

# STATISTICAL NEWS

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## In this issue...

### **A Review of Child Births in Pennsylvania**

#### How Were You Brought Into the World?

The ultimate goal for any delivery is a healthy mother and baby. Achieving this goal varies depending on beliefs, technology, and timing. Some women may choose to have some medical intervention during the birthing process, and some women do not have a choice due to complications. Other women strive to have a natural child birth for various reasons such as not wanting their child's first moment in the world to be influenced by drugs.

*Continue reading this article >>>*

### **A Look at Digestive System Cancers**

#### Pennsylvania Rates Higher Than the U.S.

The digestive system is a broad term that refers to the digestive tract organs, glands, and related structures that digest and process food. Cancers of the digestive system include the esophagus, stomach, small intestine, colon and rectum, anus/anal canal/anorectum, liver and intrahepatic bile duct, gallbladder, biliary, pancreas, retroperitoneum, peritoneum/omentum/mesentery, and other digestive organs.

*Continue reading this article >>>*

### **Pregnancies Still Declining in Pennsylvania**

#### Teen Pregnancy Rate Declines for the Second Year

There were 179,003 pregnancies reported among female residents of Pennsylvania in 2010, with a reported pregnancy rate of 73.3 per 1,000 females ages 15-44. The reported pregnancy rate among female residents decreased by 3.7 percent from 1995 to 2002, from 72.8 to 70.1.

*Continue reading this article >>>*

### **Electronic Health Records (EHR) Incentives Program**

#### What Exactly Is Meaningful Use?

Through the American Recovery and Reinvestment Act of 2009 (Recovery Act), the Centers for Medicare and Medicaid Services (CMS) is authorized to make incentive payments to eligible professionals (EP) and eligible hospitals (EH) demonstrating meaningful use of certified EHR technology.

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# A Review of Child Births in Pennsylvania

## How Were You Brought Into the World?

The ultimate goal for any delivery is a healthy mother and baby. Achieving this goal varies depending on beliefs, technology, and timing. Some women may choose to have some medical intervention during the birthing process, and some women do not have a choice due to complications. Other women strive to have a natural child birth for various reasons such as not wanting their child's first moment in the world to be influenced by drugs. Natural child birth in this article is defined as a vaginal birth without the use of forceps, vacuum, anesthetics, antibiotics, steroids, induction of labor, or augmentation of labor. A vaginal birth has been recognized as less risky compared to a cesarean delivery. However, certain risk factors in the pregnancy and characteristics of the labor may make a cesarean delivery more acceptable or may require medical assistance with a vaginal birth.

Women have given birth naturally since the beginning of humankind. Women often desire to give birth naturally, but circumstances or influences from others often makes them rethink this decision. Several procedures are used to minimize pain ranging from hypnosis to narcotics. "Natural childbirth" was coined in the 1930's by an obstetrician named Grantly Dick-Read. He published a book titled "Childbirth Without Fear" in 1942. Natural childbirth was just known as childbirth prior to sedation, medical intervention, and the publication of this book.

Ether was the sedative of choice for childbirth during the mid-1800's, but there was the issue of flammability and lung irritation. Chloroform quickly replaced ether in the late

1800's because it was less flammable and much more potent. Both ether and chloroform were administered in home births until 1900. The beginning of the Industrial Revolution and the development of urban centers grew exponentially around 1900. The combination of tight living spaces with the pollution of the factories created a horrific place to give birth. So, hospitals started to become the preferred place for all women to give birth. Certain circumstances contributed to the development of intravenous sedation and other medical interventions for childbirth. The "knock-em out, drag-em out" birthing procedure was termed by Robert A. Bradley in his book "Husband Coached Childbirth". Women would be heavily sedated, tied to a bed, and the child would be pulled out by a pair of forceps. More complications during birth began to be noticed after years of non-natural child births. Midwives, proponents of natural childbirth, were the first to start criticizing all of the medical interventions. Later, support for natural childbirth grew, spawning many new methods of natural birth. Several of these methods include the Grantly Dick-Read, Bradley, Lamaze, Alexander, water birth, hypno-birth, and birthing ball methods.

Inducing labor is a medical procedure of forcing labor to begin, rather than waiting for it to begin naturally. Certain events can occur prior to labor that makes the induction of labor a requirement for the safety of the mother and child. These events can be: a ruptured membrane (water broke) without the initiation of contractions, an infection inside of the uterus, a slowly growing baby,

the mother's Rhesus (RH) factor is negative while the baby's is positive, insufficient amniotic fluid, high blood pressure, preeclampsia, diabetes, or kidney disease. The induction of labor has not been found to be harmful to the child after 39 weeks of gestation. There are natural methods for assisting the woman into labor. These methods include walking, physical activity, and sex. Just over 23 percent of births to Pennsylvania residents in 2010 were medically induced (see Table 1, next page).

Augmentation can occur if the mother's contractions are too weak or too irregular. Certain medication can be used to adjust contractions, and thus, correct the labor. Certain natural methods can be used to correct abnormal labors, but obstetricians often recommend medical intervention. An electronic fetal monitor is used on nearly every delivery, including those that have to be augmented. Nearly one in four births to Pennsylvania residents were augmented during 2010.

Corticosteroids are often used for inflammation, but they are also used to advance lung and organ development in the case of preterm labors. Steroids were applied to just under 2 percent of the births to Pennsylvania residents in 2010. Most steroids are not known to have adverse side effects for the child. The mother on the other hand can be subjected to a couple of side effects. She can experience higher blood sugar levels while receiving the steroid. Also, a combination of steroids and other medications may cause an increase, but still low risk in the accumulation of fluid in the mother's lungs.

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## A Review of Child Births in Pennsylvania

**Table 1**  
**Obstetric Percentages by Age and Race**  
**Pennsylvania Resident Live Births, 2005 and 2010**

Year	2005									2010					
	Total	White			Black			Total	White			Black			
		< 20	20 - 29	30+	< 20	20 - 29	30+		< 20	20 - 29	30+	< 20	20 - 29	30+	
<b>Age</b>	<b>All</b>	<b>&lt; 20</b>	<b>20 - 29</b>	<b>30+</b>	<b>&lt; 20</b>	<b>20 - 29</b>	<b>30+</b>	<b>All</b>	<b>&lt; 20</b>	<b>20 - 29</b>	<b>30+</b>	<b>&lt; 20</b>	<b>20 - 29</b>	<b>30+</b>	
Total Births	145,033	6,934	52,272	49,503	4,123	11,197	5,037	142,370	6,116	50,792	45,147	3,746	12,227	5,647	
Natural Births*	14.9%	12.1%	15.1%	14.0%	14.3%	17.3%	16.8%	13.0%	9.3%	13.5%	12.7%	12.1%	12.9%	12.8%	
Hospital Births	97.6%	99.6%	96.5%	97.2%	99.7%	99.5%	99.4%	97.1%	99.5%	95.8%	96.1%	99.7%	99.6%	99.4%	
Home Births	1.6%	0.2%	2.5%	1.8%	0.3%	0.3%	0.3%	1.7%	0.3%	2.5%	2.2%	0.3%	0.3%	0.3%	
Induction Occurred	21.8%	27.1%	25.5%	21.6%	16.6%	15.0%	15.5%	23.3%	29.4%	25.2%	22.0%	25.5%	22.5%	22.7%	
Augmentation Occurred	25.9%	33.1%	27.2%	21.5%	32.0%	27.4%	22.9%	24.6%	31.9%	25.6%	20.1%	30.3%	26.4%	20.6%	
Steroids Applied	1.6%	2.0%	1.5%	1.4%	2.6%	2.3%	2.8%	1.8%	1.6%	1.7%	1.7%	2.5%	2.2%	3.1%	
Antibiotics Applied	20.5%	24.2%	20.3%	18.9%	25.3%	22.6%	19.4%	20.9%	23.6%	20.9%	19.7%	25.5%	22.7%	22.5%	
Anesthesia Applied	61.9%	63.1%	59.7%	63.1%	67.8%	63.3%	61.8%	69.1%	73.5%	67.2%	68.9%	75.2%	73.7%	70.7%	
Spontaneous Vaginal Delivery	64.9%	69.9%	67.6%	60.1%	71.2%	69.2%	60.4%	64.4%	72.6%	66.8%	59.4%	73.5%	67.3%	57.7%	
Forceps Vaginal Delivery	1.0%	1.5%	1.1%	0.9%	1.5%	1.0%	0.5%	0.6%	0.9%	0.7%	0.5%	0.8%	0.5%	0.2%	
Vacuum Vaginal Delivery	5.3%	8.1%	5.7%	5.0%	5.2%	3.5%	2.9%	3.7%	5.7%	4.1%	3.4%	3.8%	2.5%	2.3%	
Cesarean Section Delivery	28.8%	20.4%	25.6%	34.0%	22.1%	26.4%	36.1%	31.3%	20.8%	28.4%	36.7%	22.0%	29.7%	39.7%	

\* Natural birth in this article is defined as a vaginal birth without the use of forceps, vacuum, anesthesia, antibiotics, steroids, induction of labor, or augmentation of labor.

Antibiotics are used prior to birth if there is an infection or sexually transmitted disease present. Antibiotics mitigate the chances of the newborn contracting the infection. Unfortunately, there is no natural method of removing an infection during labor, so any application of antibiotics during labor is considered a medical intervention for the purpose of this article. Nearly 21 percent of all births to Pennsylvania residents in 2010 had antibiotics involved during the pregnancy.

Anesthetics are the most commonly used medical intervention during child birth. Over 69 percent of all births in Pennsylvania during 2010 had some sort of anesthetics. They are used to reduce or eliminate the pain and intense pressures created during labor. Opioids, a form of narcotics, is one example of an anesthetic. Opioids do not influence a women's ability to push during contractions or receive a spinal block/epidural in the future. The negative aspects of opioids is that they are short lived, can cause nausea, drowsiness, itchiness, and slow the heart rate of the unborn child.

An epidural is another common method of pain relief during labor. A small tube (catheter) is placed into a pocket in the spine containing spinal fluid. Small doses of medication can be delivered to the spine so that sensations cannot be received by the brain, effectively numbing the lower body. There is very little recovery time after its application. The medication from an epidural is fast acting, within 10 to 20 minutes, and can be administered when needed throughout child birth.

A spinal block is similar to an epidural, but pain relief is instant and only lasts one to two hours. Administering this type of anesthetic can cause motor skill paralysis for a temporary period of time. The numbness caused by the epidural or spinal block can also influence the stages of labor. Contractions may not be as strong and the mother may not be able to push as hard during vaginal child birth. This can prolong labor and create risks during child birth.

Pudendal blocks are considered to be a very safe anesthetic and can be applied during labor. It is a local anesthetic that is applied directly to

the vagina and nearby pudendal nerve. The pudendal block is only applied during the late stages of labor when the baby is ready to be delivered. The mother can still feel some pain, but she is still responsive with little to no side effects.

Occasionally, the mother's uterus does not contract well enough, the baby gets stuck in the birth canal, some type of fetal distress occurs, or the baby becomes breeched. These situations require physical manipulation of the position of the baby. Two tools, forceps and a vacuum, are used to physically move the baby inside of the mother. For vaginal births to Pennsylvania residents in 2010, these tools are only needed just over four percent of the time. Some bruising and discoloration are to be expected on the child's head for several days after the birth. The vacuum is a suction device that is designed to fit onto the child's head and not allow the child to slide back into the uterus during labor. The vacuum has the same risks as the forceps, but the vacuum is generally easier to use.

Cesarean sections (C-sections) are the surgical removal of the child

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## A Review of Child Births in Pennsylvania

from the mother's uterus. The World Health Organization states that only 15 percent of births should be delivered through C-sections. They are to be performed when vaginal birth would put the mother or the child at risk. According to the Center for Disease Control and Prevention, the total number of C-sections has increased from one in five in 1995 to one in three in 2005. Births to Pennsylvania residents in 2010 exceeded 31 percent, or over 44,350 Cesarean births. That is more than double the World Health Organization's standards for C-sections.<sup>1</sup>

A comparison of 2005 to 2010 shows that natural birth was on a decline (see Table 1). Natural births have declined from 14.9 percent to 13.0 percent with the largest decrease for black women. Specifically, the largest decrease occurred for black women between the ages of 20-29, who saw a change from approximately one in six births in 2005 to about one in eight births in 2010 being a natural birth.

Causes for the decrease in the natural birth rate can generally be linked to increased rates of induced labors, anesthetics, and C-sections

(see Table 1). Between 2005 and 2010, the gap between races for induced labor rates decreased. Black mothers went from between 15.0 and 16.6 percent induced labors to between 22.5 and 25.5 percent induced labors. This is similar to the induced labor rates for white mothers, between 22.0 and 29.4 percent in 2010. The largest increase of induced labors for both races was for births to women less than 20 years old.

Anesthetics use during labor has increased similarly for both races and all age groups with no definitive outlier. Overall anesthetics use during labor had increased from 61.9 to 69.1 percent between 2005 and 2010. The highest rates for anesthetics use in 2010 are for mothers less than 20 years old with 73.5 and 75.2 percent for white and black mothers, respectively.

The only age group to have a lower rate of C-sections from 2005 to 2010 was women less than 20 years old. There tend to be higher rates of C-sections for method of delivery as women get older. In fact, each consecutively older age group is one third more likely to have a C-section.

One contributing factor that positively influenced the natural birth rate is the decline in vacuum assistance of vaginal births for women less than 20 years old. This decrease over the timeframe was also coupled with an increase in spontaneous vaginal births for mothers less than 20 years old.

There are many ways to bring a baby into this world and the options and circumstances must be considered carefully. Through discussion with the medical provider during prenatal care visits, the soon to be mother will be able to make some informed decisions regarding delivery. Currently, the most common method is a vaginal birth in a hospital with some sort of pain relieving anesthetic.

If you have any questions about this article, please contact the Bureau of Health Statistics and Research at 717-783-2548. Additional birth statistics for Pennsylvania can be obtained from the '[Birth, Death and Other Vital Statistics](#)' web page or from [EpiQMS](#), our online, interactive data dissemination tool.

*return to list of articles >>>*

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<sup>1</sup>Jeremy A. Lauer , Ana P. Betrán , Mario Meriardi and Daniel Wojdyla. "Determinants of caesarean section rates in developed countries: supply, demand and opportunities for control." *World Health Report 2010, Background Papers 28-56*. The World Health Organization. 3 Aug 2012.  
<<http://www.who.int/healthsystems/topics/financing/healthreport/29DeterminantsC-section.pdf>>.

# A Look at Digestive System Cancers

## Pennsylvania Rates Higher Than the U.S.

The digestive system is a broad term that refers to the digestive tract organs, glands, and related structures that process food. Cancers of the digestive system include the esophagus, stomach, small intestine, colon and rectum, anus/anal canal/anorectum, liver and intrahepatic bile duct, gallbladder, biliary, pancreas, retroperitoneum, peritoneum/omentum/mesentery, and other digestive organs. In all, these cancers accounted for 17.9 percent of all invasive cancers diagnosed among Pennsylvania residents in 2009. In fact, digestive system cancers (13,564) were the most common type of cancer diagnosed among the major site groupings as defined by the Surveillance Epidemiology and End Results (SEER) program. Respiratory system cancers had the second highest total among major site groupings with 11,307 cases.

In Pennsylvania, the five most common types of digestive system cancers diagnosed during the five-year period, 2005-2009, were colon and rectum (38,736), pancreas (9,576), stomach (5,293), liver and intrahepatic bile duct (4,811), and esophagus (4,167) as shown in Table 1. Together, these five cancer types represented 90.8 percent of all invasive digestive system cancers. Deaths due to digestive system cancers were most common among the same five cancer sites: colon/rectum (14,152), pancreas (8,875), liver/intrahepatic bile duct (3,853), esophagus (3,824), and stomach (2,630). These cancers represented 95.0 percent of all digestive system cancer deaths.

According to the American Cancer Society, there are many risk factors for the various digestive system

**Table 1**  
**Age-Adjusted Rates for Digestive System Cancers, 2005-2009**  
**Pennsylvania Incidence and Deaths Compared to the United States**

	Incidence				Deaths			
	PA Count	PA Percent	PA Rate	US Rate	PA Count	PA Percent	PA Rate	US Rate
Digestive System	68,892	100.0%	91.6	85.5	35,085	100.0%	45.9	43.2
Esophagus	4,167	6.0%	5.5	4.6	3,824	10.9%	5.0	4.3
Stomach	5,293	7.7%	7.0	7.3	2,630	7.5%	3.5	3.6
Small intestine	1,670	2.4%	2.3	2.1	312	0.9%	0.5	0.4
Colon and Rectum	38,736	56.2%	51.5	45.4	14,152	40.3%	18.4	16.7
Colon excluding Rectum	28,131	40.8%	37.2	32.6	11,888	33.9%	15.4	13.8
Rectum and Rectosigmoid Junction	10,605	15.4%	14.3	12.8	2,264	6.5%	3.0	2.8
Anus, Anal Canal and Anorectum	1,149	1.7%	1.6	1.7	138	0.4%	0.2	0.2
Liver and Intrahepatic Bile Duct	4,811	7.0%	6.4	7.3	3,853	11.0%	5.1	5.5
Gallbladder	958	1.4%	1.3	1.1	496	1.4%	0.6	0.6
Other Biliary	1,456	2.1%	1.9	1.7	341	1.0%	0.4	0.4
Pancreas	9,576	13.9%	12.6	12.4	8,875	25.3%	11.6	10.8
Retroperitoneum	292	0.4%	0.4	0.4	57	0.2%	0.1	0.1
Peritoneum, Omentum and Mesentery	533	0.8%	0.7	0.7	171	0.5%	0.2	0.3
Other Digestive Organs	251	0.4%	0.3	0.6	236	0.7%	0.3	0.3

Notes: Rates are per 100,000 and age-adjusted using 19 age groups to the 2000 U.S. standard million population. U.S. Rates were obtained from the National Cancer Institute's Surveillance, Epidemiology and End Results program (SEER). NA = Not Available.

cancers. Some of the risk factors cannot be changed, such as age, sex, race, and family history. An analysis of modifiable lifestyle risk factors for these five major digestive system cancer types revealed that obesity was universal to all five cancer types. Some of the other common risk factors included unhealthy diets, lack of physical activity, tobacco, and heavy alcohol use.

When the number of deaths in a given time period is as high as the number of cancer cases, the chances of survival are low. A quick comparison of the incidence count and the death count reveals that some digestive system cancers are more deadly than others. For example, pancreatic cancer had 9,576 cases and 8,875 deaths from 2005 to 2009 indicating that the chances for survival are dramatically low (see Table 1). On the other hand, colon and rectum cancers had 38,736 cases diagnosed in 2005-2009 but only 14,152 deaths, which typically indicates a better chance for survival.

Stage at diagnosis is another important indicator of survival, and in general, late stage cancers are going to be more difficult to successfully treat. Pancreatic cancer had 79.8 percent of its cases diagnosed in late stage (see Chart 1, next page).

However, stage is not the only factor that predicts survival. For example, liver/intrahepatic bile duct cancer had a much lower percent (41.8) of its cases diagnosed in late stage, but still had a poor chance of survival. In 2005-2009, there were 4,811 cases of liver and intrahepatic bile duct cancer and 3,853 deaths. It turns out that liver cancers are very difficult to treat even in an early stage.

According to the American Cancer Society, four out of five liver cancer patients also had cirrhosis, which complicates treatments like surgery. In addition, chemotherapy is not very effective and radiation therapy often causes additional damage to the liver. Liver transplants, one of

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## A Look at Digestive System Cancers

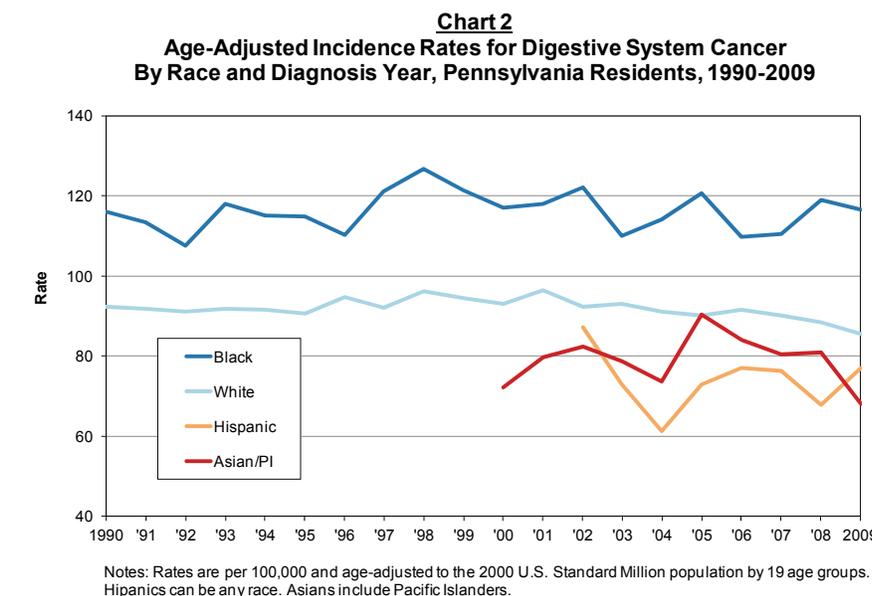
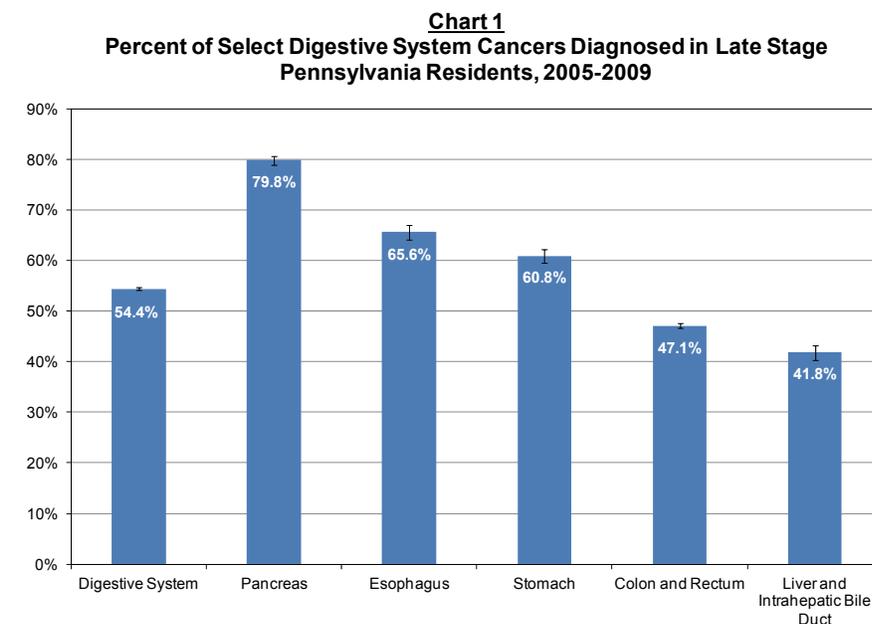
the more effective treatments for smaller tumors, are limited since the demand outpaces the supply.

In Pennsylvania, Black residents consistently had the highest age-adjusted incidence rates for digestive system cancers throughout the period 1990-2009 (see Chart 2). Further analysis showed that the incidence rates for Blacks were significantly higher than rates among Asians/Pacific Islanders, Whites, and Hispanics diagnosed with digestive system cancer.

In general, Pennsylvania minorities had higher age-adjusted rates for several types of digestive system cancer in the 2005-2009 timeframe. Incidence rates for stomach cancer were highest among Asians (12.7 per 100,000) and Blacks (11.9). Liver and intrahepatic bile duct cancer incidence rates were highest among Asians (15.0), Blacks (13.2), and Hispanics (12.0). Blacks had the highest incidence rates for colon and rectum cancer (56.8) and pancreatic cancer (16.6). Esophageal cancer incidence rates were slightly lower among Asians (3.5) and Hispanics (4.2).

Pennsylvania residents diagnosed with digestive system cancers had higher age-adjusted incidence and death rates compared to the United States (see Table 1). The only notable exceptions were for stomach and liver and intrahepatic bile duct cancers, which showed slightly lower incidence and death rates in Pennsylvania.

Within Pennsylvania, age-adjusted digestive system cancer incidence rates were significantly higher than the state rate (91.6) for Philadelphia (110.0), Luzerne



(101.1), and Delaware (96.2) Counties in 2005-2009 (see Map 1). There were several counties in northern Pennsylvania, southwestern Pennsylvania, and surrounding Luzerne County that had elevated incidence rates. Counties in central Pennsylvania and around Erie County tended to have lower rates. There were 14

counties that had significantly lower rates than the state.

Elevated age-adjusted death rates for digestive system cancers were dispersed in the western half of Pennsylvania, but somewhat concentrated around Luzerne County in the Northeast. Death rates for digestive

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## A Look at Digestive System Cancers

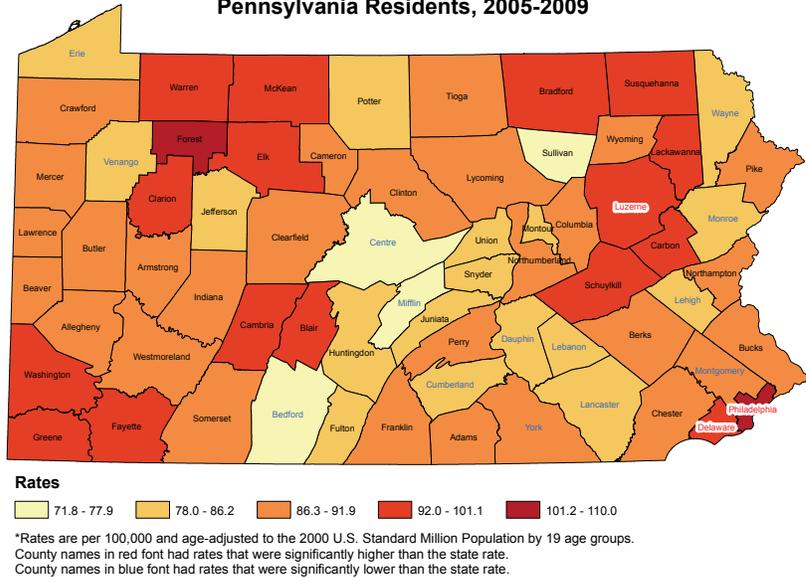
system cancers were significantly higher than the state rate (45.9) for both Philadelphia (57.3) and Lackawanna (49.8) Counties (see Map 2). No counties had death rates that were significantly lower than the state rate. However, there were several counties with lower rates in the central part of Pennsylvania.

In summary, this analysis has shown that the most prevalent sites for digestive system cancers are: colon and rectum, pancreas, stomach, liver and intrahepatic bile duct, and esophagus. Obesity appears to be the most common lifestyle risk factor for digestive system cancers. Staging at diagnosis can vary dramatically among the different digestive system cancer types. Black residents have the greatest risk for digestive system cancers, although Asian and Hispanic residents have elevated risk for certain types. In Pennsylvania, digestive system cancer incidence and death rates were higher than comparable rates for the United States. Philadelphia was the only county to have significantly higher incidence and death rates compared to the state.

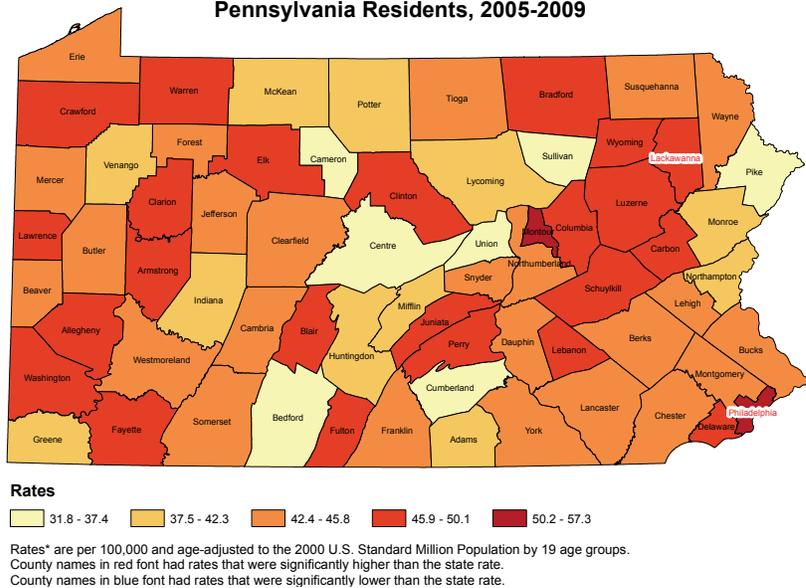
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*return to list of articles >>>*

**Map 1**  
**Age-Adjusted Rates\* for Digestive System Cancer Incidence**  
**Pennsylvania Residents, 2005-2009**



**Map 2**  
**Age-Adjusted Rates\* for Digestive System Cancer Deaths**  
**Pennsylvania Residents, 2005-2009**



# Pregnancies Still Declining in Pennsylvania

## Teen Pregnancy Rate Declines for the Second Year

There were 179,003 pregnancies reported among female residents of Pennsylvania in 2010, with a reported pregnancy rate of 73.3 per 1,000 females ages 15-44 (see Table 1). Between 1995 and 2002, the reported pregnancy rate among female residents decreased from 72.8 per 1,000 females to 70.1, or 3.7 percent. However, from 2002 to 2008, the reported pregnancy rate increased by 8.4 percent from 70.1 to 76.0 and then decreased again in 2009 (73.4) and 2010 (73.3). However, the 2010 pregnancy rate is still 4.6 percent higher than the 2002 rate of 70.1 per 1,000 females.

Reported pregnancies are produced by combining Pennsylvania data on live births, fetal deaths of 16+ weeks gestation, and induced abortions performed in-state. Table 1 compares the reported pregnancy rates by woman's ages for 2010 and 2009. All age-specific reported pregnancy rates in 2010 were about the same or slightly lower than the 2009 rates. The largest rate decrease was seen for ages 20-29, which experienced a 3.0 percent drop, followed by women in the age group 15-19 with a decrease of 2.0 percent. The rate for females under 15 years old and ages 30 and older were unchanged.

Chart 1 depicts the annual rate of reported pregnancies for all Pennsylvania residents and the annual rate of reported pregnancies for teens (ages 15-19), from 1996 through 2010. The teen pregnancy rate declined by 25.2 percent from 1996 (54.4) to 2005 (40.7), then rose for three consecutive years to a rate of 44.3 in 2008. In 2009, the teen pregnancy rate (40.4) declined by 8.8

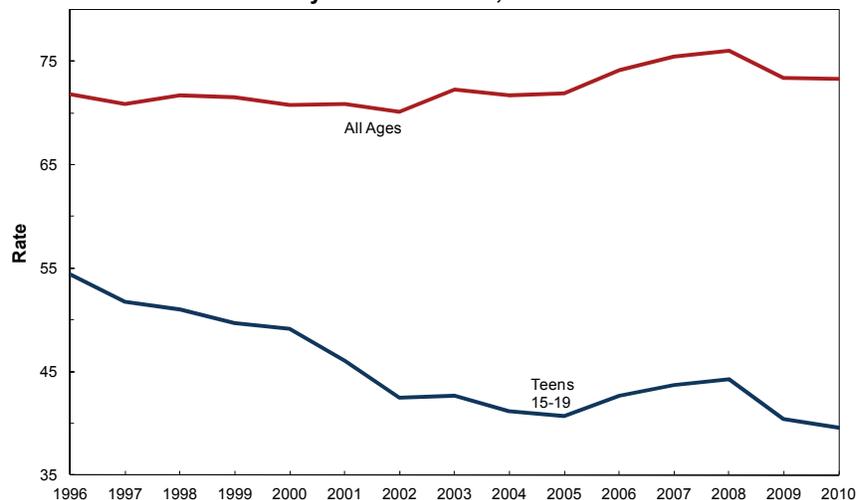
**Table 1**  
Reported Pregnancies and Rates\* by Woman's Age and Year  
Pennsylvania Residents, 2009 and 2010

Age of Woman	2010		2009		Rate % Difference
	Number	Rate	Number	Rate	
All Ages	179,003	73.3	182,625	73.4	-0.1
Under 15	340	0.9	341	0.9	0.0
15-19	17,531	39.6	18,825	40.4	-2.0
20-29	93,850	114.3	95,794	117.8	-3.0
30 & Older	67,150	40.4	67,530	40.4	0.0

\*Rate calculations: per 1,000 female population for each year by age group; all ages - per 1,000 females ages 15-44 years; under 15 - per 1,000 females ages 10-14 years; and 30 & older - per 1,000 females ages 30-49 years.

Note: Unknown ages are included in the total number for all ages.

**Chart 1**  
Reported Pregnancy Rate\*, All Ages and Teens 15-19  
Pennsylvania Residents, 1996-2010



\*Teen rate per 1,000 female population ages 15-19; All Ages - per 1,000 females ages 15-44 years.  
Note: Unknown age included in All Ages.

percent from the 2008 rate (44.3), and in 2010 the rate declined again to 39.6, which is the lowest rate for the time period of 1996 through 2010. The rate for all pregnancies in Pennsylvania also decreased to 73.4 and remained about the same in 2010 (73.3 per 1,000 females).

Reported pregnancy statistics for Pennsylvania residents in 2010, by woman's age group and outcome, are shown in Table 2 (next page). Almost 80 percent (142,370) of all re-

ported pregnancies resulted in a live birth in 2010; with 19.7 percent (35,227) in an induced abortion; and only 0.8 percent (1,406) in a fetal death (non-induced termination of 16 weeks or more gestation). Women aged 20-29 accounted for 52.4 percent of all reported pregnancies in 2010; those under 20 years of age accounted for 10.0 percent; and women 30 years of age and older accounted for 37.5 percent. In 2010,

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## Pregnancies Still Declining in Pennsylvania

67.6 percent of all reported pregnancies to women under 20 years of age resulted in a live birth, compared to 77.4 percent for women 20-29 years of age, and 85.8 percent for those women 30 years of age and older.

Over 67 percent (120,691) of all reported pregnancies in 2010 were among White women, as shown in Table 3. Black women accounted for 20.7 percent (37,092) of the reported pregnancies, and Asian/Pacific Islander women accounted for only 3.7 percent (6,654) of all reported pregnancies. Reported pregnancies among women of Hispanic origin accounted for 9.3 percent (16,602). Please note that persons of Hispanic origin can be of any race. Among Black and Hispanic females in 2010, 17.8 percent and 16.6 percent of the reported pregnancies, respectively, were to females under 20 years of age. Only 7.2 percent of all reported pregnancies to Whites and 2.5 percent of all reported pregnancies to Asian/Pacific Islanders were to females under 20 years of age.

Chart 2 shows the percentage of 2010 reported pregnancies by outcome, race and Hispanic origin for Pennsylvania residents. In 2010, 84.6 percent of the reported pregnancies to White women resulted in a live birth and 14.8 percent in an induced abortion. Over 81 percent of the reported pregnancies among Asian/Pacific Islander women resulted in a live birth and 18.3 percent in an induced abortion. Only 58.3 percent of the reported pregnancies among Black women resulted in a live birth with 40.7 percent resulting in an induced abortion. The percentages of live births and induced abortions for

**Table 2**  
Reported Pregnancies by Woman's Age Group and Outcome  
Pennsylvania Residents, 2010

Age of Woman	Reported Pregnancies	Live Births	Fetal Deaths	Induced Abortions
All Ages	179,003	142,370	1,406	35,227
Under 15	340	153	2	185
15-17	5,326	3,562	42	1,722
18-19	12,205	8,367	106	3,732
20-29	93,850	72,603	647	20,600
30 & Older	67,150	57,600	573	8,977

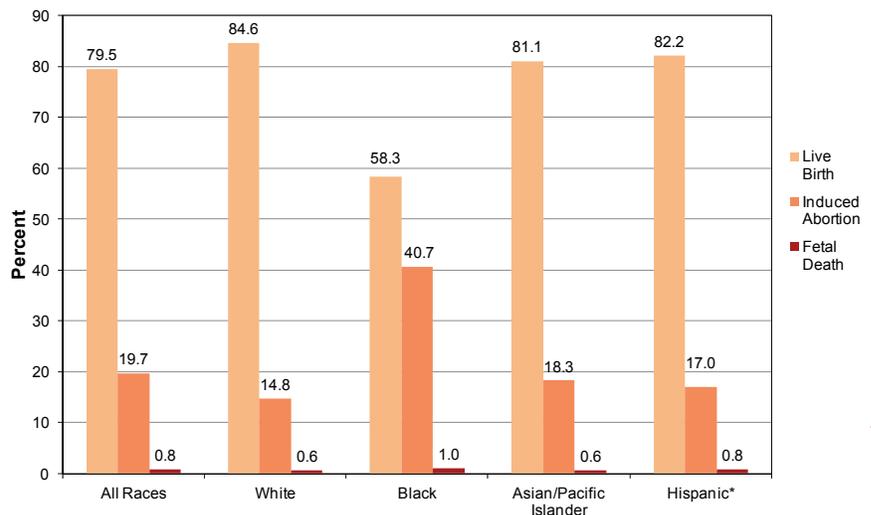
Note: Unknown ages are included in the total number for all ages.

**Table 3**  
Reported Pregnancies by Age, Race, and Hispanic Origin of Woman  
Pennsylvania Residents, 2010

Age of Woman	All Races	White	Black	Asian/Pacific Islander	Hispanic Origin
All Ages	179,003	120,691	37,092	6,654	16,602
Under 15	340	101	190	0	54
15-17	5,326	2,295	2,201	41	935
18-19	12,205	6,336	4,224	123	1,769
20-29	93,850	61,474	21,402	2,697	9,680
30 & Older	67,150	50,412	9,049	3,788	4,159

Notes: Hispanic origin can be of any race. Unknown ages are included in the total for all ages.

**Chart 2**  
Reported Pregnancies, Percent Outcome by Race and Hispanic Origin\*, Pennsylvania Residents, 2010



\*Hispanic Origin can be of any race

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## **Pregnancies Still Declining in Pennsylvania**

Hispanic women were similar to those for White women and Asian/Pacific Islander women at 82.2 percent and 17.0 percent, respectively.

In summary, three components were used to calculate the reported pregnancies among Pennsylvania residents: live births, non-induced fetal deaths, and induced abortions. Please note the following qualifications of the reported pregnancy sta-

tistics as released by the Bureau of Health Statistics and Research. Fetal deaths exclude non-induced terminations of less than 16 weeks of gestation. Induced abortions exclude those performed on a Pennsylvania resident in an out-of-state facility.

For additional statistics on the age-specific pregnancy rate and the percent live birth outcome for reported resident teen pregnancies

please use our [Epidemiologic Query and Mapping System](#), an interactive health statistics web tool where you can create customized data tables, charts/graphs, county assessments, and maps. If you have any questions about the data presented here, please contact the Bureau of Health Statistics and Research at 717-783-2548.

*return to list of articles >>>*

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# Electronic Health Records (EHR) Incentives Program

## What Exactly Is Meaningful Use?

Through the American Recovery and Reinvestment Act of 2009 (Recovery Act), the Centers for Medicare and Medicaid Services (CMS) are authorized to make incentive payments to eligible professionals (EP) and eligible hospitals (EH) demonstrating meaningful use of certified EHR technology. In simplistic terms, "meaningful use" requires providers to show that they are using certified EHR technology in specific ways that can be measured through qualitative and quantitative outcomes. There are three main components of meaningful use: the use of a certified EHR to support clinical decision-making; the use of certified EHR technology for electronic exchange of health information to improve the quality and coordination of health and health care; and the use of certified EHR technology to submit clinical, quality, and other measures.

The CMS EHR incentive program is being implemented in three stages over a five-year period and began with stage 1 in early 2011. Eligibility criteria and requirements vary by program. EPs may apply for either the Medicare or Medicaid program (they may switch programs once prior to calendar year 2015). EHs may apply for both Medicare and Medicaid incentives. For Medicare, EPs and EHs must demonstrate meaningful use of certified electronic health record technology each year of the program to receive incentive payments. For Medicaid, EPs and EHs may qualify for incentive payments if they adopt, implement, or upgrade certified electronic health record technology in their first year

of participation (demonstration of meaningful use is required in subsequent years of the program).

The Medicare and Medicaid EHR Incentive Programs require the use of certified EHR technology. Standards, implementation specifications, and certification criteria for EHR technology have been adopted by the Secretary of the U.S. Department of Health and Human Services. EHR technology must be tested and certified by an Office of the National Coordinator Authorized Testing and Certification Body in order for a provider to qualify for EHR incentive payments.

Although both EPs and EHs have flexibility in Stage 1 in choosing the menu options, they must choose at least one of three public health options. The three public health menu options for both EPs and EHs include: submitting electronic data to an immunization information system (Immunization Reporting); submitting reportable lab results to public health, for hospitals only, (Laboratory Reporting); or submitting syndromic surveillance data to public health (Syndromic Surveillance Reporting). In Pennsylvania, the Department of Health (PA DoH) is the receiving agency for public health reporting. All electronic reporting must use recommended standards for exchange and vocabulary as prescribed in the final rule for stage 1.

An EP or EH must perform at least one test of the certified EHR technology's capacity to submit electronic data to an immunization registry. On-going electronic submissions of data are recommended if the test is successful.

Successful data submissions to the Pennsylvania Statewide Immunization Information System (PA-SIIS) must be submitted from a certified EHR technology, following Health Level Seven International (HL7) version 2.4 specifications, include codes for vaccine administered (CVX codes), and manufacturers of vaccines codes (MVX codes) as standard vocabulary and be sent to PA-SIIS via a secure transport mechanism utilizing http post. The PA-SIIS implemented the requirements with no additional constraints to the national messaging standards in May 2009 and has successfully onboarded over 1,700 practices as required by the final rule for stage 1 meaningful use requirements.

As we anxiously await the publication of the final rule for stage 2 it appears as though public health reporting for immunization, electronic lab, and syndromic surveillance reporting will be moved to core requirements for both EPs and EHs. During the stage 2 proposed rule-making period, discussion developed around new public health menu items for cancer reporting and for specialty registry reporting. The PA DoH continues to actively participate in and monitor the national discussions around stage 2 reporting to better position programs to support the health care reporting requirements through increasing system capacity and infrastructure resources. Please contact the PA-SIIS section in the Bureau of Health Statistics and Research at 717-783-2548 should you have any questions related to public health reporting on immunizations.

*return to list of articles >>>*