	28.2 %	7.1 %	1.4 %	0.3 %	30.8 %	24.7 %	10.0 %
Wayne County	12.8 %	10.6 %	35.7 %	6.2 %	3.5 %	0.6 %	88.1 %	22.8 %	12.4 %
Westmoreland County	8.2 %	10.0 %	30.1 %	6.4 %	1.6 %	0.4 %	25.4 %	2.1 %	9.5 %

Population Group	Less than HS Education	Income Below 100% Poverty	Income Below 250% Poverty (Age: 40-64)	Un-employed	Foreign Born	Linguis-tically Isolated	In Rural Areas	In Medically Under-served Areas	No Health Insurance (Age: 40-64)
Wyoming County	11.1 %	12.1 %	32.7 %	7.3 %	1.3 %	0.3 %	83.5 %	51.6 %	11.0 %
York County	12.5 %	9.4 %	25.6 %	7.4 %	3.6 %	1.3 %	24.7 %	0.0 %	10.9 %

Data are in the percentage of people (men and women) in the population.
Source of health insurance data: US Census Bureau – Small Area Health Insurance Estimates (SAHIE) for 2011.
Source of rural population data: US Census Bureau – Census 2010.
Source of medically underserved data: Health Resources and Services Administration (HRSA) for 2013.
Source of other data: US Census Bureau – American Community Survey (ACS) for 2007-2011.

Conclusions: Population characteristics

Proportionately, the State of Pennsylvania has a substantially larger White female population than the US as a whole, a slightly smaller Black/African-American female population, a slightly smaller Asian and Pacific Islander (API) female population, a slightly smaller American Indian and Alaska Native (AIAN) female population, and a substantially smaller Hispanic/Latina female population. The state's female population is slightly older than that of the US as a whole. The state's education level is slightly higher than and income level is slightly higher than those of the US as a whole. The state's unemployment level is slightly smaller than that of the US as a whole. The state has a substantially smaller percentage of people who are foreign born and a slightly smaller percentage of people who are linguistically isolated. There are a slightly larger percentage of people living in rural areas, a substantially smaller percentage of people without health insurance, and a substantially smaller percentage of people living in medically underserved areas.

The following counties have substantially larger Black/African-American female population percentages than that of the state as a whole:

- Dauphin County (Komen Northeastern Pennsylvania)
- Delaware County (Komen Philadelphia)
- Philadelphia County (Komen Philadelphia)

The following counties have substantially larger API female population percentages than that of the state as a whole:

- Montgomery County (Komen Philadelphia)
- Philadelphia County (Komen Philadelphia)

The following counties have substantially larger Hispanic/Latina female population percentages than that of the state as a whole:

- Berks County (Komen Philadelphia)
- Lehigh County (Komen Philadelphia)
- Monroe County (Komen Northeastern Pennsylvania)
- Philadelphia County (Komen Philadelphia)

The following counties have substantially older female populations than that of the state as a whole:

- Cameron County (Komen Pittsburgh)
- Forest County (Komen Pittsburgh)
- Sullivan County (Komen Northeastern Pennsylvania)

The following counties have substantially lower education levels than that of the state as a whole:

- Forest County (Komen Pittsburgh)
- Fulton County (Komen Pittsburgh)
- Juniata County (Komen Pittsburgh)
- Mifflin County (Komen Pittsburgh)
- Philadelphia County (Komen Philadelphia)
- Snyder County (Komen Northeastern Pennsylvania)

The following counties have substantially lower income levels than that of the state as a whole:

- Fayette County (Komen Pittsburgh)
- Indiana County (Komen Pittsburgh)
- Philadelphia County (Komen Philadelphia)

The following counties have substantially lower employment levels than that of the state as a whole:

- Monroe County (Komen Northeastern Pennsylvania)
- Philadelphia County (Komen Philadelphia)
- Pike County (Komen Northeastern Pennsylvania)

The county with substantial foreign born and linguistically isolated populations is:

- Philadelphia County (Komen Philadelphia)

The following county has a substantially larger percentage of adults without health insurance than does the state as a whole:

- Philadelphia County (Komen Philadelphia)

Healthy People 2020 Forecasts

Healthy People 2020 is a major federal government program that has set specific targets (called "objectives") for improving Americans' health by the year 2020.

This report shows whether areas are likely to meet the two Healthy People 2020 objectives related to breast cancer: reducing breast cancer death rate and reducing the number of late-stage breast cancers.

Healthy People 2020 (HP2020) is a major federal government initiative that provides specific health objectives for communities and for the country as a whole (Healthy People 2020, 2010). Many national health organizations use HP2020 targets to monitor progress in reducing the burden of disease and improve the health of the nation. Likewise, Komen believes it is important to refer to HP2020 to see how areas across the country are progressing towards reducing the burden of breast cancer.

HP2020 has several cancer-related objectives, including:

- Reducing women's death rate from breast cancer.
- Reducing the number of breast cancers that are found at a late-stage.

The HP2020 objective for breast cancer death rates

As of the writing of this report, the HP2020 target for the breast cancer death rate is 20.6 breast-cancer related deaths per 100,000 females – a 10 percent improvement in comparison to the 2007 rate.

To see how well counties in Pennsylvania are progressing toward this target, this report uses the following information:

- County breast cancer death rate data for years 2006 to 2010.
- Estimates for the trend (annual percent change) in county breast cancer death rates for years 2006 to 2010.
- Both the data and the HP2020 target are age-adjusted.

These data are used to estimate how many years it will take for each county to meet the HP2020 objective. Because the target date for meeting the objective is 2020 and 2008 (the middle of the 2006-2010 period) was used as a starting point, a county has 12 years to meet the target.

Death rate data and trends are used to calculate whether an area will meet the HP2020 target, assuming that the trend seen in years 2006 to 2010 continues for 2011 and beyond.
The calculation was conducted using the following procedure:

- The annual percent change for 2006-2010 was calculated.
- Using 2008 (the middle of the period 2006-2010) as a starting point, the annual percent change was subtracted from (or added to) the expected death rate (based on the 2006-2010 death rate) for each year between 2010 and 2020.
- These calculated death rates were then compared with the target.
    - If the breast cancer death rate for 2006-2010 was already below the target, it is reported that the area "Currently meets target."
    - If it would take more than 12 years (2008 to 2020) to meet the target, it is reported that the area would need "13 years or longer" to meet the target.
    - If the rate is currently below the target but the trend is increasing such that the target will no longer be met in 2020, it is reported that the area would need "13 years or longer" to meet the target.

- In all other cases, the number of years it would take for the area to meet the target is reported. For example, if the area would meet the target in 2016, it would be reported as "eight years," because it's eight years from 2008 to 2016.

The HP2020 objective for late-stage breast cancer diagnoses

Another Healthy People 2020 objective is a decrease in the number of breast cancers diagnosed at a late stage. As of the writing of this report, the HP2020 target for late-stage diagnosis rate is 41.0 late-stage cases per 100,000 females. For each county in the state, the late-stage incidence rate and trend are used to calculate the amount of time, in years, needed to meet the HP2020 target, assuming that the trend observed from 2006 to 2010 continues for years 2011 and beyond.

The calculation was conducted using the following procedure:

- The annual percent change for 2006-2010 was calculated.
- Using 2008 (the middle of the period 2006-2010) as a starting point, the annual percent change was subtracted from (or added to) the expected late-stage incidence rate (based on the 2006-2010 rate) for each year between 2010 and 2020.
- The calculated late-stage incidence rates were then compared with the target.
  - If the late-stage incidence rate for 2006-2010 was already below the target, it is reported that the area "Currently meets target."
  - If it would take more than 12 years (2008 to 2020) to meet the target, it is reported that the area would need "13 years or longer" to meet the target.
  - If the rate is currently below the target but the trend is increasing such that the target will no longer be met in 2020, it is reported that the area would need "13 years or longer" to meet the target.
  - In all other cases, the number of years it would take for the area to meet the target is reported.

Identification of HP2020 breast cancer at-risk areas

Identifying geographic areas and groups of women with high needs will help develop effective, targeted breast cancer programs.

Priority areas are identified based on the time needed to meet Healthy People 2020 targets for breast cancer.

The purpose of this report is to combine evidence from many credible sources and use it to identify the highest HP2020 breast cancer at-risk areas (at-risk areas) for breast cancer programs (i.e., the areas of greatest need).

Classification of at-risk areas are based on the time needed to achieve HP2020 targets in each area. These time projections depend on both the starting point and the trends in death rates and late-stage incidence.

Late-stage incidence reflects both the overall breast cancer incidence rate in the population and the mammography screening coverage. The breast cancer death rate reflects the access to care and the quality of care in the healthcare delivery area, as well as cancer stage at diagnosis.

There has not been any indication that either one of the two HP2020 targets is more important than the other. Therefore, the report considers them equally important.

How counties are classified by need

Counties are classified as follows.

- Counties that are not likely to achieve either of the HP2020 targets are considered to have the highest needs.
- Counties that have already achieved both targets are considered to have the lowest needs.
- Other counties are classified based on the number of years needed to achieve the two targets.

Table 2.9 shows how counties are assigned to at-risk categories.

Table 2.9. Needs/At-risk classification based on the projected time to achieve HP2020 breast cancer targets

		Time to Achieve Late-stage Incidence Reduction Target				
Time to Achieve Death Rate Reduction Target		13 years or longer	7-12 yrs.	0 – 6 yrs.	Currently meets target	Unknown
	13 years or longer	**Highest**	**High**	**Medium High**	**Medium**	**Highest**
	7-12 yrs.	**High**	**Medium High**	**Medium**	**Medium Low**	**Medium High**
	0 – 6 yrs.	**Medium High**	**Medium**	**Medium Low**	**Low**	**Medium Low**
	Currently meets target	**Medium**	**Medium Low**	**Low**	**Lowest**	**Lowest**
	Unknown	**Highest**	**Medium High**	**Medium Low**	**Lowest**	**Unknown**

If the time to achieve a target cannot be calculated for one of the HP2020 indicators, then the county is classified based on the other indicator. If both indicators are missing, then the county is not classified. This doesn't mean that the county may not have high needs; it only means that sufficient data are not available to classify the county.

Healthy People 2020 forecasts and at-risk areas

The results presented in Table 2.10 help identify which counties have the greatest needs when it comes to meeting the HP2020 breast cancer targets.

- For counties in the "13 years or longer" category, current trends would need to change to achieve the target.
- Some counties may currently meet the target but their rates are increasing and they could fail to meet the target if the trend is not reversed.

Trends can change for a number of reasons, including:

- Improved screening programs could lead to breast cancers being diagnosed earlier, resulting in a decrease in both late-stage incidence rates and death rates.
- Improved socioeconomic conditions, such as reductions in poverty and linguistic isolation could lead to more timely treatment of breast cancer, causing a decrease in death rates.

The data in this table should be considered together with other information on factors that affect breast cancer death rates such as screening percentages and key breast cancer death determinants such as poverty and linguistic isolation.

Table 2.10. Breast cancer at-risk area for Pennsylvania with predicted time to achieve the HP2020 breast cancer targets and key population characteristics

County	Komen Affiliate	Priority	Predicted Time to Achieve Death Rate Target	Predicted Time to Achieve Late-stage Incidence Target	Key Population Characteristics
Delaware County	Komen Philadelphia	Highest	13 years or longer	13 years or longer	%Black/African-American
Fayette County	Komen Pittsburgh	Highest	13 years or longer	13 years or longer	Poverty, rural, medically underserved
Jefferson County	Komen Pittsburgh	Highest	13 years or longer	13 years or longer	Rural, medically underserved
Mercer County	Komen Pittsburgh	Highest	13 years or longer	13 years or longer	Rural
Mifflin County	Komen Pittsburgh	Highest	13 years or longer	13 years or longer	Education, rural, medically underserved
Montour County	Komen Northeastern Pennsylvania	Highest	SN	13 years or longer	Rural
Philadelphia County	Komen Philadelphia	Highest	13 years or longer	13 years or longer	%Black/African-American, %API, %Hispanic/Latina, education, poverty, employment, foreign, language, insurance, medically underserved
Pike County	Komen Northeastern Pennsylvania	Highest	13 years or longer	13 years or longer	Employment, rural
Schuylkill County	Komen Northeastern Pennsylvania	Highest	13 years or longer	13 years or longer	Rural, medically underserved
Allegheny County	Komen Pittsburgh	High	7 years	13 years or longer	
Beaver County	Komen Pittsburgh	High	9 years	13 years or longer	
Bucks County	Komen Philadelphia	High	8 years	13 years or longer	
Butler County	Komen Pittsburgh	High	8 years	13 years or longer	Rural
Carbon County	Komen Northeastern Pennsylvania	High	8 years	13 years or longer	Rural
Dauphin County	Komen Northeastern Pennsylvania	High	8 years	13 years or longer	%Black/African-American
Elk County	Komen Pittsburgh	High	11 years	13 years or longer	Rural
Greene County	Komen Pittsburgh	High	13 years or longer	10 years	Rural, medically underserved
Venango County	Komen Pittsburgh	High	10 years	13 years or longer	Rural
Westmoreland County	Komen Pittsburgh	High	7 years	13 years or longer	
Blair County	Komen Pittsburgh	Medium High	13 years or longer	1 year	
Bradford County	Komen Twin Tiers Region	Medium High	2 years	13 years or longer	Rural
Cambria County	Komen Pittsburgh	Medium High	10 years	9 years	Rural, medically underserved

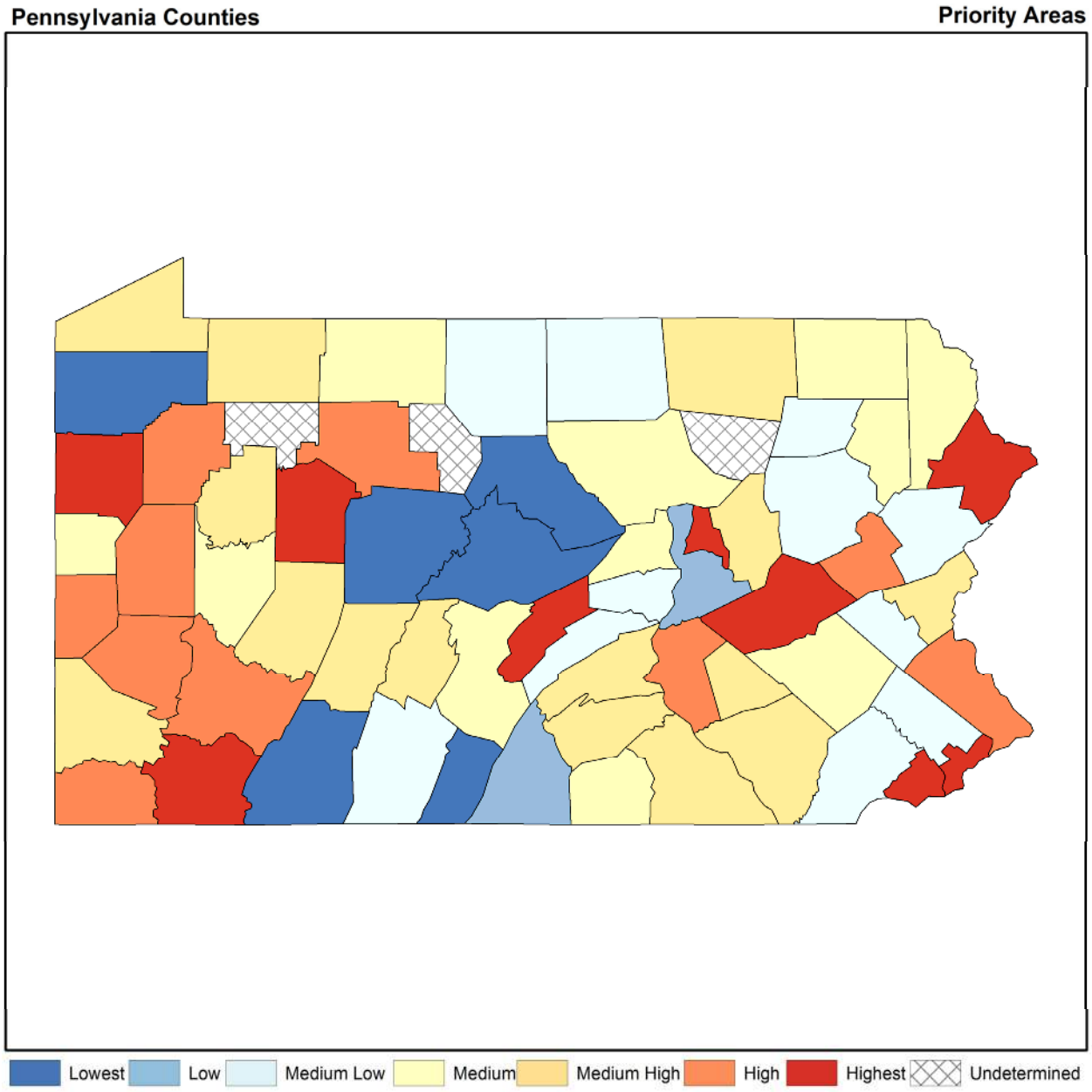
County	Komen Affiliate	Priority	Predicted Time to Achieve Death Rate Target	Predicted Time to Achieve Late-stage Incidence Target	Key Population Characteristics
Clarion County	Komen Pittsburgh	Medium High	13 years or longer	1 year	Rural
Columbia County	Komen Northeastern Pennsylvania	Medium High	3 years	13 years or longer	Rural
Cumberland County	Komen Pittsburgh	Medium High	1 year	13 years or longer	
Erie County	Komen Pittsburgh	Medium High	6 years	13 years or longer	
Indiana County	Komen Pittsburgh	Medium High	13 years or longer	1 year	Poverty, rural, medically underserved
Lancaster County	Komen Philadelphia	Medium High	6 years	13 years or longer	
Lebanon County	Komen Philadelphia	Medium High	2 years	13 years or longer	Rural
Northampton County	Komen Northeastern Pennsylvania	Medium High	5 years	13 years or longer	
Perry County	Komen Pittsburgh	Medium High	13 years or longer	1 year	Rural
Warren County	Komen Pittsburgh	Medium High	1 year	13 years or longer	Rural
Washington County	Komen Pittsburgh	Medium High	13 years or longer	6 years	Rural, medically underserved
York County	Komen Philadelphia	Medium High	2 years	13 years or longer	
Adams County	Komen Philadelphia	Medium	Currently meets target	13 years or longer	Rural
Armstrong County	Komen Pittsburgh	Medium	Currently meets target	13 years or longer	Rural, medically underserved
Berks County	Komen Philadelphia	Medium	5 years	10 years	%Hispanic/Latina
Huntingdon County	Komen Pittsburgh	Medium	13 years or longer	Currently meets target	Rural, medically underserved
Lackawanna County	Komen Northeastern Pennsylvania	Medium	Currently meets target	13 years or longer	
Lawrence County	Komen Pittsburgh	Medium	Currently meets target	13 years or longer	Rural, medically underserved
Lycoming County	Komen Northeastern Pennsylvania	Medium	Currently meets target	13 years or longer	Rural
McKean County	Komen Pittsburgh	Medium	13 years or longer	Currently meets target	Rural
Susquehanna County	Komen Northeastern Pennsylvania	Medium	Currently meets target	13 years or longer	Rural, medically underserved
Union County	Komen Northeastern Pennsylvania	Medium	Currently meets target	13 years or longer	Rural
Wayne County	Komen Northeastern Pennsylvania	Medium	13 years or longer	Currently meets target	Rural, medically underserved
Bedford County	Komen Pittsburgh	Medium Low	5 years	5 years	Rural, medically underserved

County	Komen Affiliate	Priority	Predicted Time to Achieve Death Rate Target	Predicted Time to Achieve Late-stage Incidence Target	Key Population Characteristics
Chester County	Komen Philadelphia	Medium Low	3 years	5 years	
Juniata County	Komen Pittsburgh	Medium Low	7 years	Currently meets target	Education, rural
Lehigh County	Komen Philadelphia	Medium Low	2 years	2 years	%Hispanic/Latina
Luzerne County	Komen Northeastern Pennsylvania	Medium Low	2 years	4 years	
Monroe County	Komen Northeastern Pennsylvania	Medium Low	1 year	3 years	%Hispanic/Latina, employment, rural
Montgomery County	Komen Philadelphia	Medium Low	2 years	4 years	%API
Potter County	Komen Twin Tiers Region	Medium Low	10 years	Currently meets target	Rural
Snyder County	Komen Northeastern Pennsylvania	Medium Low	6 years	1 year	Education, rural
Tioga County	Komen Twin Tiers Region	Medium Low	2 years	3 years	Rural, medically underserved
Wyoming County	Komen Northeastern Pennsylvania	Medium Low	NA	4 years	Rural, medically underserved
Franklin County	Komen Pittsburgh	Low	Currently meets target	1 year	Rural
Northumberland County	Komen Northeastern Pennsylvania	Low	4 years	Currently meets target	Rural, medically underserved
Centre County	Komen Pittsburgh	Lowest	Currently meets target	Currently meets target	Rural, medically underserved
Clearfield County	Komen Pittsburgh	Lowest	Currently meets target	Currently meets target	Rural, medically underserved
Clinton County	Komen Northeastern Pennsylvania	Lowest	Currently meets target	Currently meets target	Rural
Crawford County	Komen Pittsburgh	Lowest	Currently meets target	Currently meets target	Rural
Fulton County	Komen Pittsburgh	Lowest	SN	Currently meets target	Education, rural, medically underserved
Somerset County	Komen Pittsburgh	Lowest	Currently meets target	Currently meets target	Rural, medically underserved
Cameron County	Komen Pittsburgh	Undetermined	SN	SN	Older, rural, medically underserved
Forest County	Komen Pittsburgh	Undetermined	SN	NA	Older, education, rural, medically underserved
Sullivan County	Komen Northeastern Pennsylvania	Undetermined	SN	SN	Older, rural, medically underserved

NA – data not available.
SN – data suppressed due to small numbers (15 cases or fewer for the 5-year data period).

Map of intervention at-risk areas

Figure 2.4 shows a map of the intervention categories for the counties in Pennsylvania. When both of the indicators used to establish a category for a county are not available, the priority is shown as "undetermined" on the map.



*Map with counties labeled is available in Appendix.

Figure 2.4. Intervention categories

Data Limitations
The quantitative data in this report have been gathered from credible sources and uses the most current data available at the time.

Recent data
The most recent data available were used but, for cancer incidence and death, these data are still several years behind. The most recent breast cancer incidence and death rates available in 2013 were data from 2010. For the US as a whole and for most states, breast cancer incidence and death rates do not often change rapidly. Rates in individual counties might change more rapidly. In particular if a cancer control program has been implemented in 2011-2013, any impact of the program on incidence and death rates would not be reflected in this report.

Over the planning period for this report (2015 to 2019), the data will become more out-of-date. The trend data included in the report can help estimate more current values. Also, the State Cancer Profiles Web site (http://statecancerprofiles.cancer.gov/) is updated annually with the latest cancer data for states and can be a valuable source of information about the latest breast cancer rates for your community.

Data availability
For some areas, data might not be available or might be of varying quality. Cancer surveillance programs vary from state to state in their level of funding and this can impact the quality and completeness of the data in the cancer registries and the state programs for collecting death information. There are also differences in the legislative and administrative rules for the release of cancer statistics for studies such as these. These factors can result in missing data for some of the data categories in this report.

Small populations
Areas with small populations might not have enough breast cancer cases or breast cancer deaths each year to support the generation of reliable statistics. Because breast cancer has relatively good survival rates, breast cancer deaths occur less often in an area than breast cancer cases. So it may happen that breast cancer incidence rates are reported for a county with a small number of people but not breast cancer death rates.

The screening mammography data have a similar limitation because they are based on a survey of a small sample of the total population. So screening proportions may not be available for some of the smaller counties. Finally, it may be possible to report a late-stage incidence rate but not have enough data to report a late-stage trend and to calculate the number of years needed to reach the HP2020 late-stage target.

Data on population characteristics were obtained for all counties, regardless of their size. These data should be used to help guide planning for smaller counties where there are not enough specific breast cancer data to calculate a priority based on HP2020 targets.

Other cancer data sources

If a person has access to other sources of cancer data for their state, they might notice minor differences in the values of the data, even for the same time period. There are often several sources of cancer statistics for a given population and geographic area. State registries and vital statistics offices provide their data to several national organizations that compile the data. This report used incidence data compiled by the North American Association of Central Cancer Registries (NAACCR) and the National Cancer Institute (NCI) and death data compiled by the National Center for Health Statistics (NCHS).

Individual state registries and health departments often publish their own cancer data. These data might be different from the data in this report for several reasons. The most common reason is differences in the timing of when cases are reported.

Sometimes, a small number of cancer cases are reported to cancer registries with as much as a five year delay. Because of this delay, counts of cancer cases for a particular year may differ. In addition, data need to be checked to see whether the same case might have been counted twice in different areas. If a case is counted twice, one of the two reports is deleted. These small adjustments may explain small inconsistencies in the number of cases diagnosed and the rates for a specific year. However, such adjustments shouldn't have a substantial effect on cancer rates at the state level.

Specific groups of people

Data on cancer rates for specific racial and ethnic subgroups such as Somali, Hmong, or Ethiopian are not generally available. Records in cancer registries often record where a person was born if they were born in a foreign country. However, matching data about the population in an area are needed to calculate a rate (the number of cases per 100,000 people) and these matching population data are often not available.

Inter-dependent statistics

The various types of breast cancer data in this report are inter-dependent. For example, an increase in screening can result in fewer late-stage diagnoses and fewer deaths. However, an increase in screening mammography can also result in an increase in breast cancer incidence – simply because previously undetected cases are now being diagnosed. Therefore, caution is needed in drawing conclusions about the causes of changes in breast cancer statistics.

It is important to consider possible time delay between a favorable change in one statistic such as screening and the impact being reflected in other statistics such as the death rate. There can take 10 to 20 years for favorable changes in breast cancer control activities to be reflected in death rates.

Missing factors

There are many factors that impact breast cancer risk and survival for which quantitative data are not available. Some examples include family history, genetic markers like HER2 and BRCA, other medical conditions that can complicate treatment, and the level of family and

community support available to the patient. Good quantitative data are not available on how factors such as these vary from place to place. The quantitative data in this report should be supplemented by qualitative information about these other factors from your communities whenever possible.

Trend limitations

The calculation of the years needed to meet the HP2020 objectives assume that the current trends will continue until 2020. However, the trends can change for a number of reasons. For example, breast cancer programs, if they are successful, should change the trends. In fact, this is the primary goal of breast cancer programs.

However, trends could also change from differences in the population characteristics of the area such as shifts in the race or ethnicity of the people in the area or changes in their general socioeconomics. Areas with high migration rates, either new people moving into an area or existing residents moving elsewhere, are particularly likely to see this second type of change in breast cancer trends.

Late-stage data and un-staged cases

Not all breast cancer cases have a stage indication. Breast cancer might be suspected in very elderly women and a biopsy may not be performed. Also, some breast cancer cases may be known only through an indication of cause-of-death on a death certificate. When comparing late-stage statistics, it is assumed that the rates of unknown staging don't change and are similar between counties. This may not be a good assumption when comparing data between urban and rural areas or between areas with younger and older populations. It is also assumed that the size and types of unknown cases do not change over time when the trends in late-stage statistics are calculated.

In this report, both late-stage incidence rates and late-stage proportions are provided. These two statistics differ in how un-staged cases are represented. With late-stage incidence rates, un-staged cases are excluded from the numerator (the number of late-stage cases) but are included in the denominator (total number of people in the population). With late-stage proportions, un-staged cases are excluded from both the numerator (the number of late-stage cases) and the denominator (number of staged cases). These differences can explain why comparisons using the two late-stage statistics may get different results

Conclusions: Healthy People 2020 Forecasts

Breast Cancer Death Rates

The State of Pennsylvania as a whole is **likely to achieve** the HP2020 death rate target. The state had a base rate of 23.8 breast cancer deaths per 100,000 females per year from 2006 to 2010 (age-adjusted). This rate coupled with a desirable direction (decrease) in the recent death rate trend, indicates that the State of Pennsylvania will likely achieve the HP2020 target of 20.6 female breast cancer deaths per 100,000.

The following counties **currently meet** the HP2020 breast cancer death rate target of 20.6:

- Adams County (Komen Philadelphia)
- Armstrong County (Komen Pittsburgh)
- Centre County (Komen Pittsburgh)
- Clearfield County (Komen Pittsburgh)
- Clinton County (Komen Northeastern Pennsylvania)
- Crawford County (Komen Pittsburgh)
- Franklin County (Komen Pittsburgh)
- Lackawanna County (Komen Northeastern Pennsylvania)
- Lawrence County (Komen Pittsburgh)
- Lycoming County (Komen Northeastern Pennsylvania)
- Somerset County (Komen Pittsburgh)
- Susquehanna County (Komen Northeastern Pennsylvania)
- Union County (Komen Northeastern Pennsylvania)

The following counties are **likely to miss** the HP2020 breast cancer death rate target unless the death rate falls at a faster rate than currently estimated:

- Blair County (Komen Pittsburgh)
- Clarion County (Komen Pittsburgh)
- Delaware County (Komen Philadelphia)
- Fayette County (Komen Pittsburgh)
- Greene County (Komen Pittsburgh)
- Huntingdon County (Komen Pittsburgh)
- Indiana County (Komen Pittsburgh)
- Jefferson County (Komen Pittsburgh)
- McKean County (Komen Pittsburgh)
- Mercer County (Komen Pittsburgh)
- Mifflin County (Komen Pittsburgh)
- Perry County (Komen Pittsburgh)
- Philadelphia County (Komen Philadelphia)
- Pike County (Komen Northeastern Pennsylvania)
- Schuylkill County (Komen Northeastern Pennsylvania)
- Washington County (Komen Pittsburgh)
- Wayne County (Komen Northeastern Pennsylvania)

Because data for small numbers of people are not reliable, it can't be predicted whether Cameron County, Forest County, Fulton County, Montour County, Sullivan County and Wyoming County will reach the death rate target. The remaining counties are likely to achieve the target by 2020 or earlier.

Breast Cancer Late-Stage Incidence Rates

The State of Pennsylvania as a whole is **likely to miss** the HP2020 late-stage incidence rate target. The state had a base rate of 45.4 new late-stage cases per 100,000 females per year

from 2006 to 2010 (age-adjusted). This rate coupled with the recent late-stage incidence rate trend, indicates that the State of Pennsylvania is likely to miss the HP2020 target of 41.0 new late-stage cases per 100,000.

The following counties **currently meet** the HP2020 late-stage incidence rate target of 41.0:

- Centre County (Komen Pittsburgh)
- Clearfield County (Komen Pittsburgh)
- Clinton County (Komen Northeastern Pennsylvania)
- Crawford County (Komen Pittsburgh)
- Fulton County (Komen Pittsburgh)
- Huntingdon County (Komen Pittsburgh)
- Juniata County (Komen Pittsburgh)
- McKean County (Komen Pittsburgh)
- Northumberland County (Komen Northeastern Pennsylvania)
- Potter County (Komen Twin Tiers Region)
- Somerset County (Komen Pittsburgh)
- Wayne County (Komen Northeastern Pennsylvania)

The following counties are **likely to miss** the HP2020 late-stage incidence rate target unless the late-stage incidence rate falls at a faster rate than currently estimated:

- Adams County (Komen Philadelphia)
- Allegheny County (Komen Pittsburgh)
- Armstrong County (Komen Pittsburgh)
- Beaver County (Komen Pittsburgh)
- Bradford County (Komen Twin Tiers Region)
- Bucks County (Komen Philadelphia)
- Butler County (Komen Pittsburgh)
- Carbon County (Komen Northeastern Pennsylvania)
- Columbia County (Komen Northeastern Pennsylvania)
- Cumberland County (Komen Pittsburgh)
- Dauphin County (Komen Northeastern Pennsylvania)
- Delaware County (Komen Philadelphia)
- Elk County (Komen Pittsburgh)
- Erie County (Komen Pittsburgh)
- Fayette County (Komen Pittsburgh)
- Jefferson County (Komen Pittsburgh)
- Lackawanna County (Komen Northeastern Pennsylvania)
- Lancaster County (Komen Philadelphia)
- Lawrence County (Komen Pittsburgh)
- Lebanon County (Komen Philadelphia)
- Lycoming County (Komen Northeastern Pennsylvania)
- Mercer County (Komen Pittsburgh)

- Mifflin County (Komen Pittsburgh)
- Montour County (Komen Northeastern Pennsylvania)
- Northampton County (Komen Northeastern Pennsylvania)
- Philadelphia County (Komen Philadelphia)
- Pike County (Komen Northeastern Pennsylvania)
- Schuylkill County (Komen Northeastern Pennsylvania)
- Susquehanna County (Komen Northeastern Pennsylvania)
- Union County (Komen Northeastern Pennsylvania)
- Venango County (Komen Pittsburgh)
- Warren County (Komen Pittsburgh)
- Westmoreland County (Komen Pittsburgh)
- York County (Komen Philadelphia)

Because data for small numbers of people are not reliable, it can't be predicted whether Cameron County, Forest County and Sullivan County will reach the late-stage incidence rate target. The remaining counties are likely to achieve the target by 2020 or earlier.

HP2020 Conclusions

Highest at risk areas

Nine counties in the State of Pennsylvania are in the highest at risk category. Eight of the nine, Delaware County, Fayette County, Jefferson County, Mercer County, Mifflin County, Philadelphia County, Pike County and Schuylkill County, are not likely to meet either the death rate or late-stage incidence rate HP2020 targets. One of the nine, Montour County is not likely to meet the late-stage incidence rate HP2020 target.

The age-adjusted incidence rates in Delaware County (133.4 per 100,000) are significantly higher than the state as a whole (126.0 per 100,000). The age-adjusted death rates in Delaware County (27.5 per 100,000) and Philadelphia County (29.0 per 100,000) are significantly higher than the state as a whole (23.8 per 100,000). Death trends in Schuylkill County (-0.2 percent per year) are significantly less favorable than the state as a whole (-2.3 percent per year). The age-adjusted late-stage incidence rates in Philadelphia County (51.6 per 100,000) are significantly higher than the state as a whole (45.4 per 100,000). Screening proportions in Fayette County (62.6 percent) and Pike County (72.3 percent) are significantly lower than the state as a whole (77.8 percent).

Delaware County has a relatively large Black/African-American population. Fayette County has high poverty levels. Mifflin County has low education levels. Philadelphia County has a relatively large Black/African-American population, a relatively large API population, a relatively large Hispanic/Latina population, low education levels, high poverty levels, high unemployment, a relatively large foreign-born population and a relatively large number of households with little English. Pike County has high unemployment.

High at risk areas

Ten counties in the State of Pennsylvania are in the high at risk category. One of the ten, Greene County is not likely to meet the death rate HP2020 target. Nine of the ten, Allegheny County, Beaver County, Bucks County, Butler County, Carbon County, Dauphin County, Elk County, Venango County and Westmoreland County, are not likely to meet the late-stage incidence rate HP2020 target.

The age-adjusted incidence rates in Allegheny County (133.8 per 100,000) are significantly higher than the state as a whole (126.0 per 100,000). Incidence trends in Greene County (15.0 percent per year) are significantly less favorable than the state as a whole (0.5 percent per year). Death trends in Greene County (3.4 percent per year) are significantly less favorable than the state as a whole (-2.3 percent per year). The screening proportion in Butler County (64.6 percent) is significantly lower than the state as a whole (77.8 percent). Dauphin County has a relatively large Black/African-American population.

Health Systems Analysis

This section of the state report tells the story of the breast cancer continuum of care and the delivery of quality health care in the community. Key to this section is the observation of potential strengths and weaknesses in the health care system that could compromise a women's health as she works her way through the continuum of care (e.g., screening, diagnosis, treatment and follow-up/survivorship services).

Health Systems Analysis Data Sources

Breast Cancer Programs and Services

An inventory of breast cancer programs and services in the state were collected through a comprehensive internet search to identify the following types of health care facilities or community organizations that may provide breast cancer related services:

- Hospitals- Public or private, for-profit or nonprofit.
- Community Health Centers (CHC) - Community based organizations that provide primary care regardless of ability to pay; include Federally Qualified Health Centers (FQHCs) and FQHC look-alikes.
- Free Clinic- Free and charitable clinics are safety-net health care organizations that utilize a volunteer/staff model and restrict eligibility for their services to individuals who are uninsured, underinsured and/or have limited or no access to primary health care.
- Health Department- Local health department run by government entity (e.g. county, city) focused on the general health of its citizens.
- Title X Provider- Family planning centers that also offer breast and cervical cancer screening. Services are provided through state, county, and local health departments; community health centers; Planned Parenthood centers; and hospital-based, school-based, faith-based, other private nonprofits.
- Other- Any institution that is not a hospital, CHC, free clinic, health department or Title X provider (e.g., FDA certified mammography center that is not a hospital/CHC, community organization that is not a medical provider but does connect people to services or provide support services such as financial/legal assistance).

Information collected through these means was inputted into a Health Systems Analysis spreadsheet by service type: screening, diagnostics, treatment, and support. The screening service category encompasses clinical breast exams (CBEs), screening mammograms, mobile mammography units, ultrasounds, and patient navigation. The category of diagnostics includes diagnostic mammograms, ultrasounds, biopsy, MRI, and patient navigation. Treatment modalities counted were chemotherapy, radiation, surgery consultations, surgery, reconstruction, and patient navigations. Support encompasses a broad range of services including support groups, wigs, mastectomy wear, individual counseling/psychotherapy, exercise/nutrition programs, complementary therapies, transportation assistance, financial assistance for cost of living expenses, as well as end of life care, legal services, and education.

In order to understand the effect available health systems have on the state, the identified resources were plotted on an asset map by Susan G. Komen Information Technology (IT) staff to visually illustrate the services (or lack thereof) available in the state. While every effort was

made to ensure these findings were comprehensive, it may be possible that a facility or organization was missed or has since closed; as a result, these findings should not be considered exhaustive and/or final.

Quality of Care Indicators

For all health care facilities and hospitals, an additional layer of analysis was applied using quality of care indicators. Quality of care indicators are quantifiable measures related to the process of care, outcomes of care, and patient satisfaction levels from a particular program and/or organization. Multiple national organizations have developed key quality of care indicators for breast health services, and if an organization meets all of the key indicators they are designated an "accredited" health care institution. These accreditations outline key quality of care indicators health care institutions must meet in order to obtain and/or retain accreditation status. The following five accreditations were considered high quality of care indicators in the state's health system analysis.

- ***FDA Approved Mammography Facilities***

  The Food and Drug Administration (FDA) passed the Mammography Quality Standards Act (MQSA) in 1992 to ensure facilities meet standards for performing high quality mammography. Accreditation bodies administer the MQSA to evaluate and accredit mammography facilities based upon quality standards. These quality standards are extensive and outline how a facility can operate. For instance, physicians interpreting mammograms must be licensed to practice medicine, be certified to interpret radiological procedures including mammography, and must complete continuing experience or education to maintain their qualifications (US Food and Drug Administration [US FDA], 2014). Radiologic technologists must also be trained and licensed to perform general radiographic procedures and complete continuing experience or education to maintain their qualifications. Facilities are required to maintain personnel records to document the qualifications of all personnel who work at the facility such as physicians, radiologic technologists or medical physicists.

  All radiographic equipment used in FDA approved mammography centers must be specifically designed for mammography and must not be equipment designed for general purpose or equipment that has been modified with special attachments for mammography. Equipment regulations also apply to compression paddles, image receptor size, light fields and magnification, focal spot selection, x-ray film, film processing solutions, lighting and film masking devices. Facilities must also prepare a written report of the results of each mammography examination performed under its certificate. The report must include the name of the patient and an additional patient identifier, date of examination, the name of the interpreting physician, and the overall final assessment of findings. Findings from mammograms are classified into four different categories, including negative, benign, probably benign, and highly suggestive of malignancy. An assessment can also be assigned as incomplete indicating additional imaging evaluation is needed.

FDA approved mammography facilities are obligated to communicate the results of mammograms to the patient and the patient's primary care provider in a written report within 30 days. Each facility must also maintain mammography films and reports in a permanent medical record for a period of no less than five years or longer if mandated by State or local law. Patients can request to permanently or temporarily transfer the original mammograms and patient report to a medical institution, physician, health care provider, or to the patient directly. Any fees for providing transfer services shall not exceed the documented costs associated with this service.

A quality assurance program must be established at each facility to ensure safety, reliability, clarity, and accuracy of mammography services. At least once a year, each facility undergoes a survey by a medical physicist that includes the performance of tests to ensure the facility meets quality assurance requirements. The FDA evaluates the performance of each certificated agency annually through the use of performance indicators that address the adequacy of program performance in certification, inspection, and enforcement activities. Only facilities that are accredited by FDA accrediting bodies or are undergoing accreditation by accrediting bodies may obtain a certificate from the FDA to legally perform mammography (US FDA, 2014). Only FDA approved mammography centers were included in the health system analysis for each target community.

- ***American College of Surgeons Commission on Cancer Certification (CoCC)***
  Applying and sustaining an American College of Surgeons Commission on Cancer Certification (CoCC) is a voluntary effort a cancer program can undertake to ensure a range of services necessary to diagnose and treat cancer, as well as rehabilitate and support patients and their families, are available (American College of Surgeons [ACoS], 2013). There are various categories of cancer programs, and each facility is assigned a category based on the type of facility or organization, services provided, and cases accessioned or recorded. Program categories include: Integrated Network Cancer Program (INCP); NCI-Designated Comprehensive Cancer Center Program (NCIP); Academic Comprehensive Cancer Program (ACAD); Veterans Affairs Cancer Program (VACP); Comprehensive Community Cancer Program (CCCP); Hospital Associate Cancer Program (HACP); Pediatric Cancer Program (PCP); and Freestanding Cancer Center Program (FCCP) (ACoS, 2013).

  CoCC cancer programs are surveyed every three years. In preparation for survey, the cancer committee for that facility must assess program compliance with the requirements for all standards outlined in *Cancer Program Standards 2012: Ensuring Patient-Centered Care*. An individual must then review and complete an online Survey Application Record (SAR). In addition, the individual responsible for completing the SAR will perform a self-assessment and rate compliance with each standard using the Cancer Program Ratings Scale.

The surveyor's role is to assist in accurately defining the standards and verifying the facility's cancer program is in compliance. To accomplish this task, the surveyor will meet with the cancer committee, cancer registry staff and cancer liaison physicians, review pathology reports, and attend a cancer conference to observe the multidisciplinary patient management discussions and confirm treatment is planned using nationally recognized, evidence-based treatment guidelines. CoCC-accredited programs must also submit documentation of cancer program activities with the SAR using multiple sources such as policies, procedures, manuals, and grids.

Each cancer program standard is rated on a compliance scale that consists of the score of (1+) commendation, (1) compliance, (5) noncompliance, and (8) not applicable. A deficiency is defined as any standard with a rating of five. A deficiency in one or more standards will affect the accreditation award. Commendation ratings (+1) are valid for eight standards, can only be earned at the time of survey, and are used to determine the accreditation award and award level (bronze, silver, or gold). Accreditation awards are based on consensus ratings by the cancer program surveyor, CoCC staff and when necessary, the Program Review Subcommittee. A program can earn one of the following Accreditation Awards; three-year with commendation accreditation, three-year accreditation, three-year accreditation with contingency, provisional accreditation, or no accreditation. Programs are surveyed at three-year intervals from the date of survey.

Award notification takes place within 45 days following the completed survey and will include The Accredited Cancer Program Performance Report. This report includes a comprehensive summary of the survey outcome and accreditation award, the facility's compliance rating for each standard, an overall rating compared with other accredited facilities nation- and state-wide, and the category of accreditation. In addition, a narrative description of deficiencies that require correction, suggestions to improve or enhance the program, and commendations awarded are also included.

- ***American College of Surgeons National Accreditation Program for Breast Centers (NAPBC)***
  The American College of Surgeons' National Accreditation Program for Breast Centers (NAPBC) is a consortium of national professional organizations focused on breast health and dedicated to improving quality of care and outcomes for patients with diseases of the breast (ACoS, 2014). The NAPBC utilizes evidence-based standards as well as patient and provider education, and encourages leaders from major disciplines to work together to diagnose and treat breast disease. The NAPBC has defined 28 program standards and 17 program components of care that provide the most efficient and contemporary care for patients diagnosed with diseases of the breast. Quality standards cover a range of topics and levels of operation including leadership, clinical management, research, community outreach, professional education, and quality improvement (ACoS, 2014).

To be considered for initial survey, breast center leadership must ensure clinical services, interdisciplinary/multidisciplinary conference(s), and quality management programs are in place and ensure a facility can meet the requirements outlined for all standards. Critical standards include having breast program leadership that is responsible and accountable for services and also establishes, monitors, and evaluates the interdisciplinary breast cancer conference frequency, multidisciplinary and individual attendance, prospective case presentation, and total case presentation annually. In addition, the interdisciplinary patient management standard requires patient management to be conducted by an interdisciplinary team after a patient is diagnosed with breast cancer.

Breast center leadership then completes a pre-application to participate and pay for the survey fee within 30 days of the receipt from the NAPBC. To prepare for a survey, the breast center must complete a Survey Application Record (SAR) prior to the on-site visit. The SAR is intended to capture information about the breast center activity and includes portions of individuals to perform a self-assessment and rate compliance with each standard using a provided rating system. The NAPBC will then complete a survey of the facility within six months. A survey of a facility typically includes a tour of the center, a meeting between the surveyor and breast center leadership and staff, chart and medical record review, and the attendance of a breast conference.

Accreditation awards are based on consensus ratings by the surveyor, the NAPBC staff, and, if required, the Standards and Accreditation Committee. Accreditation award is based on compliance with 28 standards. A three year, full accreditation is granted to centers that comply with 90 percent or more of the standards with resolution of all deficient standards documented within 12 months of survey. Centers that do not resolve all deficiencies within the 12 month period risk losing NAPBC accreditation status and are required to reapply. Once a performance report and certificate of accreditation are issued, these centers are surveyed every three years.

A three-year contingency accreditation is granted to centers that meet less than 90 percent, but more than 75 percent of the standards at the time of survey. The contingency status is resolved by the submission of documentation of compliance within 12 months from the date of survey. A performance report and certificate of accreditation are issued, and these facilities are surveyed every three years. An accreditation can be deferred if a center meets less than 75 percent of the standards at the time of the survey. The deferred status is resolved by the submission of documentation of compliance within 12 months from the date of survey. Based on the resolution of deficiencies and survey results, a performance report and certificate of accreditation are issued, and these facilities are surveyed every three years. For the complete list of NAPBC quality standards, visit: http://www.napbc-breast.org/standards/standards.html.

- ***American College of Radiology Breast Imaging Centers of Excellence (BICOE)***
  The American College of Radiology (ACR) Breast Imaging Centers of Excellence (BICOE) designation is awarded to breast imaging centers that seek and earn accreditation in the ACR's entire voluntary breast imaging accreditation programs and modules, in addition to the Mandatory Mammography Accreditation Program (MMAP) (American College of Radiology [ACR], n.d.). The ACR MMAP is designed to provide facilities with peer review and constructive feedback on staff qualifications, equipment, quality control, quality assurance, image quality, and radiation dose. This ensures facilities comply with the 1992 Mammography Quality Standards Act (MQSA), which requires all mammography facilities be accredited. In order to receive the ACR's BICOE designation, a facility must be accredited by the ACR in mammography, stereotactic breast biopsy, breast ultrasound, and effective January 1, 2016, breast MRI.

  The ACR will send a BICOE certificate to each facility that fulfills the necessary requirements. The designation remains in effect as long as all breast imaging facilities (an organizations home location or a different location) remain accredited in all required breast imaging services provided. If the center or facility neglects to renew any of its accreditations or fails during renewal, the facility will be notified that it no longer has the BICOE designation and the BICOE certificate must be removed from public display. Some centers will need to specifically request a BICOE designation, while in most cases the ACR will consult its database and automatically provide an eligible center a BICOE certificate if the center is at a single physical location and meets all breast imaging requirements (ACR, n.d.).

- ***National Cancer Institute Designated Cancer Centers***
  A National Cancer Institute (NCI) designated Cancer Center is an institution dedicated to researching the development of more effective approaches to the prevention, diagnosis, and treatment of cancer (National Cancer Institute [NCI], 2012). A NCI-designated Cancer Center conducts cancer research that is multidisciplinary and incorporates collaboration between institutions and university medical centers. This collaboration also provides training for scientists, physicians, and other professionals interested in specialized training or board certification in cancer-related disciplines. NCI-designated Cancer Centers also provide clinical programs that offer the most current forms of treatment for various types of cancers and typically incorporate access to clinical trials of experimental treatments. In addition, public education and community outreach regarding cancer prevention and screening are important activities of a NCI-designated Cancer Center (NCI, 2012).

HRSA Shortage Designations

The US Department of Health and Human Services-Health Resources and Services Administration (HRSA) designations for Health Professional Shortage Areas (HSPAs) and Medically Underserved Areas/Populations (MUA/Ps) were used to identify areas within the state where individuals may have inadequate access to primary care providers and facilities (US Department of Health and Human Services, n.d.).

- ***Health Professional Shortage Areas (HPSAs)*** are designated by HRSA as having shortages of primary medical care, dental or mental health providers and may be geographic (a county or service area), population (e.g. low income or Medicaid eligible) or facilities (e.g. federally qualified health center or other state or federal prisons).
- ***Medically Underserved Areas/Populations (MUA/Ps)*** are areas or populations designated by HRSA as having too few primary care providers, high infant death, high poverty or a high elderly population.

Breast Cancer Continuum of Care

The Breast Cancer Continuum of Care (CoC), shown in Figure 3.1, is a model that shows how a woman typically moves through the health care system for breast care. A woman would ideally move through the CoC quickly and seamlessly, receiving timely, quality care in order to have the best outcomes. Education can play an important role throughout the entire CoC.

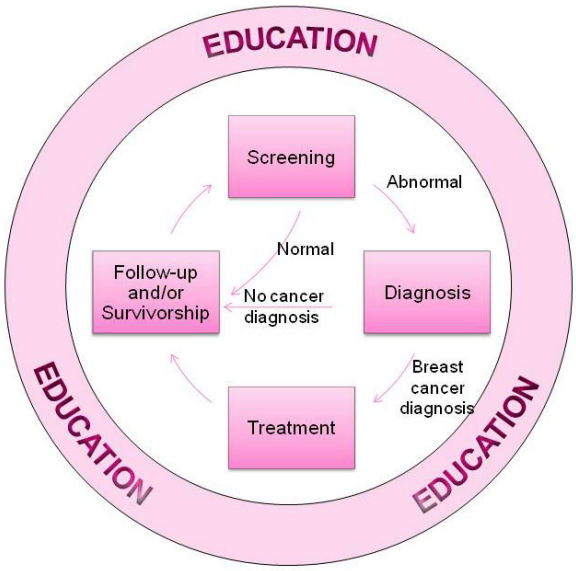


Figure 3.1. Breast Cancer Continuum of Care (CoC)

While a woman may enter the continuum at any point, ideally, a woman would enter the CoC by getting screened for breast cancer – with a clinical breast exam or a screening mammogram. If the screening test results are normal, she would loop back into follow-up care, where she would get another screening exam at the recommended interval. Education plays a role in both providing education to encourage women to get screened and reinforcing the need to continue to get screened routinely thereafter.

If a screening exam resulted in abnormal results, diagnostic tests would be needed, possibly several, to determine if the abnormal finding is in fact breast cancer. These tests might include a diagnostic mammogram, breast ultrasound, or biopsy. If the tests were negative (or benign) and breast cancer was not found, she would go into the follow-up loop and return for screening at the recommended interval. The recommended intervals may range from three to six months for some women to 12 months for most women. Education plays a role in communicating the importance of proactively getting test results, keeping follow-up appointments, and understanding what everything means. Education can empower a woman and help manage anxiety and fear.

The woman would proceed to treatment if breast cancer is diagnosed. Education can cover such topics as treatment options, how a pathology reports determines the best options for

treatment, understanding side effects and how to manage them, and helping to formulate questions a woman may have for her providers.

For some breast cancer patients, treatment may last a few months and for others, it may last years. While the CoC model shows that follow-up and survivorship come after treatment ends, they actually may occur at the same time. Follow-up and survivorship may include things like navigating insurance issues, locating financial assistance, symptom management, such as pain, fatigue, sexual issues, bone health, etc. Education may address topics such as making healthy lifestyle choices, long term effects of treatment, managing side effects, the importance of follow-up appointments, and communication with their providers. Most women will return to screening at a recommended interval after treatment ends, or for some, during treatment (such as those taking long term hormone therapy).

There are often delays in moving from one point of the continuum to another – at the point of follow-up of abnormal screening exam results, starting treatment, and completing treatment – that can all contribute to poorer outcomes. There are also many reasons why a woman does not enter or continue in the breast cancer CoC. These barriers can include things such as lack of transportation, system issues including long waits for appointments and inconvenient clinic hours, language barriers, fear, and lack of information or the wrong information (myths and misconceptions). Education can address some of these barriers and help a woman enter and progress through the CoC more quickly.

Health Systems Analysis Findings

In the State of Pennsylvania there were 719 locations found to provide breast cancer services varying between screening, diagnostic, treatment, and survivorship (Figure 3.2). There were 719 locations that provided screening services, 280 locations in the state that provide diagnostic services and 112 locations providing treatment services. In the state there were 102 locations that provided survivorship services or care. Identified facilities that provide mammography services were all accredited by the Federal Drug Administration. There are 78 locations that are accredited by the American College of Surgeons Commission on Cancer, 77 locations accredited by the American College of Radiology as a Breast Imaging Center of Excellence and 31 locations accredited as an American College of Surgeons NAPBC program. There are four locations that are designated as a NCI Cancer Center.

The following counties are designated as a Medically Underserved Area/Population and/or a Health Professional Shortage Area for primary care: Adams, Allegheny, Armstrong, Beaver, Bedford, Berks, Blair, Bradford, Bucks, Butler, Cambria, Cameron, Carbon, Centre, Chester, Clarion, Clearfield, Clinton, Columbia, Crawford, Cumberland, Dauphin, Delaware, Elk, Erie, Fayette, Forest, Franklin, Fulton, Greene, Huntingdon, Indiana, Jefferson, Juniata, Lackawanna, Lancaster, Lawrence, Lebanon, Lehigh, Luzerne, Lycoming, McKean, Mercer, Mifflin, Monroe, Montgomery, Northampton, Northumberland, Perry, Philadelphia, Pike, Potter, Schuylkill, Snyder, Somerset, Sullivan, Susquehanna, Tioga, Union, Venango, Warren, Washington, Wayne, Westmoreland, Wyoming and York.

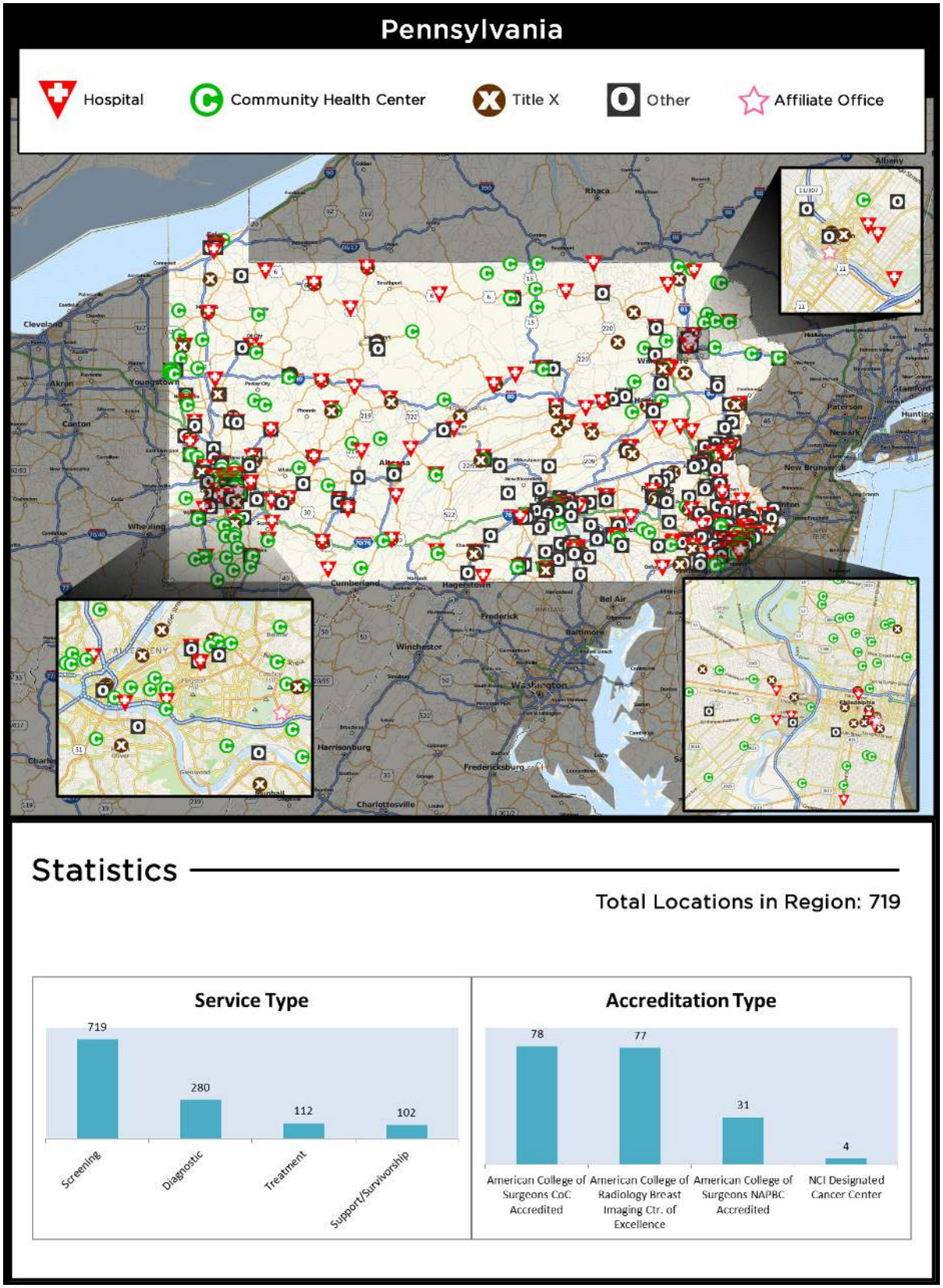


Figure 3.2. Breast cancer services available in Pennsylvania

Public Policy Overview

In recent years, public policies pertaining to breast cancer have undergone substantial changes that will affect at-risk women across the United States. States have responded differently to the public policy developments concerning access to services within the breast cancer continuum of care (screening, diagnostic, treatment and survivorship care); therefore, women are dependent on their state's agenda and action on health care reform. This section of the state report will focus on the following public policies that affect breast cancer care in the state: National Breast and Cervical Cancer Early Detection Program, State Comprehensive Cancer Control Plan, the Affordable Care Act and Medicaid Expansion.

Susan G. Komen Advocacy

Susan G. Komen is the voice for the more than three million breast cancer survivors and those who love them, working to ensure that the fight against breast cancer is a priority among policymakers in Washington, D.C., and every Capitol across the country.

Each year, Komen works to identify, through a transparent and broad-based, intensive vetting and selection process, the policy issues that have the greatest potential impact on Komen's mission. This process includes the collection of feedback from Komen Headquarters leadership, policy staff, and subject matter experts; Komen Affiliates from across the country; advisory groups including the Komen Advocacy Advisory Taskforce (KAAT), Advocates in Science (AIS), and Komen Scholars; and other stakeholders with a vested interest in breast cancer-related issues.

The selected issues are the basis for Komen's state and federal advocacy work in the coming year. While the priority issues may change on an annual basis, the general focus for Komen's advocacy work is to ensure high-quality, affordable care for all, though access to services and an increased investment in research to ensure the continued development of the latest technologies and treatments. For more information on Komen's current Advocacy Priorities, please visit: http://ww5.komen.org/WhatWeDo/Advocacy/Advocacy.html.

National Breast and Cervical Cancer Early Detection Program

The United States Congress passed the Breast and Cervical Cancer Mortality Prevention Act of 1990, which directed the Centers for Disease Control and Prevention (CDC) to create the National Breast and Cervical Cancer Early Detection Program (NBCCEDP) to improve access to screening (CDC, 2015a). NBCCEDP is a federal-state partnership which requires states to satisfy a 1:3 matching obligation ($1 in state funds or in-kind funds for every $3 in federal funds provided to that state) (CDC, n.d.). Currently, the NBCCEDP funds all 50 states, the District of Columbia, five US territories, and 11 American Indian/Alaska Native tribes or tribal organizations, to provide the following services to women (CDC, 2015a; CDC, n.d.):

- Breast and cervical cancer screening for women with priority to low-income women.
- Providing appropriate follow-up and support services (i.e., case management and referrals for medical treatment).
- Developing and disseminating public information and education programs.

- Improving the education, training and skills of health professionals.
- Monitoring screening procedure quality and interpretation.

To be eligible to receive NBCCEDP services, uninsured and underinsured women must be at or below 250 percent of the federal poverty level and between the ages of 40 to 64 for breast cancer screening (CDC, 2015a; CDC, n.d.). Uninsured women between the ages of 50 and 64 who are low-income (up to 250 percent federal poverty level) and who have not been screened in the past year are a priority population for NBCCEDP (CDC, n.d.).

While federal guidelines are provided by the CDC, there are some variations among states, tribal organizations and territories (CDC, 2015b):

- Program funding, clinical costs and additional eligibility guidelines vary by state, tribal organization and territory which influence the number of services that can be provided.
- Flexibility of the program allows each state, tribal organization and territory to adopt an operational model that is appropriate for their respective public health infrastructure and legislative polices.

Since the launch of the program in 1991, NBCCEDP has served more than 4.8 million women providing over 12 million breast and cervical cancer screening services that has resulted in more than 67,900 women being diagnosed with breast cancer (CDC, 2015a).

Congress passed the Breast and Cervical Cancer Prevention and Treatment Act in 2000 to provide states the option to offer Medicaid coverage for breast cancer treatment for women who were diagnosed when receiving services through from the NBCCEDP (CDC, 2015a). To date, all 50 states and the District of Columbia have approved provision of Medicaid coverage for cancer treatment; therefore, providing low-income, uninsured and underinsured women coverage from screening through completion of treatment (CDC, 2015a). Congress expanded this option 2001, with the passage of the Native American Breast and Cervical Cancer Treatment Technical Amendment Act, to include eligible American Indians and Alaska Natives that receive services by the Indian Health Service or by a tribal organization (CDC, 2015a).

In the State of Pennsylvania, the NBCCEDP is known as Pennsylvania's Healthy Woman Program and is administered by the Pennsylvania Department of Health. From July 2009 to June 2014, Pennsylvania's Healthy Woman Program provided 23,187 cancer and cervical cancer screening and diagnostic services to women. The program provided 20,803 mammograms that resulted in 2,890 women receiving an abnormal result and 282 women being diagnosed with breast cancer (NBCCEDP Minimum Data Elements, 2015). To find out more information about getting screened and eligibility, contact the Healthy Woman Program (1-800-215-7494).

State Comprehensive Cancer Control Plan

Comprehensive cancer control is a process through which communities and partner organizations pool resources to reduce cancer risk, find cancers earlier, improve treatments, increase the number of people who survive cancer and improve quality of life for cancer survivors to ultimately reduce the burden of cancer in the state (CDC, 2015d).

The National Comprehensive Cancer Control Program (NCCCP) (http://www.cdc.gov/cancer/ncccp/) is an initiative by the CDC to help states, tribes, US affiliated Pacific Islands, and territories form or support existing coalitions to fight cancer by using local data to determine the greatest cancer-related needs in their area (2015d). Once areas have been identified, the state coalition works collaborative to develop and implement a State Comprehensive Cancer Control Plan to meet the identified needs (CDC, 2015d). These plans include initiatives involving healthy lifestyles, promotion of cancer screening tests, access to good cancer care, and improvement in the quality of life for people who survive cancer (CDC, 2015d). State Comprehensive Cancer Control Plans (2015c) can be located at the following link: http://www.cdc.gov/cancer/ncccp/ccc_plans.htm.

Pennsylvania's comprehensive cancer control plan for 2013-2018 (ftp://ftp.cdc.gov/pub/Publications/Cancer/ccc/pennsylvania_ccc_plan_2013_2018.pdf) includes the following goals, objectives and strategies:

Goals:

- Advocate for state and federal policies, practices, reform and community-based systems that promote consumer access to affordable and quality health care
- Reduce cancer health disparities, defined as populations disproportionately burdened by disease and its contributing factors
- Support evidence-based health provider practices across the cancer care delivery continuum, while incorporating health reform concepts
- Develop and expand community support system linkages to improve cancer control, while addressing the impacts of social, economic and physical health determinants
- Build capacity for sustainable cancer control programs, research and stakeholder engagement

Objectives:

- Institute a coordinated approach that engages public agencies and private organizations to promote access to affordable health care
- Link consumers to initiatives that help them navigate the health care system and reduce barriers to obtain coverage, care and services
- Empower consumers to actively participate in their health and care
- Improve rates for key cancer surveillance indicators and measures for high burden cancers
- Optimize impacts of health reform to eliminate cancer health disparities

- Link registry data to other reliable data sources to improve outcomes; and share appropriately with partners and audiences
- Promote evidence-based best clinical practices across all elements of the cancer care continuum
- Increase attention to prevention, early detection and reduction of risk factors
- Facilitate collaboration to increase attention to appropriate use of palliative care and improve quality of life
- Align community-based cancer care with clinical care across the full continuum
- Promote primary care and patient navigation for disparate populations
- Reduce barriers to availability of, and access to, community-based care
- Optimize and expand existing resources to sustain cancer control programs
- Support sustainable cancer research to inform, support and validate best available evidence and improve outcomes
- Develop and sustain an effective stakeholder engagement strategy

Strategies:

- Coordinate interventions with other chronic diseases to eliminate barriers and address comorbidities
- Develop communication strategies to facilitate consumer education and engagement
- Support healthcare delivery transformation, consistent with the State Health Care Innovation Plan
- Eliminate barriers to accessing quality and affordable cancer care
- Support sustained, data-driven legislative advocacy to reduce burden and disparities
- Develop multi-media approaches to connect audiences to beneficial resources
- Promote the Patient Centered Medical Home (PCMH) model, facilitating enhanced relationships with primary providers.
- Support Health Information Exchanges and Pennsylvania's eHealth Partnership Authority, allowing consumer access to information portals and active participation in their care
- Provide information and intervention to recipients across the lifespan, with a focus on younger ages
- Positively impact rates for CDC priority cancers: breast, cervical and colorectal
- Calculate rates and monitor trends for additional high burden cancers including preventable cancers, e.g. tobacco-related
- Optimize use of Pennsylvania Cancer Registry data in order to recommend realistic interventions
- Target primary care providers to track data on screening, early detection and prevention
- Facilitate development of data-driven patient navigation systems
- Support the Moral Imperative to advance equity and eliminate disparities
- Expand linkages to existing state-level resources to improve outcomes
- Reduce burden of multiple chronic diseases through newly identified data sources
- Pennsylvania's eHealth Partnership Authority to improve outcomes and optimize data-driven decision-making

- Assess existing clinical care practices to promote best current practices
- Support development of new, and improvements in existing, practices
- Incorporate impacts of comorbidities in recommendations of clinical guidelines
- Promote evidence based screening as appropriate by site and population, while reducing disparities in screening awareness and access
- Facilitate the reform based shift from treatment to prevention when promoting allocation of care resources
- Support development of a sustainable, community-focused cancer care workforce e.g. primary care providers
- Promote CDC National Action Plan for Cancer Survivorship to reduce burden on cancer survivors, their families and caregivers
- Promote National Consensus Project for Quality Palliative Care, Clinical Practice Guidelines
- Promote chronic disease self-education and self-management programs to positively impact cancer risk and lifestyle factors
- Incorporate survivorship plans and care into community based services and interventions
- Promote the use of community lay workers, e.g. Community Health Workers (CHWs)
- Support Patient Centered Medical Home collaboratives that incorporate CHWs, practice-based health coaches and other patient navigators as part of the care team
- Expand outreach to underserved populations through community lay workers
- Increase state-local linkages to coordinate services and promote resource efficiencies
- Advocate for sustained public-sector program funding for state-level and partner programs
- Obtain supplemental resources through nontraditional sources, e.g. private sector sources
- Link to existing and future prevention programs, e.g. tobacco cessation, obesity reduction
- Promote research across the care continuum for high burden cancers
- Support patient centered outcomes research consistent with health care reform
- Promote research collaborations among cancer centers and other organizations
- Translate Plan into local action through equitable resource allocation and aligned support
- Conduct ongoing education and evaluation to sustain stakeholder engagement
- Develop and implement stakeholder commitment recognition program

For more information regarding Pennsylvania's comprehensive cancer plan please visit: http://www.livehealthypa.com/page.aspx?id=2

Affordable Care Act

In 2010, Congress passed the Patient Protection and Affordable Care Act (commonly known as Affordable Care Act or ACA) to expand access to care through insurance coverage, enhance the quality of health care, improve health care coverage for those with health insurance and to make health care more affordable (US Department of Health and Human Services, 2015a).

The ACA includes the following mandates to improve health insurance coverage and enhance health care quality (US Department of Health and Human Services, 2015a):

- Prohibit insurers from denying coverage based on pre-existing conditions
- Prohibit insurers from rescinding coverage
- Prohibit annual and lifetime caps on coverage
- Provide coverage of preventive services with no cost-sharing (including screening mammography, well women visits)
- Establish minimum benefits standards, known as the Essential Health Benefits (EHB)

The ACA provides tax subsidies for middle-income individuals to purchase insurance through the health insurance exchanges (commonly called the Marketplace). To be eligible to receive health coverage through the Marketplace, an individuals must live in the United States, be a US citizen or national (or lawfully present), cannot be incarcerated, fall into certain income guidelines and cannot be eligible for other insurance coverage (i.e., Medicaid, Medicare and employer sponsored health care coverage) (US Centers for Medicare and Medicaid Services, n.d.).

Based on 2015 data, of the estimated 994,000 total number of uninsured in Pennsylvania, 48.0 percent are Medicaid eligible, 18.0 percent are eligible for tax subsidies and 34.0 percent are ineligible for financial assistance due to income, employer sponsored insurance offer or citizenship status (Garfield et al., 2015).

Some of the ways that the ACA has affected Pennsylvania over the past five years include (US Department of Health and Human Service, 2015b):

- Making health care more affordable and accessible through Health Insurance Marketplaces.
    - In Pennsylvania, 472,697 consumers selected or were automatically re-enrolled in health insurance coverage.
- Reducing the number of uninsured.
    - The number of uninsured in Pennsylvania decreased to 10.3 percent (2014) from 11.0 percent (2013).
- Removing lifetime limits on health benefits and discrimination for pre-existing conditions resulting in cancer patients not having to worry about going without treatment.
    - In Pennsylvania, over 1,769,000 women no longer have to worry about lifetime limits on coverage.

- Making prescription drug coverage more affordable for those on Medicare.
    - In Pennsylvania, Medicare covered individuals have saved nearly $940,062,709 on prescription drugs.
- Covering preventive services, such as screening mammograms, with no deductible or co-pay.
    - In Pennsylvania, over 1,338,000 women received preventive services without cost-sharing.
- Providing increased funding to support health care delivery improvement projects that offer a broader array of primary care services, extend hours of operations, employ more providers and improve health care facilities.
    - Pennsylvania received $189,115,545 under the health care law.

For more information about the Affordable Care Act or to obtain coverage, please visit the following websites:

- US Department of Health and Human Services: http://www.hhs.gov/healthcare
- Information about health insurance coverage: 1-800-318-2596 or www.healthcare.gov
- ACA assistance in the local community: https://localhelp.healthcare.gov/#intro

Medicaid Expansion

Traditional Medicaid had gaps in coverage for adults because eligibility was restricted to specific categories of low-income individuals (i.e., children, their parents, pregnant women, the elderly, or individuals with disabilities) (Figure 4.1) (The Henry J. Kaiser Family Foundation, 2014). In most states, non-elderly adults without dependent children were ineligible for Medicaid, regardless of their income.

Under the ACA, states were provided the option to expand Medicaid coverage to a greater number of non-elderly adults with incomes at or below 138 percent of poverty (about $16,242 per year for an individual in 2015); thus reducing the number of uninsured, low-income adults (The Henry J. Kaiser Family Foundation, n.d.). As of January 2016, 32 states including the District of Columbia have adopted and implemented Medicaid Expansion, three states are still considering adopting Medicaid Expansion and 16 are not adopting Medicaid Expansion at this time (The Henry J. Kaiser Family Foundation, n.d.).

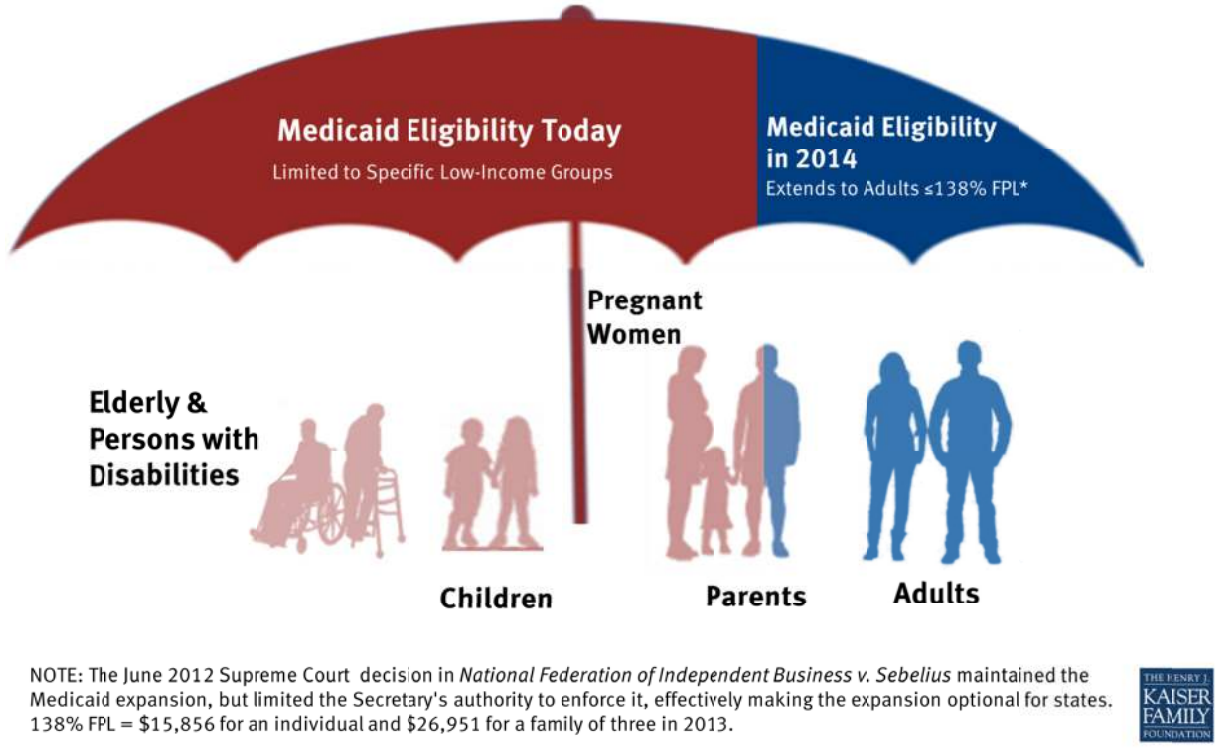


Figure 4.1. The ACA Medicaid Expansion fills current gaps in coverage

Additional information regarding Medicaid Expansion can be found at the following websites:

- The Henry J. Kaiser Family Foundation State Health Facts: http://kff.org/
- US Centers for Medicare and Medicaid Services: https://www.healthcare.gov/medicaid-chip/medicaid-expansion-and-you/

Pennsylvania adopted Medicaid expansion, effective January 1, 2015. There are currently 994,000 total individuals who are uninsured and 477,000 are Medicaid eligible (The Henry J. Kaiser Family Foundation, 2016). Pennsylvania's Medicaid plan, called Health Choices PA, is administered by the Pennsylvania Department of Human Services. Health Choices PA is available to adults (ages 64 and younger) who earn an annual income up to 138 percent of the federal poverty level (FPL) ($16,243 for an individual or $33,465 for a family of 4) and meet certain residency requirements (Pennsylvania Department of Human Services, n.d.). More information about the Health Choices PA can be found at the following website: http://www.healthchoicespa.com/.

Affordable Care Act, Medicaid Expansion and Unisured Women

Even after implementation of the ACA and Medicaid Expansion (in some states), there are approximately 12.8 million women (ages 19 to 64) in the US that remain uninsured (The Henry J. Kaiser Family Foundation, 2016). Uninsured women have been found to have inadequate access to care and receive a lower standard of care within health systems that lead to poorer health outcomes (Kaiser Commission on Medicaid and the Uninsured, 2013). Women that are

single parents, have incomes below 100 percent federal poverty level, have less than a high school education, are women of color or immigrants are at greatest risk of being uninsured (Figure 4.2) (The Henry J. Kaiser Family Foundation, 2016).

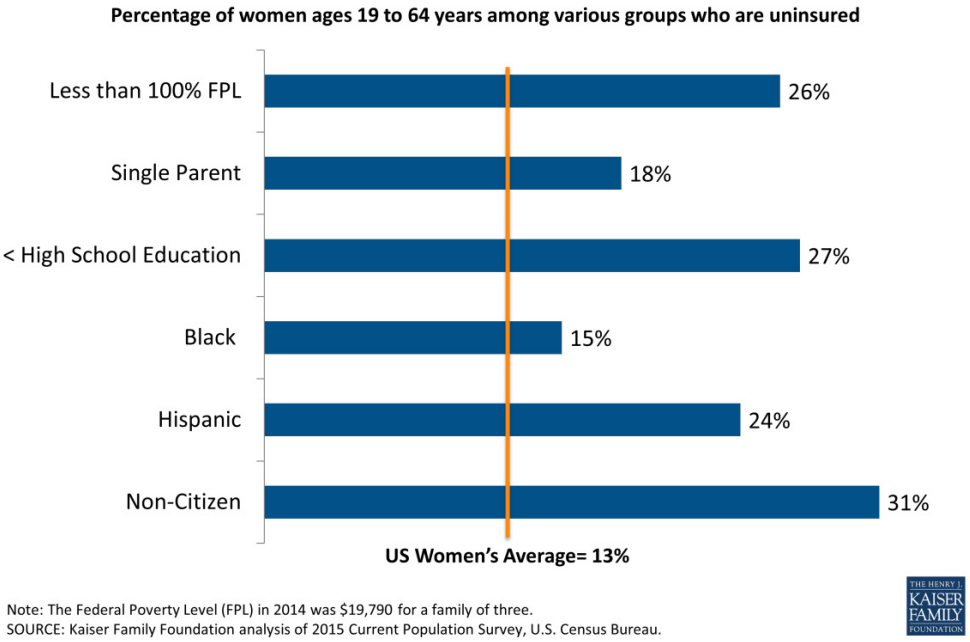


Figure 4.2. Women at greatest risk of being uninsured, 2014

A 2014 survey by The Henry J. Kaiser Family Foundation (2016) found that 47.0 percent of uninsured women indicated that insurance was too expensive, 13.0 percent were unemployed/work does not offer/not eligible through work, 8.0 percent tried to obtain coverage but were told they were ineligible, 7.0 percent were not eligible due to immigration status and 4.0 percent indicated that they did not need coverage. Of the 3,832,000 women in Pennsylvania, 421,520 (11.0 percent) were without health insurance coverage in 2014 (The Henry J. Kaiser Family Foundation, 2016).

Community Profile Summary

Introduction to the Community Profile Report

Susan G. Komen is the world's largest breast cancer organization, funding more breast cancer research than any other nonprofit while providing real-time help to those facing the disease. Since its founding in 1982, Komen has funded more than $889 million in research and provided $1.95 billion in funding to screening, education, treatment and psychosocial support programs serving millions of people in more than 30 countries worldwide. Komen was founded by Nancy G. Brinker, who promised her sister, Susan G. Komen, that she would end the disease that claimed Suzy's life.

The purpose of the Pennsylvania Community Profile is to assess breast cancer burden within the state by identifying areas at highest risk of negative breast cancer outcomes. Through the Community Profile, populations most at-risk of dying from breast cancer and their demographic and socioeconomic characteristics can be identified; as well as, the needs and disparities that exist in availability, access and utilization of quality care.

Quantitative Data: Measuring Breast Cancer Impact in Local Communities

After review of breast cancer late-stage diagnosis and death rates and trends for each county in the state, areas of greatest need were identified based on if the county would meet Healthy People 2020 late-stage diagnosis rate (41.0 per 100,000 women) and death rate (20.6 per 100,000 women) targets.

Breast Cancer Death Rates

The State of Pennsylvania as a whole is **likely to achieve** the HP2020 death rate target. The state had a base rate of 23.8 breast cancer deaths per 100,000 females per year from 2006 to 2010 (age-adjusted). This rate coupled with a desirable direction (decrease) in the recent death rate trend, indicates that the State of Pennsylvania will likely achieve the HP2020 target of 20.6 female breast cancer deaths per 100,000.

The following counties **currently meet** the HP2020 breast cancer death rate target of 20.6:

- Adams County (Komen Philadelphia)
- Armstrong County (Komen Pittsburgh)
- Centre County (Komen Pittsburgh)
- Clearfield County (Komen Pittsburgh)
- Clinton County (Komen Northeastern Pennsylvania)
- Crawford County (Komen Pittsburgh)
- Franklin County (Komen Pittsburgh)
- Lackawanna County (Komen Northeastern Pennsylvania)
- Lawrence County (Komen Pittsburgh)
- Lycoming County (Komen Northeastern Pennsylvania)
- Somerset County (Komen Pittsburgh)
- Susquehanna County (Komen Northeastern Pennsylvania)
- Union County (Komen Northeastern Pennsylvania)

The following counties are **likely to miss** the HP2020 breast cancer death rate target unless the death rate falls at a faster rate than currently estimated:

- Blair County (Komen Pittsburgh)
- Clarion County (Komen Pittsburgh)
- Delaware County (Komen Philadelphia)
- Fayette County (Komen Pittsburgh)
- Greene County (Komen Pittsburgh)
- Huntingdon County (Komen Pittsburgh)
- Indiana County (Komen Pittsburgh)
- Jefferson County (Komen Pittsburgh)
- McKean County (Komen Pittsburgh)
- Mercer County (Komen Pittsburgh)
- Mifflin County (Komen Pittsburgh)
- Perry County (Komen Pittsburgh)
- Philadelphia County (Komen Philadelphia)
- Pike County (Komen Northeastern Pennsylvania)
- Schuylkill County (Komen Northeastern Pennsylvania)
- Washington County (Komen Pittsburgh)
- Wayne County (Komen Northeastern Pennsylvania)

Because data for small numbers of people are not reliable, it can't be predicted whether Cameron County, Forest County, Fulton County, Montour County, Sullivan County and Wyoming County will reach the death rate target. The remaining counties are likely to achieve the target by 2020 or earlier.

Breast Cancer Late-Stage Incidence Rates

The State of Pennsylvania as a whole is **likely to miss** the HP2020 late-stage incidence rate target. The state had a base rate of 45.4 new late-stage cases per 100,000 females per year from 2006 to 2010 (age-adjusted). This rate coupled with the recent late-stage incidence rate trend, indicates that the State of Pennsylvania is likely to miss the HP2020 target of 41.0 new late-stage cases per 100,000.

The following counties **currently meet** the HP2020 late-stage incidence rate target of 41.0:

- Centre County (Komen Pittsburgh)
- Clearfield County (Komen Pittsburgh)
- Clinton County (Komen Northeastern Pennsylvania)
- Crawford County (Komen Pittsburgh)
- Fulton County (Komen Pittsburgh)
- Huntingdon County (Komen Pittsburgh)
- Juniata County (Komen Pittsburgh)
- McKean County (Komen Pittsburgh)
- Northumberland County (Komen Northeastern Pennsylvania)
- Potter County (Komen Twin Tiers Region)

- Somerset County (Komen Pittsburgh)
- Wayne County (Komen Northeastern Pennsylvania)

The following counties are **likely to miss** the HP2020 late-stage incidence rate target unless the late-stage incidence rate falls at a faster rate than currently estimated:

- Adams County (Komen Philadelphia)
- Allegheny County (Komen Pittsburgh)
- Armstrong County (Komen Pittsburgh)
- Beaver County (Komen Pittsburgh)
- Bradford County (Komen Twin Tiers Region)
- Bucks County (Komen Philadelphia)
- Butler County (Komen Pittsburgh)
- Carbon County (Komen Northeastern Pennsylvania)
- Columbia County (Komen Northeastern Pennsylvania)
- Cumberland County (Komen Pittsburgh)
- Dauphin County (Komen Northeastern Pennsylvania)
- Delaware County (Komen Philadelphia)
- Elk County (Komen Pittsburgh)
- Erie County (Komen Pittsburgh)
- Fayette County (Komen Pittsburgh)
- Jefferson County (Komen Pittsburgh)
- Lackawanna County (Komen Northeastern Pennsylvania)
- Lancaster County (Komen Philadelphia)
- Lawrence County (Komen Pittsburgh)
- Lebanon County (Komen Philadelphia)
- Lycoming County (Komen Northeastern Pennsylvania)
- Mercer County (Komen Pittsburgh)
- Mifflin County (Komen Pittsburgh)
- Montour County (Komen Northeastern Pennsylvania)
- Northampton County (Komen Northeastern Pennsylvania)
- Philadelphia County (Komen Philadelphia)
- Pike County (Komen Northeastern Pennsylvania)
- Schuylkill County (Komen Northeastern Pennsylvania)
- Susquehanna County (Komen Northeastern Pennsylvania)
- Union County (Komen Northeastern Pennsylvania)
- Venango County (Komen Pittsburgh)
- Warren County (Komen Pittsburgh)
- Westmoreland County (Komen Pittsburgh)
- York County (Komen Philadelphia)

Because data for small numbers of people are not reliable, it can't be predicted whether Cameron County, Forest County and Sullivan County will reach the late-stage incidence rate target. The remaining counties are likely to achieve the target by 2020 or earlier.

HP2020 Conclusions

Highest at risk areas

Nine counties in the State of Pennsylvania are in the highest at risk category. Eight of the nine, Delaware County, Fayette County, Jefferson County, Mercer County, Mifflin County, Philadelphia County, Pike County and Schuylkill County, are not likely to meet either the death rate or late-stage incidence rate HP2020 targets. One of the nine, Montour County is not likely to meet the late-stage incidence rate HP2020 target.

The age-adjusted incidence rates in Delaware County (133.4 per 100,000) are significantly higher than the state as a whole (126.0 per 100,000). The age-adjusted death rates in Delaware County (27.5 per 100,000) and Philadelphia County (29.0 per 100,000) are significantly higher than the state as a whole (23.8 per 100,000). Death trends in Schuylkill County (-0.2 percent per year) are significantly less favorable than the state as a whole (-2.3 percent per year). The age-adjusted late-stage incidence rates in Philadelphia County (51.6 per 100,000) are significantly higher than the state as a whole (45.4 per 100,000). Screening proportions in Fayette County (62.6 percent) and Pike County (72.3 percent) are significantly lower than the state as a whole (77.8 percent).

Delaware County has a relatively large Black/African-American population. Fayette County has high poverty levels. Mifflin County has low education levels. Philadelphia County has a relatively large Black/African-American population, a relatively large API population, a relatively large Hispanic/Latina population, low education levels, high poverty levels, high unemployment, a relatively large foreign-born population and a relatively large number of households with little English. Pike County has high unemployment.

High at risk areas

Ten counties in the State of Pennsylvania are in the high at risk category. One of the ten, Greene County is not likely to meet the death rate HP2020 target. Nine of the ten, Allegheny County, Beaver County, Bucks County, Butler County, Carbon County, Dauphin County, Elk County, Venango County and Westmoreland County, are not likely to meet the late-stage incidence rate HP2020 target.

The age-adjusted incidence rates in Allegheny County (133.8 per 100,000) are significantly higher than the state as a whole (126.0 per 100,000). Incidence trends in Greene County (15.0 percent per year) are significantly less favorable than the state as a whole (0.5 percent per year). Death trends in Greene County (3.4 percent per year) are significantly less favorable than the state as a whole (-2.3 percent per year). The screening proportion in Butler County (64.6 percent) is significantly lower than the state as a whole (77.8 percent). Dauphin County has a relatively large Black/African-American population.

Health Systems Analysis

The Breast Cancer Continuum of Care (CoC), shown in Figure 5.1, is a model that shows how a woman typically moves through the health care system for breast care. A woman would ideally move through the CoC quickly and seamlessly, receiving timely, quality care in order to have the best outcomes. Education can play an important role throughout the entire CoC.

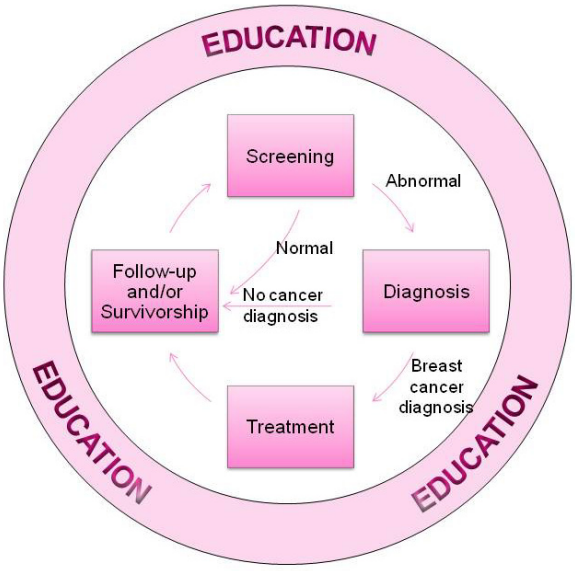


Figure 5.1. Breast Cancer Continuum of Care (CoC)

There are often delays in moving from one point of the continuum to another – at the point of follow-up of abnormal screening exam results, starting treatment, and completing treatment – that can all contribute to poorer outcomes. There are also many reasons why a woman does not enter or continue in the breast cancer CoC. These barriers can include things such as lack of access to services, lack of transportation, system issues including long waits for appointments and inconvenient clinic hours, language barriers, fear, and lack of information or the wrong information (myths and misconceptions).

In the State of Pennsylvania there were 719 locations found to provide breast cancer services varying between screening, diagnostic, treatment, and survivorship (Figure 5.2). There were 719 locations that provided screening services, 280 locations in the state that provide diagnostic services and 112 locations providing treatment services. In the state there were 102 locations that provided survivorship services or care. Identified facilities that provide mammography services were all accredited by the Federal Drug Administration. There are 78 locations that are accredited by the American College of Surgeons Commission on Cancer, 77 locations accredited by the American College of Radiology as a Breast Imaging Center of Excellence and 31 locations accredited as an American College of Surgeons NAPBC program. There are four locations that are designated as a NCI Cancer Center.

The following counties are designated as a Medically Underserved Area/Population and/or a Health Professional Shortage Area for primary care: Adams, Allegheny, Armstrong, Beaver, Bedford, Berks, Blair, Bradford, Bucks, Butler, Cambria, Cameron, Carbon, Centre, Chester, Clarion, Clearfield, Clinton, Columbia, Crawford, Cumberland, Dauphin, Delaware, Elk, Erie, Fayette, Forest, Franklin, Fulton, Greene, Huntingdon, Indiana, Jefferson, Juniata, Lackawanna, Lancaster, Lawrence, Lebanon, Lehigh, Luzerne, Lycoming, McKean, Mercer, Mifflin, Monroe, Montgomery, Northampton, Northumberland, Perry, Philadelphia, Pike, Potter, Schuylkill, Snyder, Somerset, Sullivan, Susquehanna, Tioga, Union, Venango, Warren, Washington, Wayne, Westmoreland, Wyoming and York.

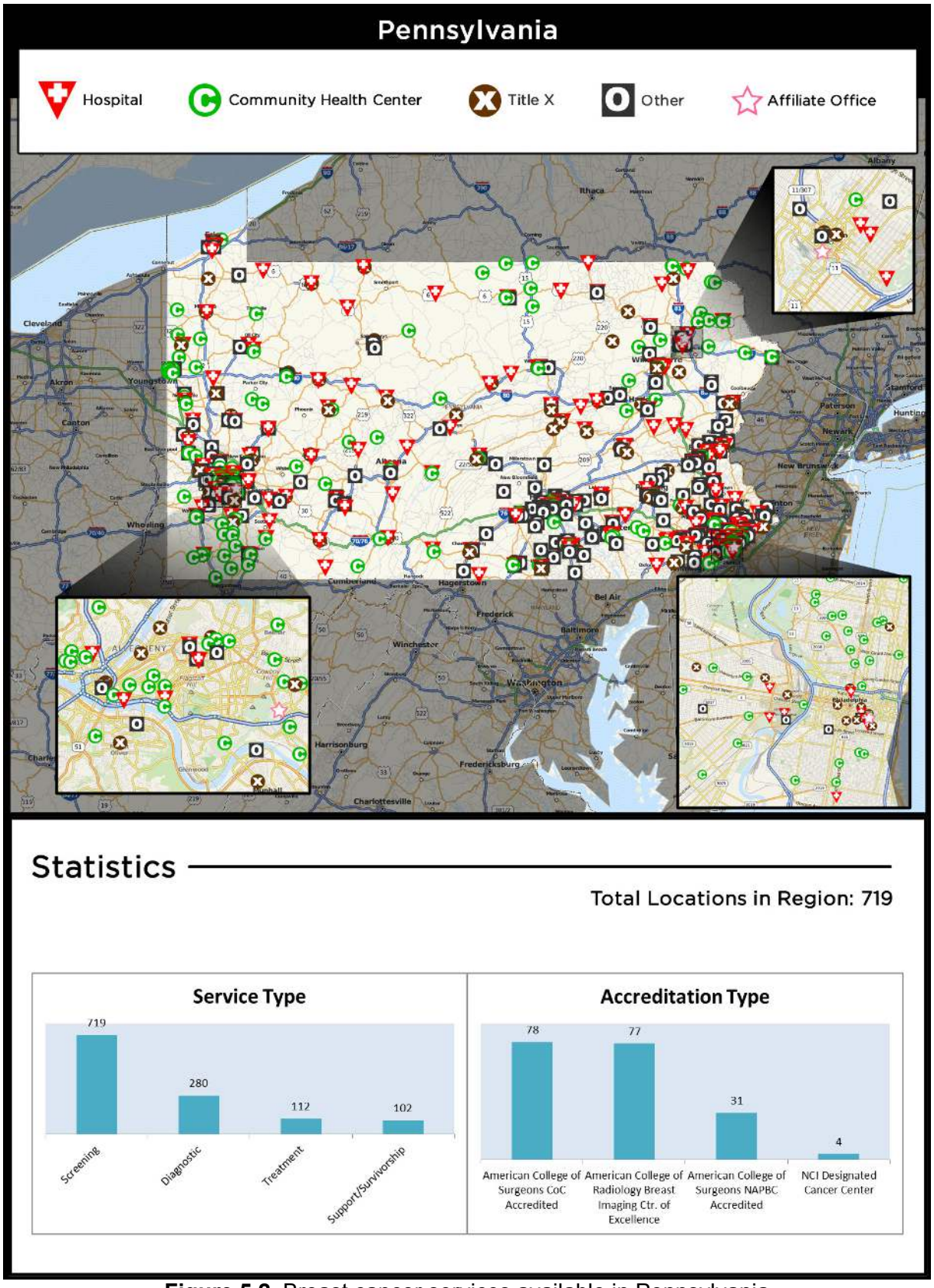


Figure 5.2. Breast cancer services available in Pennsylvania

Public Policy Overview

In recent years, public policies pertaining to breast cancer have undergone substantial changes that will affect at-risk women across the United States. States have responded differently to the public policy developments concerning access to services within the breast cancer continuum of care (screening, diagnostic, treatment and survivorship care); therefore, women are dependent on their state's agenda and action on health care reform.

National Breast and Cervical Cancer Early Detection Program (NBCCEDP)
The NBCCEDP is a nationwide program that provides low-income women with breast and cervical cancer screening, follow-up and support services (i.e., case management and referrals for medical treatment), developing and disseminating public information and education programs and improving the education, training and skills of health professionals.

In the State of Pennsylvania, the NBCCEDP is known as Pennsylvania's Healthy Woman Program and is administered by the Pennsylvania Department of Health. From July 2009 to June 2014, Pennsylvania's Healthy Woman Program provided 23,187 cancer and cervical cancer screening and diagnostic services to women. The program provided 20,803 mammograms that resulted in 2,890 women receiving an abnormal result and 282 women being diagnosed with breast cancer (NBCCEDP Minimum Data Elements, 2015). To find out more information about getting screened and eligibility, contact the Healthy Woman Program (1-800-215-7494).

State Comprehensive Cancer Control Plan
Comprehensive cancer control is a process through which communities and partner organizations pool resources to reduce cancer risk, find cancers earlier, improve treatments, increase the number of people who survive cancer and improve quality of life for cancer survivors to ultimately reduce the burden of cancer in the state. Under the National Comprehensive Cancer Control Program (NCCCP), state cancer coalitions develop and implement a State Comprehensive Cancer Control Plan to meet identified cancer needs.

Pennsylvania's comprehensive cancer control plan for 2013-2018 (ftp://ftp.cdc.gov/pub/Publications/Cancer/ccc/pennsylvania_ccc_plan_2013_2018.pdf) includes the following goals, objectives and strategies:

Goals:

- Advocate for state and federal policies, practices, reform and community-based systems that promote consumer access to affordable and quality health care
- Reduce cancer health disparities, defined as populations disproportionately burdened by disease and its contributing factors
- Support evidence-based health provider practices across the cancer care delivery continuum, while incorporating health reform concepts
- Develop and expand community support system linkages to improve cancer control, while addressing the impacts of social, economic and physical health determinants

- Build capacity for sustainable cancer control programs, research and stakeholder engagement

Objectives:

- Institute a coordinated approach that engages public agencies and private organizations to promote access to affordable health care
- Link consumers to initiatives that help them navigate the health care system and reduce barriers to obtain coverage, care and services
- Empower consumers to actively participate in their health and care
- Improve rates for key cancer surveillance indicators and measures for high burden cancers
- Optimize impacts of health reform to eliminate cancer health disparities
- Link registry data to other reliable data sources to improve outcomes; and share appropriately with partners and audiences
- Promote evidence-based best clinical practices across all elements of the cancer care continuum
- Increase attention to prevention, early detection and reduction of risk factors
- Facilitate collaboration to increase attention to appropriate use of palliative care and improve quality of life
- Align community-based cancer care with clinical care across the full continuum
- Promote primary care and patient navigation for disparate populations
- Reduce barriers to availability of, and access to, community-based care
- Optimize and expand existing resources to sustain cancer control programs
- Support sustainable cancer research to inform, support and validate best available evidence and improve outcomes
- Develop and sustain an effective stakeholder engagement strategy

Strategies:

- Coordinate interventions with other chronic diseases to eliminate barriers and address comorbidities
- Develop communication strategies to facilitate consumer education and engagement
- Support healthcare delivery transformation, consistent with the State Health Care Innovation Plan
- Eliminate barriers to accessing quality and affordable cancer care
- Support sustained, data-driven legislative advocacy to reduce burden and disparities
- Develop multi-media approaches to connect audiences to beneficial resources
- Promote the Patient Centered Medical Home (PCMH) model, facilitating enhanced relationships with primary providers.
- Support Health Information Exchanges and Pennsylvania's eHealth Partnership Authority, allowing consumer access to information portals and active participation in their care
- Provide information and intervention to recipients across the lifespan, with a focus on younger ages

- Positively impact rates for CDC priority cancers: breast, cervical and colorectal
- Calculate rates and monitor trends for additional high burden cancers including preventable cancers, e.g. tobacco-related
- Optimize use of Pennsylvania Cancer Registry data in order to recommend realistic interventions
- Target primary care providers to track data on screening, early detection and prevention
- Facilitate development of data-driven patient navigation systems
- Support the Moral Imperative to advance equity and eliminate disparities
- Expand linkages to existing state-level resources to improve outcomes
- Reduce burden of multiple chronic diseases through newly identified data sources
- Pennsylvania's eHealth Partnership Authority to improve outcomes and optimize data-driven decision-making
- Assess existing clinical care practices to promote best current practices
- Support development of new, and improvements in existing, practices
- Incorporate impacts of comorbidities in recommendations of clinical guidelines
- Promote evidence based screening as appropriate by site and population, while reducing disparities in screening awareness and access
- Facilitate the reform based shift from treatment to prevention when promoting allocation of care resources
- Support development of a sustainable, community-focused cancer care workforce e.g. primary care providers
- Promote CDC National Action Plan for Cancer Survivorship to reduce burden on cancer survivors, their families and caregivers
- Promote National Consensus Project for Quality Palliative Care, Clinical Practice Guidelines
- Promote chronic disease self-education and self-management programs to positively impact cancer risk and lifestyle factors
- Incorporate survivorship plans and care into community based services and interventions
- Promote the use of community lay workers, e.g. Community Health Workers (CHWs)
- Support Patient Centered Medical Home collaboratives that incorporate CHWs, practice-based health coaches and other patient navigators as part of the care team
- Expand outreach to underserved populations through community lay workers
- Increase state-local linkages to coordinate services and promote resource efficiencies
- Advocate for sustained public-sector program funding for state-level and partner programs
- Obtain supplemental resources through nontraditional sources, e.g. private sector sources
- Link to existing and future prevention programs, e.g. tobacco cessation, obesity reduction
- Promote research across the care continuum for high burden cancers
- Support patient centered outcomes research consistent with health care reform
- Promote research collaborations among cancer centers and other organizations

- Translate Plan into local action through equitable resource allocation and aligned support
- Conduct ongoing education and evaluation to sustain stakeholder engagement
- Develop and implement stakeholder commitment recognition program

For more information regarding Pennsylvania's comprehensive cancer plan please visit: http://www.livehealthypa.com/page.aspx?id=2

Affordable Care Act

In 2010, Congress passed the Patient Protection and Affordable Care Act (commonly known as Affordable Care Act or ACA) to expand access to care through insurance coverage, enhance the quality of health care, improve health care coverage for those with health insurance and to make health care more affordable.

The ACA includes the following mandates to improve health insurance coverage and enhance health care quality (US Department of Health and Human Services, 2015a):

- Prohibit insurers from denying coverage based on pre-existing conditions
- Prohibit insurers from rescinding coverage
- Prohibit annual and lifetime caps on coverage
- Provide coverage of preventive services with no cost-sharing (including screening mammography, well women visits)
- Establish minimum benefits standards, known as the Essential Health Benefits (EHB)

The ACA provides tax subsidies for middle-income individuals to purchase insurance through the health insurance exchanges (commonly called the Marketplace). To be eligible to receive health coverage through the Marketplace, an individuals must live in the United States, be a US citizen or national (or lawfully present), cannot be incarcerated, fall into certain income guidelines and cannot be eligible for other insurance coverage (i.e., Medicaid, Medicare and employer sponsored health care coverage) (US Centers for Medicare and Medicaid Services, n.d.).

Based on 2015 data, of the estimated 994,000 total number of uninsured in Pennsylvania, 48.0 percent are Medicaid eligible, 18.0 percent are eligible for tax subsidies and 34.0 percent are ineligible for financial assistance due to income, employer sponsored insurance offer or citizenship status (Garfield et al., 2015).

Medicaid Expansion

Traditional Medicaid had gaps in coverage for adults because eligibility was restricted to specific categories of low-income individuals (i.e., children, their parents, pregnant women, the elderly, or individuals with disabilities). In most states, non-elderly adults without dependent children were ineligible for Medicaid, regardless of their income. Under the ACA, states were provided the option to expand Medicaid coverage to a greater number of non-elderly adults with incomes at or below 138 percent of poverty (about $16,242 per year for an individual in 2015); thus reducing the number of uninsured, low-income adults.

Pennsylvania adopted Medicaid expansion, effective January 1, 2015. There are currently 994,000 total individuals who are uninsured and 477,000 are Medicaid eligible (The Henry J. Kaiser Family Foundation, 2016). Pennsylvania's Medicaid plan, called Health Choices PA, is administered by the Pennsylvania Department of Human Services. Health Choices PA is available to adults (ages 64 and younger) who earn an annual income up to 138 percent of the federal poverty level (FPL) ($16,243 for an individual or $33,465 for a family of 4) and meet certain residency requirements (Pennsylvania Department of Human Services, n.d.). More information about the Health Choices PA can be found at the following website: http://www.healthchoicespa.com/.

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Even after implementation of the ACA and Medicaid Expansion (in some states), there are approximately 12.8 million women (ages 19 to 64) in the US that remain uninsured. Of the 3,832,000 women in Pennsylvania, 421,520 (11.0 percent) were without health insurance coverage in 2014.

Uninsured women have been found to have inadequate access to care and receive a lower standard of care within health systems that lead to poorer health outcomes. Women that are single parents, have incomes below 100 percent federal poverty level, have less than a high school education, are women of color or immigrants are at greatest risk of being uninsured.

Conclusions

Overall, Pennsylvania is likely to miss the HP2020 late-stage incidence target and is likely to achieve the HP2020 death rate target. A total of 719 locations were identified as providing at least one type of breast cancer service along the continuum of care. While all of the facilities providing mammography services were accredited by the FDA, only 26.0 percent of the locations have been recognized as receiving additional quality of care accreditations. Pennsylvania also has many designated areas that are rural and/or medically underserved - where individuals may have inadequate access to health care. Although Pennsylvania has implemented programs (i.e., NBCCEDP, Medicaid Expansion) to assist low-income and uninsured individuals, there are still far too many individuals that have inadequate access to health care and may be receiving a lower standard of care. Both may contribute to poorer breast cancer outcomes.

The information provided in this report can be used by public health organizations, local service providers and policymakers to identify areas of greatest need and the potential demographic and socioeconomic factors that may be causing suboptimal breast cancer outcomes. Susan G. Komen will continue to utilize evidence-based practices to reduce breast cancer late-stage diagnosis and death rates by empowering others, ensuring quality care for all and energizing science to find the cures.

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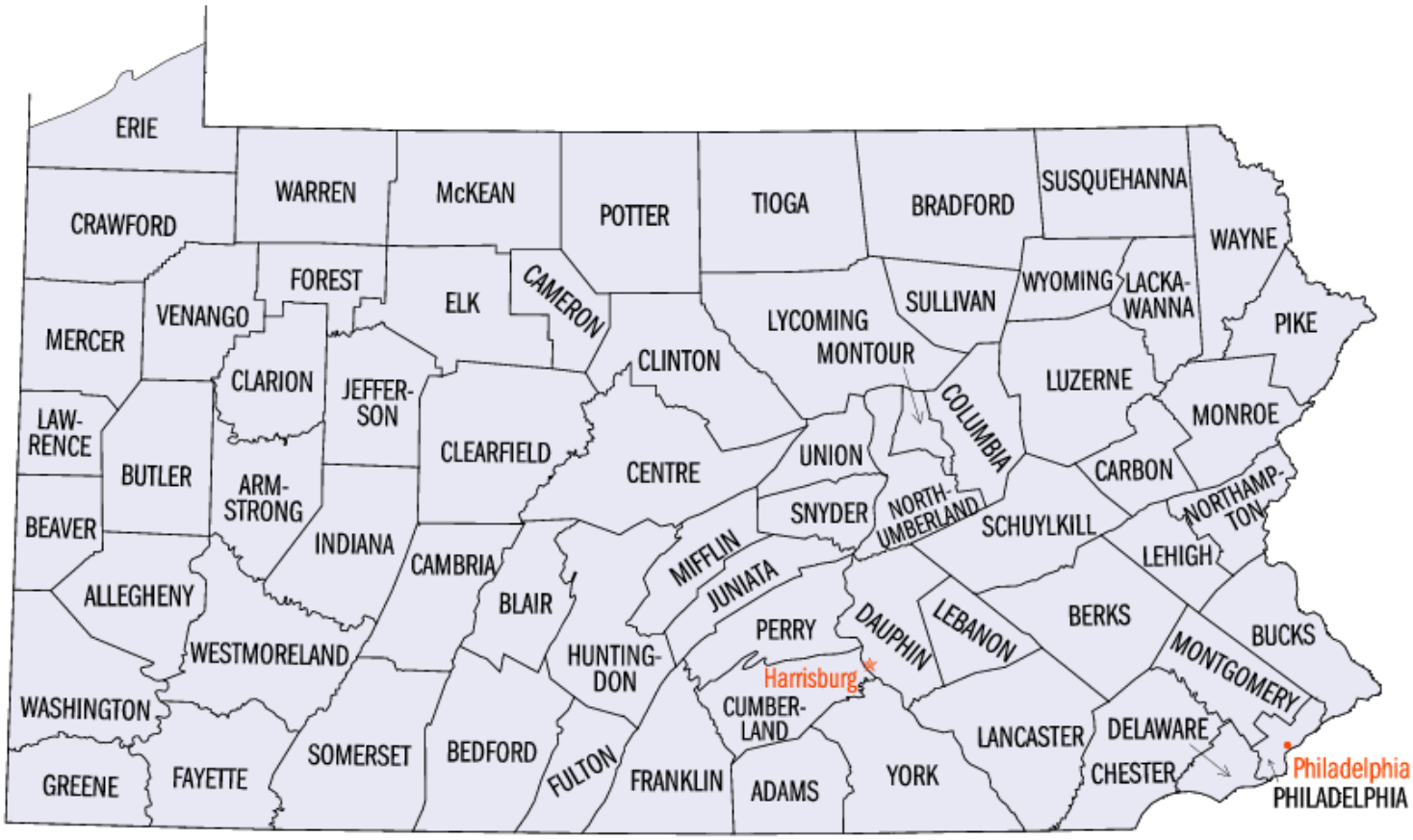
Appendix

Appendix A.
State Map with County Names



Source: US Census Bureau, 2014