

## **C-section Deliveries in Pennsylvania, 1999**



**A joint project of the  
Pennsylvania Health Care Cost Containment Council (PHC4)  
and the Pennsylvania Department of Health**

# C-section Deliveries in Pennsylvania

## Foreword

Delivery by Cesarean section (C-section) remains the most frequently performed operation within the Commonwealth, accounting for 29,473, or 21.1%, of all Pennsylvania hospital deliveries in 1999. After years of a declining trend in C-section rates across the nation and in Pennsylvania, the C-section rate rose in 1998 and again in 1999.

## Background

C-sections have long been the subject of public scrutiny, resulting from concerns related to both quality and utilization. For many years the adage was, “Once a C-section, always a C-section.” As the C-section rate rose throughout the 1980s, so did concern for the economic impact, risk of complications, and recovery time associated with this procedure. As a result, many strategies to reduce the C-section rate were proposed. Of these strategies, Vaginal Birth After Cesarean (VBAC) was favored because it would affect the most women, those who would otherwise have a repeat C-section. In recent years, however, some articles published in the medical literature have questioned the safety of VBACs. *The New England Journal of Medicine* reported that women undergoing a VBAC, which involves a trial of labor, are at twice the risk of complications than women who have an elective repeat C-section.<sup>8</sup> Meanwhile, *Obstetrics and Gynecology* found higher risks of uterine rupture for women attempting a vaginal birth following a previous C-section, but concluded the procedure is relatively safe because the occurrence is low (0.5%).<sup>4</sup> As more is known about potential complications, physicians recognize that decisions concerning mode of delivery must be made on a case by case basis.



## Key Findings

After declining for years, the C-section rate in Pennsylvania hospitals increased 8.2% between 1997 and 1999 from 19.5% to 21.1%. From 1998 to 1999, the C-section rate increased 6.0%.

The Vaginal Birth After Cesarean (VBAC) rate is falling. Since 1996, the VBAC rate in Pennsylvania hospitals has fallen 12.3% from a level of 39.7% to 34.8% in 1999.

Even after separating patients into high and low risk categories, Medicaid recipients had the lowest C-section rate and the highest VBAC rate among major payor groups.

There is significant variation in C-section rates among hospitals even after separating the deliveries by risk.

The number of repeat C-sections for women at low risk for a C-section delivery in Pennsylvania was 9,322 in 1999.

Uterine rupture (a potentially serious complication) occurred in only 0.1% of all deliveries in Pennsylvania hospitals in 1999; none of these complications resulted in fatality.

The #1 reason for a C-section in Pennsylvania during 1999 was a previous C-section after accounting for other maternal risk factors.

Hospitals may have commented on this report. Copies of their comments are available by request. In addition, these comments and other information about the report are available on the Web at [www.phc4.org](http://www.phc4.org).

## What is a C-section?

A C-section is a surgical procedure associated with childbirth in which the infant is delivered through an incision made in the mother's abdominal and uterine wall. In the past, physicians performed repeat C-sections automatically due to fear that a woman's uterus would rupture during labor. However, almost all C-sections done today are performed with a transverse incision (bikini cut) low in the uterus, which greatly reduces the risk of rupture during labor in a subsequent pregnancy.

Concerns surrounding the rising C-section rate and inappropriate utilization also led to the creation of the Healthy People 2000 C-section objectives. These goals, established in 1990 by the United States Department of Health and Human Services, set a target to reduce the national C-section rate to 15%. Healthy People 2010 has modified and further refined these goals with new national targets established for the year 2010.<sup>16</sup> The national C-section rate objective has been replaced by a target of 15% for women who are delivering for the first time and who are at low-risk for C-section delivery.<sup>16</sup> Healthy People 2010 also adjusts the target for women who have had a previous C-section from 65 to 63 per 100 deliveries.<sup>16</sup>

## How is the report organized?

Within this report, discussion of current issues in the medical literature is paired with state and national trends of C-section statistics.

Following the trend information in this report are the hospital-specific data tables. The Pennsylvania Health Care Cost Containment Council (PHC4) continues to report hospital-specific C-section rates because of considerable variation between hospitals.

Medically unnecessary C-sections may have adverse effects because C-section deliveries carry higher health care costs, increased risk of complications, and longer patient recovery time. In fact, the risk of rehospitalization following C-section has been found to be twice as likely than following vaginal delivery.<sup>7</sup> Ultimately these consequences may lead to work loss and higher insurance premiums.

## How were C-section and VBAC rates calculated?

The C-section rates in this report were calculated by dividing the number of total C-sections by the number of total deliveries, and multiplying by 100. Within this report, PHC4 differentiates between mothers who are at either low or high-risk to have a C-section. A few conditions associated with a high-risk C-section delivery included breech presentation, prolapsed cord, and placenta previa. Please refer to the technical document for more information on risk stratification. The VBAC rate is calculated by dividing the number of total VBACs by the total number of previous C-section deliveries, and multiplying by 100.



## Why do rates differ?

C-section rates vary among hospitals for a variety of reasons including the patient risk level, patient choice, and physician practice patterns. Risk stratification allows PHC4 to account for each hospital's unique mix of patients, thereby making comparisons between hospitals more valid. Three C-section rates were calculated for each hospital: a rate for patients at high risk for a C-section, a rate for those at low risk, and the total rate. The high risk and low risk C-section rates are reported separately (risk stratified), however, the total rates are not "risk-adjusted." Please refer to the technical document for a complete description of risk stratification.

## How do rates differ for different population groups?

An analysis of Pennsylvania birth data by the Pennsylvania Department of Health showed that there were no substantive racial differences; 21.2% of births to white mothers and 20.2% of births to black mothers were C-sections. Among births to Hispanic mothers, 18.4% were C-sections. There were also no substantive urban/rural differences; 20.9% of births occurring in urban counties and 21.3% of births occurring in rural counties were C-section. There were differences associated with mother's education; mothers with less than a high school education had a C-section rate of 14.4% and mothers with a high school education or more had a rate of 22.1%. This may be due in part to confounding factors, such as maternal age and type of payor. Increasing maternal age and a larger number of previous deliveries were also associated with increased C-section delivery rates. There were also

differences associated with birth weight; for very low birth weight (VLBW) infants (0-1499 grams), the C-section method of delivery was used in 50.4% of these deliveries and for low birth weight (LBW) infants (0-2499 grams), 36.4% were delivered by C-section. This may be due to a greater need for emergency C-section deliveries among extremely pre-term births. The percent of LBW infants is slowly rising over time, and perhaps contributing to the rise in C-section deliveries.

### Hospital Name Changes

AUMC Allegheny Valley Hospital's current name is Allegheny Valley Hospital.

Hanover General Hospital's current name is Hanover Hospital, Inc.

Saint Joseph Hospital/Lancaster's current name is Lancaster Regional Medical Center.

UPMC Bedford's current name is UPMC Bedford Memorial.

### Mergers

Elk Regional Health Center includes Elk County Regional Medical Center and St. Mary's Regional Medical Center.

Frankford Hospital includes Delaware Valley Medical Center.

Albert Einstein Medical Center includes Germantown Community Health Services.

### Hospital Closings

Citizens General Hospital closed on November 3, 2000.

City Avenue Hospital closed on April 3, 2000.



## The trend in C-section Rates



Trends in C-section Delivery Rates, 1990-1999  
Pennsylvania and United States

Source of Pennsylvania data: PHC4

Source of national data: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics Reports.

At the state and national level C-section rates are beginning to climb again. Articles in the medical literature and popular press offer several possible explanations for this trend, including:

1. The threshold for clinical indications for C-section may be lowering due to a variety of reasons, such as physician comfort with the procedure and decreasing risk. Therefore, more women who may not quite meet the criteria are having a C-section.<sup>6</sup>
2. Another factor could be premature utilization of the C-section procedure. Almost 25% of women having a C-section may be having it too early in labor.<sup>2</sup>
3. Women's preference of delivery method may also contribute to the increase. Fear of pain and complications may be causing more women to request a C-section, according to the *Journal of Obstetrics and Gynecology's* survey of 300 women.<sup>11</sup>
4. Women who may be eligible for VBAC are having repeat C-sections. As the rate of VBACs increased throughout the early 1990s, more women were experiencing complications from the trial of labor.<sup>12</sup> Since then, physicians have had a heightened concern of malpractice suits and may be more likely to offer a repeat C-section.<sup>12</sup>



## Why are VBAC Rates falling?



Trends in VBAC Delivery Rates, 1990-1999  
Pennsylvania and United States

Source of Pennsylvania data: PHC4

Source of national data: Centers for Disease Control and Prevention, National Center for Health Statistics, National Vital Statistics Reports.

According to the American College of Obstetricians and Gynecologists (ACOG), most low-risk women who have had one or more low transverse C-sections can deliver vaginally in subsequent deliveries.

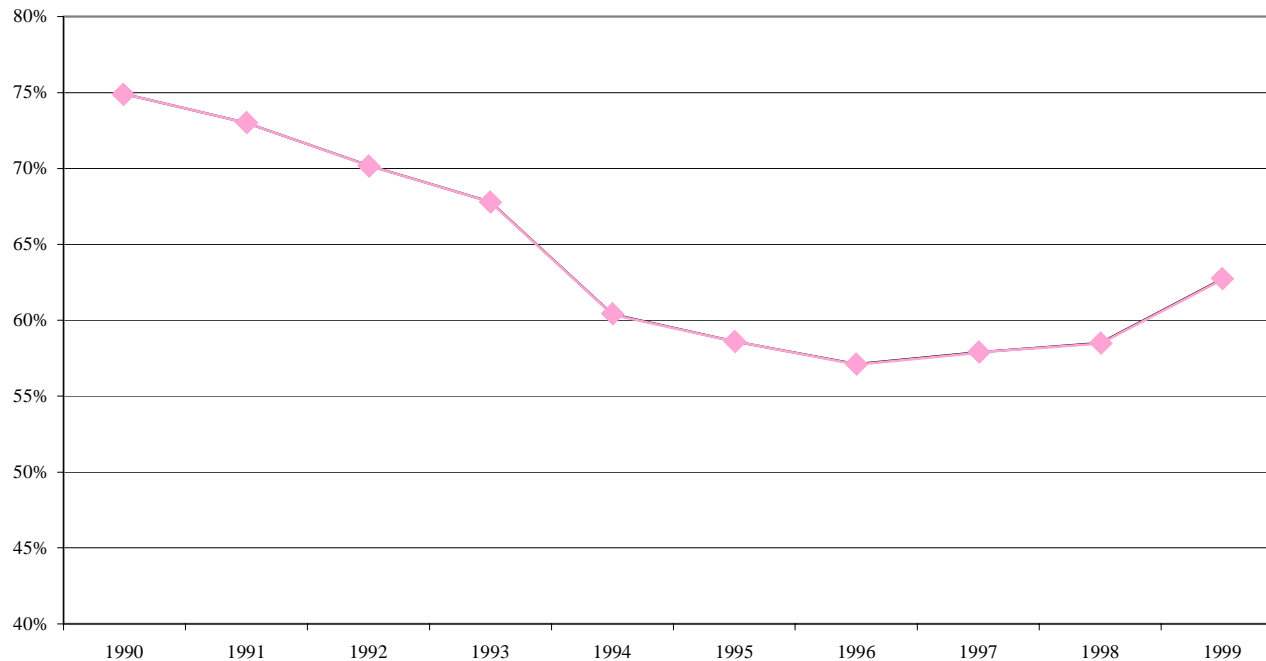
**From 1990 through 1996, VBAC rates increased from 22.6% to 39.7% in Pennsylvania. Recently, however, VBAC rates are on the downswing.** Roger K. Freeman, MD, ACOG's chair of Task Force on Cesarean Delivery Rates, has

suggested one possible reason. When VBACs became more prevalent, lawsuits connected to uterine rupture increased and physicians and patients became more cautious about utilization, causing the rate to drop.<sup>12</sup>

It is important to recognize that each woman's circumstances are different. Therefore, every woman should discuss her preferred birth method and alternatives with her physician.



## Trends in the Low-Risk C-section Rate (with a previous C-section)



Trends in Low-Risk C-section Rates (with a previous C-section),  
1990-1999  
Pennsylvania

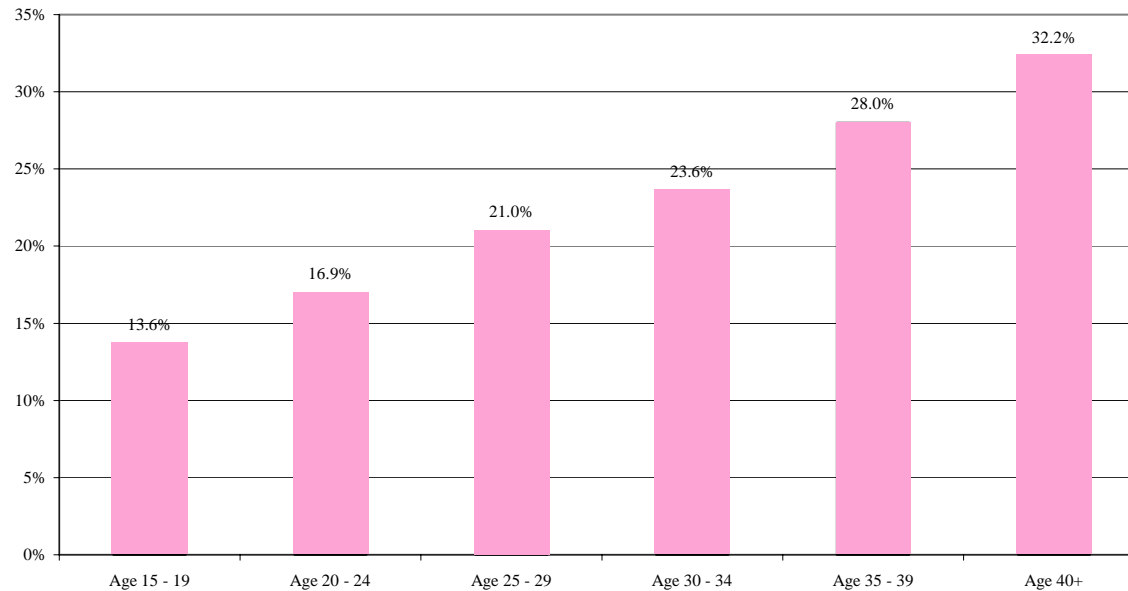
Source of data: PHC4

**In Pennsylvania, the Low-Risk C-section Rate (with a previous C-section) fell from 74.9% in 1990 to 57.1% in 1996. Since then the trend has reversed directions, climbing to 62.7% in 1999.**

This may be due to patients' concerns of complications related to VBAC and physicians' concerns of malpractice suits, causing physicians to be more likely to offer a repeat C-section.<sup>12</sup>



## How do C-section Rates differ according to maternal age?



C-section Rate by maternal age at delivery,  
1999 Pennsylvania

Source of data: PHC4

**In Pennsylvania, older women are more likely to have a C-section.** Studies have demonstrated that increasing maternal age is associated with a higher risk of complications during delivery.<sup>3, 4, 9, 10</sup> In addition, a review of 20 years' of C-section statistics in the United States found that women over the age of 35 consistently had higher C-section rates.<sup>13</sup>

While the reasons for the increasing rate are unclear, researchers have postulated a variety of factors from physiological changes to larger babies. Maternal age will continue to influence risk as the trend to delay childbearing or to have children later in life continues. Older women are more likely to have had a previous C-section and are at higher chances of having a repeat C-section.





## Differences by Payor Population

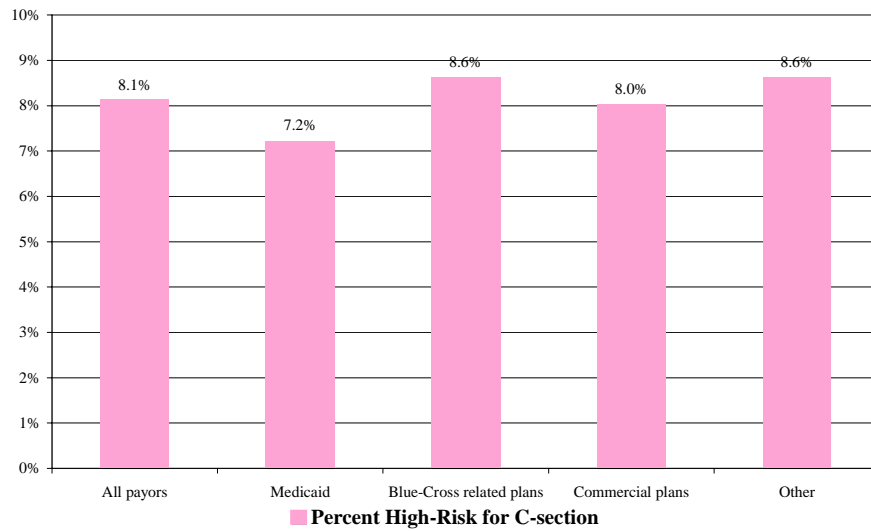
Payor Type	Risk Type	Number of Deliveries	Percent of Deliveries by Risk	Average Age	C-section Rate	VBAC Rate
All payors	Total	139,368	100.0%	27.8	21.1%	34.8%
	High Risk	11,247	8.1%	28.7	77.2%	
	Low Risk	128,121	91.9%	27.7	16.2%	
Medicaid	Total	33,924	24.3%	23.7	18.2%	38.7%
	High Risk	2,454	7.2%	24.6	72.5%	
	Low Risk	31,470	92.8%	23.7	13.9%	
Blue-Cross related plans	Total	47,606	34.2%	29.6	22.6%	32.1%
	High Risk	4,093	8.6%	30.3	79.5%	
	Low Risk	43,513	91.4%	29.5	17.2%	
Commercial	Total	46,506	33.4%	29	22.0%	34.5%
	High Risk	3,720	8.0%	29.7	78.0%	
	Low Risk	42,786	92.0%	28.9	17.1%	
Other	Total	10,958	7.9%	27.3	20.2%	37.7%
	High Risk	941	8.6%	28.4	76.9%	
	Low Risk	10,017	91.4%	27.2	14.9%	

\*\*The numbers may not add up to one hundred percent because a small portion of Medicare-related deliveries were not included.

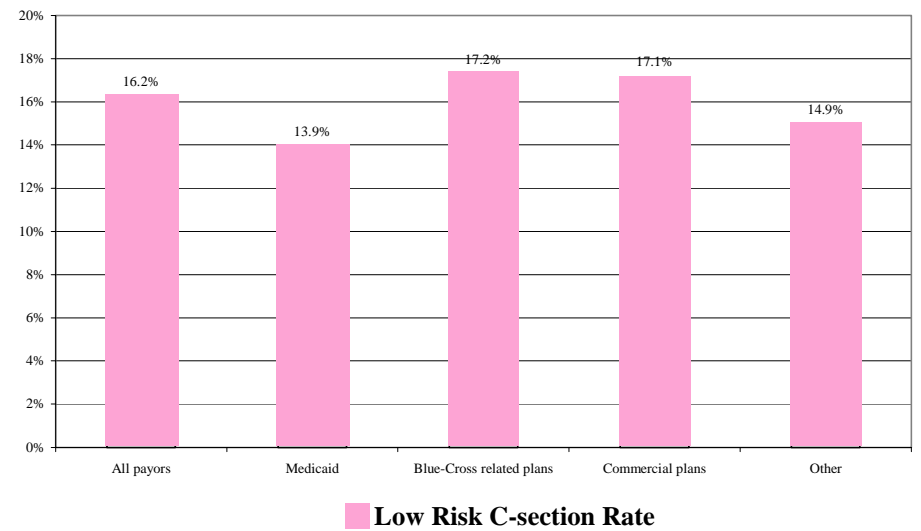
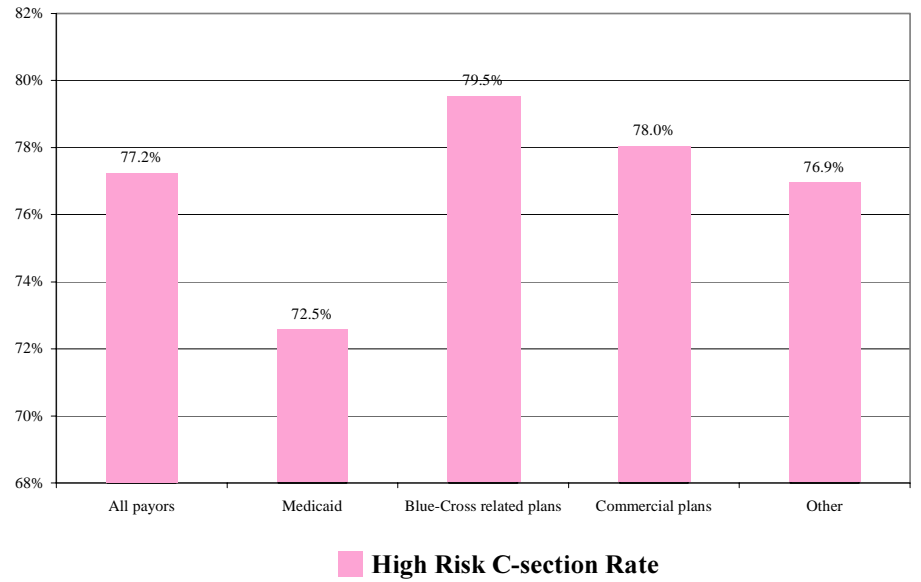
Source of data: PHC4, 1999



## Differences by Payor Population



Source of data: PHC4, 1999



## User's Guide

This User's Guide is intended for all those interested in hospital performance in terms of C-section procedures. That may include health care purchasers such as employers and union leaders, insurance companies and other types of payors, hospital staff, physicians, government agencies and individual consumers. This report examines only one dimension of hospital services; it is not a comprehensive measure of overall quality. No such single measure exists. Information from some of the sources listed in the back of the report may be used to augment the data contained in this report.

### **Purchasers**

The information in this report can be useful in your interactions with both health insurance organizations and employees. Use this information as one tool to select and negotiate with insurance carriers on behalf of your employees. Share this information with your employees to help raise public awareness about the issues surrounding C-sections.

### **Hospitals and Physicians**

One of the primary purposes of this report is to improve the quality of care in all Pennsylvania hospitals by encouraging clinicians and hospital administrators to incorporate this information into their quality management activities and raise intelligent questions about variation in rates.

This report compares C-section and VBAC rates for all Pennsylvania birthing hospitals (with more than 50 deliveries). C-section rates are stratified into high and low risk categories, as well as overall rates. This means that based on clinical reasons, was a woman a low risk to have a C-section or was she a high risk to have one?

Use the information as a starting point. Ask questions within your quality improvement process about the appropriateness of low-risk

C-sections, especially those that are repeats. Evaluate your hospital's performance along with the performance of other "like" hospitals, using level of Neonatal Intensive Care Unit.

### **Government Agencies**

The information in this report can be useful to state and county agencies involved in arranging care for program beneficiaries. The results can be used in discussions with hospitals and health plans.

### **Insurance Carriers and other Types of Health Plans**

The information contained in this report may be useful to you in selecting hospitals to provide services to your beneficiaries. It may help you participate in improving quality within your hospital networks.

### **Individual Consumers**

Although this report is not intended solely for individual consumers, it can help you make more informed health care decisions. Ask your physician for a thorough explanation of risk factors and delivery options.



## How to Use the Information - Questions to Ask/Issues to Raise

**Look at the total C-section rate and the Percent High-Risk for C-section Delivery. (It is useful to compare the hospital-specific data to the state rates where applicable.)**

- Compare the total C-section rate to the statewide C-section rate.
- Is the Percent High-Risk for C-section Delivery a relatively low or high number?
- How does the C-section rate appear when you examine the Percent High-Risk for C-section Delivery ?
- Do hospitals with a relatively high Percent High-Risk for C-section Delivery have a level 3 Neonatal Intensive Care Unit (NICU) (capability to provide comprehensive care for newborns of all risk categories)?

*It is important to ask these questions because high-risk deliveries are more likely to require a medically necessary C-section. Thus, the risk level may account for a relatively high C-section rate. The NICU is also helpful to gauge a hospital's capability for caring for high-risk pregnancies.*

Now you have a basic picture of the total C-section rate and the risk level the hospital treats.

**Look at the different risk categories.**

- What are the High-Risk and Low-Risk C-section rates?
- Is the High-Risk C-section rate relatively low or high?
- Is the Low-Risk C-section rate relatively low or high?  
*Significant variation in these rates may signal differences among hospitals' patient characteristics, physician/hospital practice patterns, and/or patient preferences.*

**Examine the VBAC rate in comparison to the Repeat C-section Rate in Low-Risk Delivery.**

- Is the VBAC rate relatively low or high?  
*Physicians generally agree that VBAC is safe for women who have had one or more low transverse procedures; thus a relatively higher rate has been viewed favorably.*
- Is the Repeat C-section Rate in Low-Risk Delivery relatively low or high?  
*A higher Repeat C-section Rate in Low-Risk Delivery suggests that the possibility of clinically unnecessary C-sections be explored.*

**Look at the various sections together for a comprehensive picture.**

*It is important to recognize that each woman's circumstances are different; therefore, every woman should discuss the birth method with her physician. This is not a guide to medical treatment, but a guide to reviewing C-section data.*



## About the Data

Each column of the following tables represents an important variable when comparing C-section rates between hospitals. To optimize these comparisons, it is important to understand what each variable means.

**NICU (Neonatal Intensive Care Unit) Level** (Source: Pennsylvania Department of Health) The NICU level helps identify hospitals that specialize in treating high-risk pregnancies, and thus may have a higher C-section rate. A level of neonatal care is assigned based upon the types of inpatient services available, varying from 1 to 3. The levels listed in this report apply to the hospital's status as of June 30, 1999 only, and may be different today.

**Level 1** hospitals primarily care for uncomplicated newborn cases, but have the capability to handle unexpected emergencies and can provide short-term supportive care for high risk infants until transfer to a Level 2 or 3 unit can occur.

**Level 2** hospitals take low-risk cases, but also have expertise in managing moderately high-risk infants. Some examples of conditions these units must be capable of handling include: respiratory distress syndrome, unstabilized respiratory function, superficial and localized infections, and hypoglycemia.

**Level 3** hospitals provide comprehensive care for newborns of all risk categories. They must meet all requirements of a Level 2 unit and also be staffed and equipped to treat critically ill newborns including those requiring prolonged assisted respiratory support.

**Number of deliveries** represents the total number of births, regardless of birth method and residency of the mother for 1999. Multiple births are not accounted for separately. Only hospitals with 50 or more deliveries are displayed.

**Number of C-sections** denotes the total number of C-sections for 1999.

**C-section rate** is the total C-section deliveries divided by the total

number of deliveries, multiplied by 100. It is important to note that certain hospitals may have a higher C-section rate because they specialize in high-risk pregnancies. In these types of pregnancies, it is more likely that a C-section will be medically necessary. Two columns may help identify such variables: NICU level and percent high risk. **Percent high-risk for C-section delivery** is the number of women at high risk for C-section delivery divided by the total number of deliveries. **High-risk for C-section delivery** defines those at high risk for a C-section, based on conditions that are cited repeatedly in scientific literature as contributing to medically necessary C-sections. These conditions, followed by the associated ICD.9.CM codes, are: Malpresentation, breech (652.21); Malpresentation, other (652.31, 652.41, 652.51, 652.91); Obstructed labor from malpositioned fetus (660.01); Premature separation of placenta (641.21); Severe pre-eclampsia (642.51); Placenta previa (641.01, 641.11), and Prolapsed cord (663.01). In addition, C-section rates have been separated into high and low risk categories to account for variation in the patient population:

**High-Risk C-section rate** represents the number of women at high risk for a C-section who go on to have a C-section divided by the number of women at high risk, then multiplied by 100.

**Low-Risk C-section rate** represents the number of women at low risk for a C-section who go on to have a C-section divided by the number of women at low risk, then multiplied by 100.

**VBAC rate** is the total number of Vaginal Births After Cesareans (VBAC) divided by the total previous C-section deliveries, multiplied by 100.

**Repeat C-section Rate in Low-Risk Delivery** is the number of C-sections performed on women at low risk having had a previous C-section divided by women having had a previous C-section that were low risk, multiplied by 100.



## Delivery Information by Hospital, 1999

Total					
Hospital Name	NICU Level <sup>1</sup>	# of Deliveries	# of C-sections	C-section Rate	VBAC Rate
Statewide		139,368	29,473	21.1%	34.8%
Adams County					
Gettysburg	1	479	132	27.6%	10.4%
Allegheny County					
AUMC/Allegheny Valley	1	491	133	27.1%	20.6%
Allegheny General	3	1,829	485	26.5%	30.3%
Forbes Regional	2	1,385	212	15.3%	51.5%
Magee-Womens	3	7,128	1,397	19.6%	48.6%
Mercy/Pittsburgh	3	1,089	223	20.5%	46.8%
Ohio Valley General	1	337	70	20.8%	32.1%
Saint Francis/Pittsburgh	2	598	92	15.4%	38.6%
Sewickley Valley	1	729	174	23.9%	22.4%
St Clair Memorial	2	1,520	363	23.9%	33.7%
UPMC McKeesport	2	286	47	16.4%	46.2%
UPMC Shadyside	2	807	150	18.6%	28.8%
Western Pennsylvania	3	2,070	467	22.6%	34.9%
Armstrong County					
Armstrong County Memorial	1	565	144	25.5%	30.4%
Beaver County					
Medical Center/Beaver	2	1,297	245	18.9%	39.3%
Bedford County					
UPMC Bedford	1	277	73	26.4%	17.1%
Berks County					
Reading	2	2,920	541	18.5%	46.3%
Saint Joseph/Reading	2	897	158	17.6%	39.2%
Blair County					
Altoona	2	1,345	288	21.4%	27.4%
Bon Secours Holy Family	2	384	91	23.7%	15.2%
Nason	1	270	63	23.3%	26.3%
Bradford					
Memorial/Towanda	1	307	74	24.1%	30.4%
Robert Packer	2	774	119	15.4%	37.5%

1. Neonatal Intensive Care Unit (NICU) level is assigned by the Department of Health, based on the level of newborn services available. See page 13 for a complete definition of each level.



## Delivery Information by Hospital, 1999

Hospital Name	Percent High-Risk for C-section Delivery	High-Risk C-section Rate	Low-Risk C-section Rate	Repeat C-section Rate in Low-Risk Delivery <sup>2</sup>
Statewide	8.1%	77.2%	16.2%	62.7%
Adams County				
Gettysburg	5.0%	91.7%	24.2%	88.9%
Allegheny County				
AUMC/Allegheny Valley	6.9%	85.3%	22.8%	76.4%
Allegheny General	10.2%	72.7%	21.3%	67.7%
Forbes Regional	8.4%	84.5%	9.0%	39.9%
Magee-Womens	12.1%	69.5%	12.8%	47.2%
Mercy/Pittsburgh	9.4%	74.5%	14.9%	52.0%
Ohio Valley General	9.2%	87.1%	14.1%	65.3%
Saint Francis/Pittsburgh	4.7%	75.0%	12.5%	60.7%
Sewickley Valley	7.1%	90.4%	18.8%	75.3%
St Clair Memorial	7.2%	89.1%	18.8%	64.0%
UPMC McKeesport	6.3%	100%	10.8%	47.8%
UPMC Shadyside	7.3%	83.1%	13.5%	69.6%
Western Pennsylvania	11.0%	76.7%	15.9%	63.4%
Armstrong County				
Armstrong County Memorial	13.8%	62.8%	19.5%	69.0%
Beaver County				
Medical Center/Beaver	6.8%	85.2%	14.1%	59.9%
Bedford County				
UPMC Bedford	9.4%	92.3%	19.5%	81.8%
Berks County				
Reading	9.5%	72.5%	12.9%	48.9%
Saint Joseph/Reading	5.2%	83.0%	14.0%	58.4%
Blair County				
Altoona	7.5%	82.2%	16.5%	70.8%
Bon Secours Holy Family	4.9%	94.7%	20.0%	84.4%
Nason	8.5%	95.7%	16.6%	71.4%
Bradford				
Memorial/Towanda	5.9%	77.8%	20.8%	67.4%
Robert Packer	5.2%	70.0%	12.4%	60.8%

2. See page 13 for the definition of Repeat C-section Rate in Low-Risk Delivery.



## Delivery Information by Hospital, 1999

					Total
Hospital Name	NICU Level <sup>1</sup>	# of Deliveries	# of C-sections	C-section Rate	VBAC Rate
<b>Bucks</b>					
Doylestown	2	1,201	274	22.8%	33.1%
Grand View	2	1,136	275	24.2%	23.1%
Saint Mary	2	1,376	278	20.2%	39.3%
Temple/Lower Bucks	3	1,279	303	23.7%	29.2%
Warminster	1	348	67	19.3%	28.9%
<b>Butler</b>					
Butler Memorial	1	880	154	17.5%	41.6%
<b>Cambria</b>					
Conemaugh Valley Memorial	3	443	86	19.4%	46.3%
UPMC Lee Regional	3	982	233	23.7%	7.1%
<b>Carbon</b>					
Gnaden Huetten Memorial	1	288	60	20.8%	25.0%
Palmerton	1	170	34	20.0%	15.0%
<b>Centre</b>					
Centre Community	2	1,196	179	15.0%	36.9%
<b>Chester</b>					
Brandywine	2	662	144	21.8%	33.3%
Chester County	2	2,053	443	21.6%	34.4%
Main Line/Paoli	1	943	207	22.0%	23.1%
Phoenixville/Univ of PA	1	1,224	171	14.0%	54.3%
<b>Clarion</b>					
Clarion	1	384	132	34.4%	12.9%
<b>Clearfield</b>					
Clearfield	1	350	77	22.0%	18.0%
DuBois Regional	3	651	164	25.2%	27.6%
<b>Clinton</b>					
Lock Haven	1	NC	NC	NC	NC
<b>Columbia</b>					
Berwick	1	157	39	24.8%	26.1%
Bloomsburg	1	546	157	28.8%	20.5%
<b>Crawford</b>					
Meadville	1	634	99	15.6%	36.7%
Titusville Area	1	310	42	13.5%	66.7%

1. Neonatal Intensive Care Unit (NICU) level is assigned by the Department of Health, based on the level of newborn services available. See page 13 for a complete definition of each level.  
 NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.





## Delivery Information by Hospital, 1999

Hospital Name	Percent High-Risk for C-section Delivery	High-Risk C-section Rate	Low-Risk C-section Rate	Repeat C-section Rate in Low-Risk Delivery <sup>2</sup>
<b>Bucks</b>				
Doylestown	6.5%	89.7%	18.2%	64.0%
Grand View	5.7%	78.5%	20.9%	75.7%
Saint Mary	6.3%	82.8%	16.0%	58.6%
Temple/Lower Bucks	8.8%	81.4%	18.1%	67.3%
Warminster	6.0%	81.0%	15.3%	68.6%
<b>Butler</b>				
Butler Memorial	7.2%	87.3%	12.1%	53.5%
<b>Cambria</b>				
Conemaugh Valley Memorial	10.6%	74.5%	12.9%	46.7%
UPMC Lee Regional	8.1%	87.5%	18.1%	91.7%
<b>Carbon</b>				
Gnaden Huetten Memorial	11.5%	72.7%	14.1%	74.2%
Palmerton	6.5%	90.9%	15.1%	81.3%
<b>Centre</b>				
Centre Community	6.0%	56.9%	12.3%	61.8%
<b>Chester</b>				
Brandywine	5.7%	78.9%	18.3%	65.6%
Chester County	7.8%	72.5%	17.3%	64.1%
Main Line/Paoli	9.0%	75.3%	16.7%	75.7%
Phoenixville/Univ of PA	5.6%	82.6%	9.9%	42.2%
<b>Clarion</b>				
Clarion	12.5%	83.3%	27.4%	86.0%
<b>Clearfield</b>				
Clearfield	7.1%	88.0%	16.9%	80.0%
DuBois Regional	8.8%	89.5%	19.0%	70.4%
<b>Clinton</b>				
Lock Haven	NC	NC	NC	NC
<b>Columbia</b>				
Berwick	10.2%	100%	16.3%	70.0%
Bloomsburg	7.5%	90.2%	23.8%	78.2%
<b>Crawford</b>				
Meadville	5.4%	79.4%	12.0%	60.0%
Titusville Area	3.9%	83.3%	10.7%	33.3%

2. See page 13 for the definition of Repeat C-section Rate in Low-Risk Delivery.  
 NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.



## Delivery Information by Hospital, 1999

Total

Hospital Name	NICU Level <sup>1</sup>	# of Deliveries	# of C-sections	C-section Rate	VBAC Rate
<b>Cumberland</b>					
Carlisle	1	516	92	17.8%	32.7%
Holy Spirit	3	1,124	207	18.4%	38.2%
<b>Dauphin</b>					
Milton S Hershey	3	1,209	309	25.6%	33.8%
Pinnacle Health	3	4,089	913	22.3%	25.7%
<b>Delaware</b>					
Crozer-Chester	2	2,043	504	24.7%	32.5%
Delaware County Memorial	2	1,036	204	19.7%	52.9%
Mercy/Fitzgerald	2	1,132	249	22.0%	39.7%
Riddle Memorial	2	1,056	245	23.2%	28.4%
<b>Elk</b>					
Elk Regional	1	366	105	28.7%	6.3%
<b>Erie</b>					
Corry Memorial	1	295	54	18.3%	40.4%
Hamot	3	1,407	291	20.7%	26.2%
Metro Health Center	1	162	35	21.6%	31.8%
Millcreek Community	1	209	45	21.5%	21.2%
Saint Vincent	2	1,808	359	19.9%	38.9%
<b>Fayette</b>					
Uniontown	2	963	137	14.2%	53.2%
<b>Franklin</b>					
Chambersburg	2	843	208	24.7%	28.0%
Waynesboro	1	371	75	20.2%	40.4%
<b>Fulton</b>					
Fulton County	1	107	25	23.4%	21.4%
<b>Huntingdon</b>					
J C Blair Memorial	1	351	74	21.1%	25.0%
<b>Indiana</b>					
Indiana	1	680	69	10.1%	41.3%
<b>Jefferson</b>					
Brookville	1	126	33	26.2%	10.0%
Punxsutawney Area	1	204	59	28.9%	6.3%

1. Neonatal Intensive Care Unit (NICU) level is assigned by the Department of Health, based on the level of newborn services available. See page 13 for a complete definition of each level.



## Delivery Information by Hospital, 1999

Hospital Name	Percent High-Risk for C-section Delivery	High-Risk C-section Rate	Low-Risk C-section Rate	Repeat C-section Rate in Low-Risk Delivery <sup>2</sup>
<b>Cumberland</b>				
Carlisle	4.5%	82.6%	14.8%	66.7%
Holy Spirit	7.6%	72.9%	14.0%	57.1%
<b>Dauphin</b>				
Milton S Hershey	15.6%	75.0%	16.5%	62.3%
Pinnacle Health	9.8%	73.8%	16.7%	73.0%
<b>Delaware</b>				
Crozer-Chester	8.9%	89.0%	18.4%	64.8%
Delaware County Memorial	7.4%	83.1%	14.6%	43.8%
Mercy/Fitzgerald	7.2%	75.6%	17.8%	57.6%
Riddle Memorial	8.3%	80.7%	18.0%	70.8%
<b>Elk</b>				
Elk Regional	4.6%	82.4%	26.1%	93.3%
<b>Erie</b>				
Corry Memorial	6.1%	77.8%	14.4%	56.8%
Hamot	8.5%	84.9%	14.8%	71.0%
Metro Health Center	3.1%	80.0%	19.7%	68.2%
Millcreek Community	4.8%	100%	17.6%	77.4%
Saint Vincent	6.0%	88.0%	15.5%	59.2%
<b>Fayette</b>				
Uniontown	5.5%	71.7%	10.9%	46.2%
<b>Franklin</b>				
Chambersburg	8.9%	82.7%	19.0%	65.4%
Waynesboro	6.5%	87.5%	15.6%	57.1%
<b>Fulton</b>				
Fulton County	10.3%	81.8%	16.7%	83.3%
<b>Huntingdon</b>				
J C Blair Memorial	5.1%	83.3%	17.7%	73.8%
<b>Indiana</b>				
Indiana	4.4%	43.3%	8.6%	57.8%
<b>Jefferson</b>				
Brookville	4.8%	66.7%	24.2%	90.0%
Punxsutawney Area	11.3%	87.0%	21.5%	91.7%

2. See page 13 for the definition of Repeat C-section Rate in Low-Risk Delivery.



## Delivery Information by Hospital, 1999

Total

Hospital Name	NICU Level <sup>1</sup>	# of Deliveries	# of C-sections	C-section Rate	VBAC Rate
<b>Lackawanna</b>					
Community/Scranton	3	1,478	404	27.3%	14.6%
Mercy/Scranton	1	960	209	21.8%	34.4%
<b>Lancaster</b>					
Community/Lancaster	1	528	151	28.6%	21.5%
Ephrata Community	1	741	134	18.1%	37.3%
Lancaster General	3	2,765	527	19.1%	37.1%
Saint Joseph/Lancaster	2	1,227	207	16.9%	32.8%
<b>Lawrence</b>					
Ellwood City	1	194	52	26.8%	13.0%
Jameson Memorial	1	444	54	12.2%	52.5%
Saint Francis New Castle	1	255	62	24.3%	13.8%
<b>Lebanon</b>					
Good Samaritan/Lebanon	1	1,034	227	22.0%	26.2%
<b>Lehigh</b>					
Lehigh Valley	3	3,253	738	22.7%	32.9%
Sacred Heart/Allentown	2	447	61	13.6%	53.6%
St Luke's/Bethlehem	3	3,164	627	19.8%	44.0%
<b>Luzerne</b>					
Geisinger/Wyoming Valley	1	504	123	24.4%	30.2%
Hazleton Saint Joseph	1	449	98	21.8%	33.3%
Mercy/Wilkes-Barre	1	427	122	28.6%	15.4%
WVHCS-Hospital	2	1,652	443	26.8%	22.8%
<b>Lycoming</b>					
Williamsport	1	1,398	342	24.5%	21.5%
<b>McKean</b>					
Bradford Regional	1	350	85	24.3%	31.9%
<b>Mercer</b>					
Sharon Regional	2	645	88	13.6%	48.2%
UPMC Horizon	2	626	130	20.8%	39.5%
United Community	1	308	82	26.6%	25.5%
<b>Mifflin</b>					
Lewistown	1	673	209	31.1%	32.5%
<b>Monroe</b>					
Pocono	1	872	239	27.4%	20.2%

1. Neonatal Intensive Care Unit (NICU) level is assigned by the Department of Health, based on the level of newborn services available. See page 13 for a complete definition of each level.



## Delivery Information by Hospital, 1999

Hospital Name	Percent High-Risk for C-section Delivery	High-Risk C-section Rate	Low-Risk C-section Rate	Repeat C-section Rate in Low-Risk Delivery <sup>2</sup>
<b>Lackawanna</b>				
Community/Scranton	7.1%	92.4%	22.4%	84.7%
Mercy/Scranton	6.4%	90.2%	17.1%	63.5%
<b>Lancaster</b>				
Community/Lancaster	10.6%	75.0%	23.1%	76.8%
Ephrata Community	5.0%	86.5%	14.5%	61.5%
Lancaster General	8.2%	63.9%	15.1%	60.6%
Saint Joseph/Lancaster	8.1%	56.0%	13.4%	65.2%
<b>Lawrence</b>				
Ellwood City	5.7%	100%	22.4%	87.0%
Jameson Memorial	5.4%	70.8%	8.8%	44.7%
Saint Francis New Castle	5.9%	86.7%	20.4%	86.2%
<b>Lebanon</b>				
Good Samaritan/Lebanon	7.4%	81.8%	17.1%	71.2%
<b>Lehigh</b>				
Lehigh Valley	8.9%	72.9%	17.8%	64.6%
Sacred Heart/Allentown	7.4%	60.6%	9.9%	45.3%
St Luke's/Bethlehem	10.8%	66.0%	14.2%	52.0%
<b>Luzerne</b>				
Geisinger/Wyoming Valley	6.5%	87.9%	20.0%	70.0%
Hazleton Saint Joseph	8.9%	85.0%	15.6%	64.0%
Mercy/Wilkes-Barre	6.1%	92.3%	24.4%	86.5%
WVHCS-Hospital	6.7%	88.3%	22.4%	76.4%
<b>Lycoming</b>				
Williamsport	6.8%	85.3%	20.0%	76.3%
<b>McKean</b>				
Bradford Regional	4.9%	82.4%	21.3%	65.9%
<b>Mercer</b>				
Sharon Regional	4.5%	65.5%	11.2%	48.7%
UPMC Horizon	10.9%	83.8%	13.1%	52.2%
United Community	8.1%	96.0%	20.5%	70.5%
<b>Mifflin</b>				
Lewistown	5.6%	97.4%	27.1%	66.1%
<b>Monroe</b>				
Pocono	6.9%	86.7%	23.0%	77.8%

2. See page 13 for the definition of Repeat C-section Rate in Low-Risk Delivery.



## Delivery Information by Hospital, 1999

Total

Hospital Name	NICU Level <sup>1</sup>	# of Deliveries	# of C-sections	C-section Rate	VBAC Rate
<b>Montgomery</b>					
Abington Memorial	3	4,203	960	22.8%	33.5%
Elkins Park	2	949	274	28.9%	22.3%
Holy Redeemer	2	1,032	196	19.0%	39.2%
Main Line/Bryn Mawr	3	1,992	403	20.2%	31.3%
Main Line/Lankenau	3	1,638	383	23.4%	37.0%
Mercy Suburban	1	NC	NC	NC	NC
Montgomery	2	705	165	23.4%	25.8%
North Penn	1	604	131	21.7%	31.4%
Pottstown Memorial	1	779	144	18.5%	48.5%
<b>Montour</b>					
Geisinger/Danville	3	1,005	218	21.7%	40.5%
<b>Northampton</b>					
Easton	2	689	163	23.7%	30.7%
<b>Northumberland</b>					
Sunbury Community	1	172	50	29.1%	17.4%
<b>Philadelphia</b>					
Albert Einstein	3	1,860	343	18.4%	43.6%
Chestnut Hill	1	942	190	20.2%	30.1%
City Avenue	3	1,645	327	19.9%	43.6%
Episcopal	2	1,067	149	14.0%	39.2%
Frankford	2	2,026	431	21.3%	40.4%
Hahnemann University <sup>3,4</sup>	3	256	43	16.8%	50.0%
Hosp of the Univ of PA	3	3,229	629	19.5%	47.3%
Jeanes	2	709	185	26.1%	19.8%
Mercy/Philadelphia	1	341	46	13.5%	55.9%
Methodist Div/TJUH	3	1,020	226	22.2%	33.6%
PA Hosp/Univ of PA	3	3,874	907	23.4%	35.7%
Parkview	1	839	132	15.7%	46.5%
Roxborough Memorial	1	113	29	25.7%	35.7%
Temple East/Northeastern	1	654	116	17.7%	29.6%
Temple University	3	2,135	356	16.7%	54.8%
Thomas Jefferson Univ	3	2,154	597	27.7%	27.5%

1. Neonatal Intensive Care Unit (NICU) level is assigned by the Department of Health, based on the level of newborn services available. See page 13 for a complete definition of each level.

3. Since Hahnemann reopened its nursery facilities after the 1999 reporting period ended for the Department of Health, the NICU level is based on the hospital's response to the 2000 Hospital Questionnaire. This level has not been reviewed extensively by the Department of Health and should be recognized as provisional.

4. Hahnemann reopened its nursery facilities during quarter four of 1999. The data displayed here is from one quarter only.

NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.



## Delivery Information by Hospital, 1999

Hospital Name	Percent High-Risk for C-section Delivery	High-Risk C-section Rate	Low-Risk C-section Rate	Repeat C-section Rate in Low-Risk Delivery <sup>2</sup>
<b>Montgomery</b>				
Abington Memorial	10.2%	82.2%	16.1%	63.4%
Elkins Park	7.8%	83.8%	24.2%	76.3%
Holy Redeemer	7.2%	83.8%	14.0%	57.3%
Main Line/Bryn Mawr	7.0%	76.3%	16.0%	67.2%
Main Line/Lankenau	13.0%	75.6%	15.6%	58.9%
Mercy Suburban	NC	NC	NC	NC
Montgomery	6.0%	81.0%	19.8%	73.0%
North Penn	6.8%	90.2%	16.7%	67.1%
Pottstown Memorial	6.5%	88.2%	13.6%	44.2%
<b>Montour</b>				
Geisinger/Danville	12.7%	72.7%	14.3%	55.7%
<b>Northampton</b>				
Easton	7.3%	84.0%	18.9%	67.0%
<b>Northumberland</b>				
Sunbury Community	5.2%	44.4%	28.2%	85.7%
<b>Philadelphia</b>				
Albert Einstein	6.9%	69.5%	14.7%	54.0%
Chestnut Hill	6.8%	68.8%	16.6%	67.7%
City Avenue	7.4%	71.3%	15.8%	54.0%
Episcopal	5.2%	70.9%	10.9%	57.3%
Frankford	8.8%	81.5%	15.5%	56.2%
Hahnemann University <sup>4</sup>	6.6%	52.9%	14.2%	50.0%
Hosp of the Univ of PA	8.7%	63.7%	15.3%	50.2%
Jeanes	9.7%	79.7%	20.3%	77.1%
Mercy/Philadelphia	4.1%	71.4%	11.0%	41.9%
Methodist Div/TJUH	7.5%	71.4%	18.1%	63.2%
PA Hosp/Univ of PA	5.7%	78.8%	20.0%	62.2%
Parkview	5.7%	85.4%	11.5%	51.6%
Roxborough Memorial	3.5%	75.0%	23.9%	64.3%
Temple East/Northeastern	3.8%	92.0%	14.8%	68.7%
Temple University	6.8%	66.2%	13.1%	41.9%
Thomas Jefferson Univ	9.5%	72.5%	23.0%	70.9%

2. See page 13 for the definition of Repeat C-section Rate in Low-Risk Delivery.

4. Hahnemann reopened its nursery facilities during quarter four of 1999. The data displayed here is from one quarter only.

NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.



## Delivery Information by Hospital, 1999

Total

Hospital Name	NICU Level <sup>1</sup>	# of Deliveries	# of C-sections	C-section Rate	VBAC Rate
<b>Potter</b>					
Charles Cole Memorial	1	NC	NC	NC	NC
<b>Schuylkill</b>					
Good Samaritan Regional	1	246	35	14.2%	33.3%
Pottsville/Warne Clinic	1	758	173	22.8%	31.8%
<b>Somerset</b>					
Somerset Ctr for Health	1	507	87	17.2%	41.3%
Windber	1	134	43	32.1%	26.7%
<b>Susquehanna</b>					
Barnes-Kasson	1	122	35	28.7%	5.0%
<b>Tioga</b>					
Soldiers & Sailors	1	287	51	17.8%	18.8%
<b>Union</b>					
Evangelical Community	1	811	252	31.1%	10.7%
<b>Venango</b>					
Northwest	1	431	85	19.7%	28.3%
<b>Warren</b>					
Warren General	1	327	48	14.7%	44.7%
<b>Washington</b>					
Monongahela Valley	1	486	90	18.5%	42.2%
Washington	1	1,055	145	13.7%	47.2%
<b>Wayne</b>					
Wayne Memorial	1	439	89	20.3%	42.5%
<b>Westmoreland</b>					
Citizens General	1	281	50	17.8%	43.3%
Frick	1	363	75	20.7%	23.5%
Jeannette Memorial	1	463	96	20.7%	22.4%
Latrobe Area	2	813	126	15.5%	43.7%
Westmoreland Regional	2	842	128	15.2%	50.5%
<b>Wyoming</b>					
Tyler Memorial	1	272	72	26.5%	20.5%
<b>York</b>					
Hanover General	1	529	108	20.4%	43.1%
Memorial/York	1	554	108	19.5%	28.8%
York	3	2,757	539	19.6%	37.7%

1. Neonatal Intensive Care Unit (NICU) level is assigned by the Department of Health, based on the level of newborn services available. See page 13 for a complete definition of each level.  
 NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.





## Delivery Information by Hospital, 1999

Hospital Name	Percent High-Risk for C-section Delivery	High-Risk C-section Rate	Low-Risk C-section Rate	Repeat C-section Rate in Low-Risk Delivery <sup>2</sup>
<b>Potter</b>				
Charles Cole Memorial	NC	NC	NC	NC
<b>Schuylkill</b>				
Good Samaritan Regional	3.7%	100%	11.0%	62.5%
Pottsville/Warne Clinic	6.3%	89.6%	18.3%	67.5%
<b>Somerset</b>				
Somerset Ctr for Health	7.7%	71.8%	12.6%	52.5%
Windber	9.7%	92.3%	25.6%	66.7%
<b>Susquehanna</b>				
Barnes-Kasson	1.6%	100%	27.5%	95.0%
<b>Tioga</b>				
Soldiers & Sailors	7.3%	66.7%	13.9%	72.7%
<b>Union</b>				
Evangelical Community	7.9%	92.2%	25.8%	88.2%
<b>Venango</b>				
Northwest	5.6%	87.5%	15.7%	70.6%
<b>Warren</b>				
Warren General	7.0%	65.2%	10.9%	48.4%
<b>Washington</b>				
Monongahela Valley	8.8%	62.8%	14.2%	54.2%
Washington	5.5%	81.0%	9.8%	48.5%
<b>Wayne</b>				
Wayne Memorial	5.9%	80.8%	16.5%	52.8%
<b>Westmoreland</b>				
Citizens General	7.1%	80.0%	13.0%	53.6%
Frick	6.9%	80.0%	16.3%	74.2%
Jeannette Memorial	4.5%	90.5%	17.4%	75.6%
Latrobe Area	7.1%	75.9%	10.9%	51.3%
Westmoreland Regional	6.9%	84.5%	10.1%	44.6%
<b>Wyoming</b>				
Tyler Memorial	5.5%	86.7%	23.0%	78.4%
<b>York</b>				
Hanover General	6.8%	83.3%	15.8%	54.8%
Memorial/York	6.0%	87.9%	15.2%	67.3%
York	9.6%	81.1%	13.0%	59.1%

2. See page 13 for the definition of Repeat C-section Rate in Low-Risk Delivery.  
 NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.



# Average Length of Stay and Average Charges By Hospital, 1999

At the statewide level, differences still exist in average length of stay (LOS) and average charges between C-section and vaginal deliveries. In 1999, women who had C-sections stayed an average 1.5 days longer than those who had vaginal deliveries. The Minimum Maternity Stay Legislation enacted in Pennsylvania in July 1996 and on a national basis in January 1998 may have contributed to a narrowing of these differences. Pennsylvania's legislation mandated insurance coverage of inpatient care for at least 48 hours following a vaginal delivery and 96 hours following a C-section. When comparing average charges, the 1999 data showed a difference of \$3,923 between C-section and vaginal deliveries, up from \$3,600 in 1995.



## Length of Stay and Charge Information by Hospital, 1999

Hospital Name	C-section Deliveries		Vaginal Deliveries	
	Average LOS	Average Charge	Average LOS	Average Charge
Statewide	3.7	\$8,929	2.2	\$5,006
Adams County				
Gettysburg	3.2	\$6,141	1.9	\$3,157
Allegheny County				
AUMC/Allegheny Valley	3.2	\$8,384	2.1	\$5,300
Allegheny General	4.1	\$9,727	2.2	\$6,035
Forbes Regional	3.3	\$6,491	2.1	\$4,265
Magee-Womens	4.0	\$8,482	2.3	\$5,693
Mercy/Pittsburgh	3.6	\$7,268	2.1	\$4,183
Ohio Valley General	3.1	\$8,994	2.1	\$5,364
Saint Francis/Pittsburgh	3.4	\$5,779	2.1	\$3,125
Sewickley Valley	3.0	\$8,313	2.0	\$5,296
St Clair Memorial	3.2	\$6,126	2.1	\$4,381
UPMC McKeesport	3.4	\$7,712	2.1	\$4,936
UPMC Shadyside	3.4	\$12,316	2.1	\$6,700
Western Pennsylvania	4.0	\$12,106	2.4	\$7,422
Armstrong County				
Armstrong County Memorial	3.0	\$6,509	2.1	\$2,786
Beaver County				
Medical Center/Beaver	3.2	\$6,415	2.0	\$4,433
Bedford County				
UPMC Bedford	3.3	\$5,999	2.2	\$2,964
Berks County				
Reading	3.6	\$4,171	2.2	\$2,477
Saint Joseph/Reading	3.6	\$6,402	2.1	\$2,821
Blair County				
Altoona	3.2	\$5,385	2.2	\$3,558
Bon Secours Holy Family	3.2	\$5,916	2.2	\$3,273
Nason	3.5	\$4,821	2.2	\$2,550
Bradford				
Memorial/Towanda	3.4	\$6,868	2.0	\$3,044
Robert Packer	3.2	\$5,560	2.0	\$3,520



## Length of Stay and Charge Information by Hospital, 1999

Hospital Name	C-section Deliveries		Vaginal Deliveries	
	Average LOS	Average Charge	Average LOS	Average Charge
<b>Bucks</b>				
Doylestown	3.8	\$8,752	2.1	\$3,966
Grand View	3.1	\$9,740	2.1	\$5,590
Saint Mary	3.6	\$11,003	2.0	\$6,401
Temple/Lower Bucks	4.3	\$10,064	2.3	\$5,616
Warminster	4.1	\$12,546	2.2	\$7,020
<b>Butler</b>				
Butler Memorial	3.3	\$5,791	2.1	\$3,903
<b>Cambria</b>				
Conemaugh Valley Memorial	3.9	\$7,720	2.3	\$3,756
UPMC Lee Regional	3.6	\$8,591	2.1	\$4,004
<b>Carbon</b>				
Gnaden Huetten Memorial	3.5	\$5,499	1.9	\$2,860
Palmerton	3.8	\$4,517	2.0	\$2,138
<b>Centre</b>				
Centre Community	3.1	\$5,929	2.1	\$2,869
<b>Chester</b>				
Brandywine	3.6	\$7,406	2.2	\$4,420
Chester County	3.7	\$7,510	2.2	\$4,237
Main Line/Paoli	3.9	\$12,568	2.3	\$7,753
Phoenixville/Univ of PA	3.2	\$7,217	2.0	\$4,044
<b>Clarion</b>				
Clarion	3.0	\$4,577	1.8	\$2,248
<b>Clearfield</b>				
Clearfield	3.0	\$5,754	2.0	\$2,496
DuBois Regional	3.1	\$5,012	1.7	\$2,817
<b>Clinton</b>				
Lock Haven	NC	NC	NC	NC
<b>Columbia</b>				
Berwick	3.8	\$7,687	2.0	\$2,512
Bloomsburg	3.0	\$5,499	2.2	\$3,041
<b>Crawford</b>				
Meadville	2.9	\$4,235	1.8	\$2,193
Titusville Area	3.7	\$6,494	2.2	\$2,443



NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.

## Length of Stay and Charge Information by Hospital, 1999

Hospital Name	C-section Deliveries		Vaginal Deliveries	
	Average LOS	Average Charge	Average LOS	Average Charge
<b>Cumberland</b>				
Carlisle	3.1	\$5,273	2.1	\$2,933
Holy Spirit	3.7	\$5,525	2.1	\$2,967
<b>Dauphin</b>				
Milton S Hershey	4.0	\$8,288	2.2	\$4,211
Pinnacle Health	4.1	\$7,589	2.3	\$4,173
<b>Delaware</b>				
Crozer-Chester	4.4	\$22,249	2.3	\$11,822
Delaware County Memorial	4.8	\$21,395	2.3	\$11,331
Mercy/Fitzgerald	4.5	\$11,082	2.3	\$5,311
Riddle Memorial	4.2	\$14,375	2.3	\$7,090
<b>Elk</b>				
Elk Regional	3.1	\$4,364	2.1	\$2,398
<b>Erie</b>				
Corry Memorial	3.0	\$5,630	1.7	\$2,418
Hamot	3.8	\$5,796	2.1	\$3,100
Metro Health Center	2.7	\$5,037	1.8	\$2,102
Millcreek Community	3.0	\$7,678	2.0	\$3,488
Saint Vincent	3.4	\$5,925	2.0	\$3,442
<b>Fayette</b>				
Uniontown	2.9	\$4,738	1.8	\$3,051
<b>Franklin</b>				
Chambersburg	2.9	\$5,636	1.9	\$3,674
Waynesboro	3.2	\$5,237	1.6	\$2,833
<b>Fulton</b>				
Fulton County	2.7	\$7,102	1.9	\$3,210
<b>Huntingdon</b>				
J C Blair Memorial	2.9	\$5,921	2.1	\$2,910
<b>Indiana</b>				
Indiana	3.1	\$7,331	2.1	\$3,937
<b>Jefferson</b>				
Brookville	3.0	\$5,072	2.1	\$2,723
Punxsutawney Area	2.7	\$4,731	2.1	\$1,964



## Length of Stay and Charge Information by Hospital, 1999

Hospital Name	C-section Deliveries		Vaginal Deliveries	
	Average LOS	Average Charge	Average LOS	Average Charge
<b>Lackawanna</b>				
Community/Scranton	3.8	\$8,450	2.2	\$4,138
Mercy/Scranton	3.8	\$7,894	2.2	\$4,134
<b>Lancaster</b>				
Community/Lancaster	3.4	\$5,266	1.8	\$2,627
Ephrata Community	3.0	\$4,176	1.6	\$2,100
Lancaster General	3.6	\$4,139	2.1	\$2,316
Saint Joseph/Lancaster	3.1	\$5,033	1.9	\$2,948
<b>Lawrence</b>				
Ellwood City	3.4	\$4,206	2.0	\$2,379
Jameson Memorial	3.6	\$5,547	2.1	\$2,644
Saint Francis New Castle	3.8	\$5,040	2.4	\$3,694
<b>Lebanon</b>				
Good Samaritan/Lebanon	3.2	\$5,421	2.0	\$2,469
<b>Lehigh</b>				
Lehigh Valley	3.7	\$6,229	2.0	\$3,471
Sacred Heart/Allentown	3.7	\$5,648	2.0	\$3,442
St Luke's/Bethlehem	3.9	\$6,390	2.2	\$4,660
<b>Luzerne</b>				
Geisinger/Wyoming Valley	3.2	\$6,202	1.7	\$2,981
Hazleton Saint Joseph	3.6	\$8,072	2.1	\$3,621
Mercy/Wilkes-Barre	3.5	\$10,547	2.2	\$4,942
WVHCS-Hospital	3.6	\$7,208	2.2	\$3,563
<b>Lycoming</b>				
Williamsport	3.2	\$5,975	2.1	\$2,925
<b>McKean</b>				
Bradford Regional	3.1	\$4,946	2.1	\$2,757
<b>Mercer</b>				
Sharon Regional	2.6	\$6,658	1.6	\$2,785
UPMC Horizon	3.1	\$4,874	1.8	\$2,012
United Community	3.2	\$3,910	2.1	\$2,282
<b>Mifflin</b>				
Lewistown	3.0	\$4,996	2.0	\$2,687
<b>Monroe</b>				
Pocono	3.1	\$5,507	2.0	\$2,677



## Length of Stay and Charge Information by Hospital, 1999

Hospital Name	C-section Deliveries		Vaginal Deliveries	
	Average LOS	Average Charge	Average LOS	Average Charge
<b>Montgomery</b>				
Abington Memorial	4.6	\$18,427	2.3	\$9,526
Elkins Park	3.8	\$10,370	2.2	\$6,532
Holy Redeemer	4.1	\$17,436	2.3	\$10,169
Main Line/Bryn Mawr	4.2	\$12,167	2.3	\$7,591
Main Line/Lankenau	4.6	\$12,643	2.5	\$8,473
Mercy Suburban	NC	NC	NC	NC
Montgomery	4.2	\$10,504	2.3	\$3,968
North Penn	4.1	\$9,490	2.2	\$5,281
Pottstown Memorial	3.4	\$10,150	2.1	\$4,180
<b>Montour</b>				
Geisinger/Danville	4.0	\$6,902	2.0	\$4,023
<b>Northampton</b>				
Easton	3.3	\$5,927	2.1	\$3,202
<b>Northumberland</b>				
Sunbury Community	4.4	\$5,217	2.3	\$2,385
<b>Philadelphia</b>				
Albert Einstein	4.3	\$15,755	2.4	\$9,548
Chestnut Hill	3.8	\$14,253	2.3	\$6,558
City Avenue	4.3	\$11,218	2.3	\$5,709
Episcopal	3.8	\$8,667	1.8	\$4,267
Frankford	4.0	\$17,670	2.3	\$11,286
Hahnemann University <sup>4</sup>	4.7	\$15,495	2.3	\$8,357
Hosp of the Univ of PA	4.8	\$11,392	2.5	\$7,191
Jeanes	4.1	\$13,305	2.2	\$7,202
Mercy/Philadelphia	3.6	\$10,764	2.2	\$5,501
Methodist Div/TJUH	3.5	\$10,524	2.2	\$7,808
PA Hosp/Univ of PA	4.3	\$9,833	2.2	\$5,846
Parkview	3.3	\$10,477	1.6	\$3,578
Roxborough Memorial	3.6	\$9,051	2.3	\$3,988
Temple East/Northeastern	2.9	\$8,432	1.8	\$4,381
Temple University	4.1	\$18,225	2.4	\$10,535
Thomas Jefferson Univ	4.4	\$14,624	2.5	\$8,390

4. Hahnemann reopened its nursery facilities during quarter four of 1999. The data displayed here is from one quarter only.

NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.



## Length of Stay and Charge Information by Hospital, 1999

Hospital Name	C-section Deliveries		Vaginal Deliveries	
	Average LOS	Average Charge	Average LOS	Average Charge
<b>Potter</b>				
Charles Cole Memorial	NC	NC	NC	NC
<b>Schuylkill</b>				
Good Samaritan Regional	3.4	\$4,481	2.1	\$1,933
Pottsville/Warne Clinic	3.1	\$4,389	2.2	\$2,367
<b>Somerset</b>				
Somerset Ctr for Health	2.9	\$4,683	1.8	\$2,244
Windber	4.2	\$5,887	2.2	\$2,664
<b>Susquehanna</b>				
Barnes-Kasson	3.1	\$5,239	2.1	\$2,463
<b>Tioga</b>				
Soldiers & Sailors	3.1	\$6,319	1.8	\$2,476
<b>Union</b>				
Evangelical Community	3.1	\$3,427	2.0	\$2,024
<b>Venango</b>				
Northwest	2.8	\$4,887	1.9	\$2,692
<b>Warren</b>				
Warren General	3.7	\$6,931	2.1	\$3,033
<b>Washington</b>				
Monongahela Valley	3.1	\$6,837	1.9	\$3,744
Washington	3.1	\$10,204	2.0	\$5,665
<b>Wayne</b>				
Wayne Memorial	3.4	\$7,017	2.2	\$2,999
<b>Westmoreland</b>				
Citizens General	3.4	\$7,053	2.3	\$4,472
Frick	3.3	\$5,028	1.9	\$3,267
Jeannette Memorial	3.1	\$6,752	1.8	\$3,137
Latrobe Area	3.3	\$5,755	2.1	\$3,715
Westmoreland Regional	3.3	\$6,166	2.2	\$3,521
<b>Wyoming</b>				
Tyler Memorial	2.7	\$5,435	1.7	\$2,218
<b>York</b>				
Hanover General	2.9	\$5,389	1.8	\$2,216
Memorial/York	3.5	\$6,017	1.9	\$2,885
York	3.8	\$4,889	2.1	\$2,690

NC - Non-Compliant with state law due to missing data. Hospital is currently in compliance.





## Data Notes

Data found in this report are from the Pennsylvania Department of Health and PHC4.

- The Department of Health provided the level of neonatal care from the Annual Hospital Questionnaire, based on births between July 1, 1998 and June 30, 1999, as well as aggregate demographic data.
- PHC4 supplied all other data elements regarding hospitalizations where the discharge occurred between January 1 and December 31, 1999.

Health Care Financing Administration (HCFA) Diagnosis Related Groups (DRGs) versions 16 and 17 were used to identify hospitalizations with a delivery. More information regarding these DRGs can be found within the technical document.

All deliveries from Pennsylvania hospitals with more than 50 deliveries are included regardless of patient residence. Tyrone Hospital does not appear in this report because it has less than 50 cases due to non-compliance with data submission requirements. Pennsylvania residents hospitalized in another state are not included because PHC4 does not have access to that information.

The data were reported as submitted to PHC4 by the hospitals. If a hospital did not provide complete information, the data has been suppressed. Hospitals that did not submit data for 1999 are not included in the report.

The average charges reported are for services billed to the patient by the hospital, or to whoever is paying for the patient's care. They do not reflect physician or other professional fees. These figures are derived from hospital billing forms, which list the actual charges for each patient. However, hospitals usually do not receive full reimbursement of their charges, having negotiated discounts with insurance companies or other large purchasers of health services. The amount actually collected by the hospital may differ substantially from the amount billed.

## Top 15 Factors Contributing to a C-section

1. Previous C-section
2. Breech
3. High head at term
4. Transverse or oblique presentation
5. Pre-eclampsia (severe)
6. Placenta previa
7. Multiple gestation with malpresentation of one fetus or more
8. Other specified malposition
9. Chorioamnionitis
10. Premature separation of placenta
11. Prolapsed cord
12. Obstruction from malpositioned fetus at onset of labor
13. Mild Pre-eclampsia
14. Oligohydramnios
15. Gestational Diabetes



## C-section Report Bibliography

1. Flamm, Bruce L. and Edward J. Quilligan, Editors. Cesarean Section: Guidelines for Appropriate Utilization. 1995. Springer-Verlage New York, Inc.: New York, NY.
2. Gifford, Deidre Spelliscy, et al. "Lack of Progress in Labor as a Reason for Cesarean." Obstetrics and Gynecology. Apr 2000. v. 95. n.4: 589-595. [www.acog.org](http://www.acog.org)
3. Gould, Jeffrey B., et al. "Socioeconomic Differences in Rates of Cesarean Section." The New England Journal of Medicine. 27 July 1989. v. 321. n. 4: 233-239. [www.nejm.org](http://www.nejm.org)
4. Gregory, Kimberly D., et al. "Vaginal Birth After Cesarean and Uterine Rupture Rates in California." Obstetrics and Gynecology. Dec 1999. v. 94. n. 6: 985-989. [www.acog.org](http://www.acog.org)
5. King, Dale E. and Kajal Lahiri. "Socioeconomic Factors and the Odds of Vaginal Birth After Cesarean Delivery." Journal of the American Medical Association. 17 Aug 1994. v. 272. n. 7: 524-529. [www.jama.org](http://www.jama.org).
6. Leitch, C.R. and J.J. Walker. "The Rise in Caesarean Section Rate: The Same Indications but a Lower Threshold." British Journal of Obstetrics and Gynaecology. Jun 1998. v. 105: 621-626.
7. Lydon-Rochelle, Mona, et al. "Association Between Method of Delivery and Maternal Rehospitalization." Journal of the American Medical Association. 10 May 2000. v. 283. n. 18: 2411-2416. [www.ama-assn.org](http://www.ama-assn.org).
8. McMahon, Michael J., et al. "Comparison of a Trial of Labor with an Elective Second Cesarean Section." The New England Journal of Medicine. 5 Sept 1996. v. 335. n. 10: 689-695. [www.nejm.org](http://www.nejm.org).
9. Parrish, Kiyoko M., et al. "Effect of Changes in Maternal Age, Parity, and Birth Weight Distribution on Primary Cesarean Delivery Rates." Journal of the American Medical Association. 9 Feb 1994. v. 271. n. 6: 443-447. [www.jama.org](http://www.jama.org)
10. Porreco, Richard P. and James A. Thorp. "The Cesarean Birth Epidemic: Trends, Causes, and Solutions." American Journal of Obstetrics and Gynecology. 1996. v. 175. n. 2: 369-374.
11. Saisto, Terhi, et al. "Factors Associated With Fear of Delivery in Second Pregnancies." Obstetrics and Gynecology. Nov 1999. v. 94. n. 5, part 1: 679-682. [www.acog.org](http://www.acog.org)



12. Shelton, Deborah L. "C-sections Increasing as Doctors, Patients Re-evaluate the Risks." American Medical News. 9 Oct 2000. [www.ama-assn.org/sci-pubs/amnews/pick\\_00/hll11009.htm](http://www.ama-assn.org/sci-pubs/amnews/pick_00/hll11009.htm).

13. Taffel, Selma M., et al. "Trends in the United States Cesarean Section Rate and Reasons for the 1980-1985 Rise." American Journal of Public Health. 1987. v. 77. n. 8: 955-959. [www.apha.org](http://www.apha.org)

14. United States Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics Reports. "Births: Final Data for 1998." 28 Mar 2000. v. 48. n. 3. [www.cdc.gov/nchs/data/nvs48\\_3.pdf](http://www.cdc.gov/nchs/data/nvs48_3.pdf)

15. United States Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics Reports. "Births: Preliminary Data for 1999." 8 Aug 2000. v. 48. n. 14. [www.cdc.gov/nchs/data/nvs48\\_14.pdf](http://www.cdc.gov/nchs/data/nvs48_14.pdf)

16. United States Department of Health and Human Services, Office of Disease Prevention and Health Promotion. Healthy People 2010, Volume II B, Objective 16-9. <http://www.health.gov/healthypeople/Document/HTML/Volume2/16MICH.htm>.

**For more information regarding this report,  
you may contact:**

**PHC4**

225 Market Street, Suite 400  
Harrisburg, PA 17101

Phone (717) 232-6787

Fax (717) 232-3821

[www.phc4.org](http://www.phc4.org)

**Pennsylvania Department of Health**

Bureau of Health Statistics  
555 Walnut Street, 6th Floor  
Harrisburg, PA 17101-1900

Phone (717) 783-2548

Fax (717) 772-3258

[www.health.state.pa.us/stats](http://www.health.state.pa.us/stats)

**Other Resources**

American College of Obstetricians and Gynecologists (ACOG)  
[www.acog.org](http://www.acog.org)

Centers for Disease Control and Prevention, National Center for Health Statistics  
[www.cdc.gov/nchs](http://www.cdc.gov/nchs)

Healthy People 2000 and 2010 [www.health.gov/healthypeople](http://www.health.gov/healthypeople)

Healthfinder [www.healthfinder.gov](http://www.healthfinder.gov)



# **Pennsylvania Health Care Cost Containment Council      Customer Survey**

The Pennsylvania Health Care Cost Containment Council (PHC4) is undertaking this survey in an effort to assess the information needs of its customers. We ask that you take a few minutes to answer the following questions regarding this report. **Your response is important** because it will help us learn about the quality, readability, effectiveness and usefulness of PHC4 reports, as well as help us in targeting future reports. All responses will be kept confidential.

In order to track who is reading this report, please provide us with your:

Name:

Title:

Organization:

How did you use this report?

Was this report helpful?

Yes – How was it helpful?

No - Why was it not helpful?

How could we have improved this report?

What else would you like to learn about health care in Pennsylvania?

**Please return this survey to the:**

**Pennsylvania Health Care Cost Containment Council  
225 Market Street, Suite 400  
Harrisburg, PA 17101**