# C-Section Deliveries in Pennsylvania, 1999

## Technical Notes

March 2001

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# Foreword

The Council wishes to thank the Maine Medical Assessment Foundation and the Pittsburgh Regional Healthcare Initiative, C-section subcommittee for their guidance and assistance in the development of the methodology used to study C-section rates. The methodology used in this report was also built on earlier work completed for previous PHC4 C-Section reports.

*C-Section Deliveries in Pennsylvania, 1999* is a joint project of PHC4 and the Pennsylvania Department of Health. The Council would like to thank Secretary Robert S. Zimmerman and the DOH for its contributions. This collaborative effort benefits the public because a more complete picture of health care delivery can be observed through combining and sharing of our unique data sets.

These *Technical Notes* correspond to PHC4 methods for data analysis of delivery records. This document does not include Department of Health methodology, which relied on birth certificate data.

Copies of *C-section Deliveries in Pennsylvania, 1999* and this document, the *Technical Notes*, can be obtained by contacting the Council, or can be accessed electronically via the Council's Web site, http://www.phc4.org.

# *Methodology Overview*

## "What" is New about this Report

As part of an ongoing attempt to update and improve methodology, the current report on Pennsylvania C-section rates includes a stratification of cases according to the *level of risk* of having a C-section performed (i.e., high risk versus low risk).  Previous PHC4 reports on C-section rates studied these cases collectively.  Based on recent reviews of the literature and the input provided by the hospital community, it was decided that a stratification of cases by risk was a logical enhancement to this methodology.

## "Who" Is Reported

Hospitals

- 144 acute care hospitals in Pennsylvania performing deliveries – 142 acute care hospitals were included in this document  (1 hospital was not reported due to low case counts and another facility did not submit data to PHC4).

- 59 of the 67 counties in the state contained hospitals that perform deliveries.  The following counties were not included in the report (there were no hospitals in these counties that had deliveries): Cameron, Forest, Greene, Juniata, Perry, Pike, Snyder and Sullivan counties.

## "What" Is Reported

- Data in this report include discharges occurring in first quarter 1999 through fourth quarter 1999 (time period of January 1, 1999 through December 31, 1999).  These data were passed through the standard PHC4 quality assurance procedures prior to any analyses.

- Hospital discharge data was the source for the payor analyses.   Identification of payor is based on the "expected payor" as provided by hospitals.  Hospital inpatient discharge data were aggregated statewide for each payor class to obtain the number of deliveries, percent of deliveries by risk, average age, high-risk C-section rates, low-risk C-section rates and VBAC (vaginal birth after C-section) rates.

- Hospital discharge data are presented for total deliveries, number of c-sections performed, overall C-section rate, high risk C-section rate, low-risk C-section rate, VBAC rate, percent cases that were high risk for C-section delivery, repeat C-section rate in low-risk delivery, average length of stay (for cesarean section and vaginal delivery), and average charges (for cesarean section and vaginal delivery).  Data obtained from the Department of Health are not described in this document.

## Definition of Measures for Hospital and Payor Class Analyses

| Outcome Measures | Definitions |
|---|---|

- **Delivery**

| | |
|---|---|
| Delivery............................................ | Delivery is defined by the presence of one of the following DRGs (370, 371, 372, 373, 374, 375) in a discharge record. |
| High Risk (*for C-section*) Delivery ...... | High-risk cases are defined by the presence of any one of the following ICD.9.CM codes in any of the nine positions reserved for diagnosis codes in a delivery discharge record. |
| | Malpresentation, breech:  652.21 |
| | Malpresentation, transverse or oblique:  652.31, |
| | Malpresentation, face or brow presentation:  652.41 |
| | Malpresentation, high head at term:  652.51 |
| | Malpresentation, unspecified malpositions:  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 |
| | Prolapsed cord:  663.01 |
| Low Risk (*for C-section*) Delivery ....... | Any delivery that did not include a high-risk diagnosis (see above) was classified as low risk for C-section. |
| VBAC Rate ....................................... | Total number cases that had a vaginal delivery after having had a previous C-section divided by the *total* number of deliveries that had a previous C-section, multiplied by 100.  These cases were identified by the presence of a DRG for a vaginal delivery (372-375) and a code for a previous C-section (654.20, 654.21 and 654.23). |

# Definition of Measures for Hospital and Payor Class Analyses

| Outcome Measures | Definitions |
| --- | --- |
| **• Cesarean Section** | |
| C-section ......................................... | C-section is defined by the presence of one of the following DRGs (370, 371) in a discharge record. |
| C-Section Rate ................................ | Total number of C-sections divided by the total number of deliveries, multiplied by 100. |
| High-Risk C-Section Rate ................ | Number of C-sections with a high-risk code (see above) divided by the total number of high-risk deliveries, multiplied by 100. |
| Low-Risk C-Section Rate ................. | Number of C-sections performed for cases classified as low-risk deliveries divided by the total number of low-risk deliveries, multiplied by 100. |
| Repeat C-Section ............................ | A C-section that followed a previous C-section. Identified in a record by the presence of a C-section DRG *and* a code for a previous C-section. |
| Repeat C-Section Rate in Low-Risk Delivery............................................ | Number of repeat C-sections (see definition above) performed for cases classified as low-risk divided by the total number of low risk cases that had a previous C-section, multiplied by 100. |

## Definition of Measures for Hospital and Payor Class Analyses

| **Utilization Measures** | **Definitions** |
| --- | --- |
| Average Length of Stay .................. | Length of stay (LOS) was calculated by subtracting the admit date from the discharge date.  The lengths of stay for all deliveries were averaged across a single hospital to yield the average LOS.  The methodology used to trim outlier values (extremely atypical lengths of stay) was determined by evaluating the distribution of cases in each delivery DRG.  Because the distribution of cases within each DRG exhibited low variability, easily identifiable trim points were established for each DRG (i.e., those cases that deviated significantly from the overall distribution were trimmed): 39 (0.4%) cases were trimmed from DRG 370, 103 (0.5%) cases were trimmed from DRG 371, 60 (0.5%) cases were trimmed from DRG 372, 386 (0.4%) cases were trimmed from DRG 373, 29 (0.5%) cases were trimmed from DRG 374, and 5 (5.9%) cases were trimmed from DRG 375. |
| Average Charges............................. | This measure was defined as the average of total charges less professional fees.  Extremely atypical charges were eliminated based on region and DRG using the non-parametric "+/- 3.0 interquartile range" method (see p. 11). |

| **Reporting Measures** | **Definitions** |
| --- | --- |
| Hospital............................................ | Acute care specialty and non-specialty facilities in Pennsylvania with greater than 50 deliveries. |

# *Data Quality Methodology*

## Data Exclusion Issues / Quality Check Efforts

## Hospital Submission Compliance Report for Hospitals
## 1st Quarter 1999 through 4th Quarter 1999

Facilities are required to submit data to the Council on a quarterly basis by 90 days from the last day of each quarter. Upon receipt of the data, media verification is performed to assure data have been submitted in a readable format. The data verification process continues with extensive quality assurance checks and matching of admission severity scores to inpatient records. Error reports are generated and returned to each facility with an opportunity to correct any problems.

In a contractual agreement with CIC-MediQual® in Marlborough, Massachusetts, hospitals are required to use the MediQual *Atlas Outcomes*® Severity of Illness System to abstract patient severity information. The Admission Severity Group (ASG) scores generated by this system are submitted to the Council for a select group of acute care inpatient records covering approximately 75 percent of acute care hospital discharges. Hospitals were given an exception to providing severity scores for births (baby record) and deliveries (mom record) beginning January of 1997. Consequently, the Council receives severity scores for mom/baby cases only if hospitals choose to clinically abstract these records.

## Data Exclusion Issues

The following data were excluded from the analyses:

- Charge outliers were excluded from the average charge utilization analysis only (1,793 cases or 1.3%).

- Length of stay outliers were excluded from the average stay utilization analysis only (622 cases or 0.4%).

- Any hospitals with less than 50 total records were excluded from the individual hospital display but were included in state totals. Southern Chester County Medial Center reported only 33 cases in 1999 (Q4) and consequently was not displayed in the report.

- Hospitals with a single delivery record in one or more quarters were excluded from the analysis (3 hospitals, 4 records total); these single cases were treated in hospitals that did not have delivery services available.

## Quality Check Efforts

The following quality checks were performed to allow for the best analysis of the data:

- Patient sex was queried to ensure that only females were found.

- The Council-calculated HCFA DRG was compared to the DRG submitted by each hospital for deliveries (DRGs 370 - 375). 17 records were classified by the hospital but not by the Council. 269 records contained an ICD.9.CM code for delivery but were not classified by the hospital or the Council in a delivery DRG (because the records did not have a delivery as a principal diagnosis). These 286 records (in total) were not analyzed. Cases involving births that were not coded with a principal diagnosis of a delivery were

likely to be clinically complex and were therefore excluded. Only records classified by both the Council and hospital (138,950 cases) or by the Council alone (422 cases) were used in the study. DRGs were compared to detect problems with diagnoses or procedure codes in a record.

- The age distribution was checked for all deliveries. Ages ranged from 11 to 51 and the average age was 28.

- Newborn and delivery records were analyzed quarterly at each hospital to identify large discrepancies between number of births and number of deliveries. Five hospitals (see page 8) were found to have a significantly larger number of delivery records than newborn records for one or more quarters.

- Data for this report were affected by a number of hospital mergers and name changes for this time period. Change of services from general acute care to non-general acute care and a new hospital opening also occurred in 1999. The following tables summarize mergers, name changes, new openings and change of services:

## Mergers

| Merged Hospitals | Quarter |
|---|---|
| Saint Mary's Regional Medical Center and Elk County Regional Medical Center are now Elk Regional Health Center. | Q3 |

## Name Changes

| Original Hospital Name | New Hospital Name | Quarter |
|---|---|---|
| Suburban General - Norristown | Mercy Suburban Hospital | Q1 |
| Penn State - Hershey | Milton S. Hershey Medical Center | Q3 |

## New Facilities

| New Hospital | Quarter |
|---|---|
| Saint Francis Hospital Cranberry | Q3 |

## Change of Service (Acute care to non-acute care)

| Hospital | Quarter |
|---|---|
| Temple East - Neumann | Q3 |

- Quarterly data submissions for deliveries were examined for completeness. Inpatient discharge data were not submitted (denoted below as "missing") for one or more quarters at Tyrone Hospital (Q1, Q2, Q3, and Q4), Lock Haven Hospital (Q2), Charles Cole Memorial Hospital (Q1), and Mercy Suburban Hospital (missing discharge data in May and June 1999). No delivery data were submitted for Q1-Q3 by Hahnemann University Hospital and Southern Chester County Medical Center because delivery services were not available at these facilities until Nov. 1999 and Aug. 1999, respectively. Low case counts were discovered for Q4 at City Avenue Hospital (the facility closed April 3, 2000) as seen in the table below (only large discrepancies in the number of deliveries submitted from one quarter to the next were noted as problematic).

Tyrone Hospital and Southern Chester County Medical Center were not included in the report since they had less than 50 cases for 1999. Tyrone Hospital was *noted* in the report as non-compliant for data submission in all of 1999. Additionally, the following facilities were *displayed* as "non-compliant" in the report tables since they did not submit complete data for part of 1999: Lock Haven Hospital, Charles Cole Memorial Hospital, and Mercy Suburban Hospital (see above).

There were approximately 1,540 missing records in total—estimated for each facility based on the average number of cases that were submitted in 1999 (1998 for Tyrone Hospital):

| Hospital Name | Number of Deliveries Submitted | | | |
|---|---|---|---|---|
| | Q1-1999 | Q2-1999 | Q3-1999 | Q4-1999 |
| Tyrone Hospital | missing | missing | missing | missing |
| Lock Haven Hospital | 75 | missing | 73 | 63 |
| Charles Cole Memorial Hospital | missing | 80 | 87 | 68 |
| Hahnemann University Hospital | No delivery services available | | | 256 |
| Southern Chester County Medical Center | No delivery services available | | | 33 |
| City Avenue Hospital | 466 | 465 | 538 | 176 |
| Mercy Suburban Hospital | 90 | 9/missing* | 95 | 98 |

*These 9 cases were discharges from April only; data were not submitted for May or June by this facility.

- Annual data submissions were compared across newborn and delivery records to identify large discrepancies between births and deliveries. The hospitals listed below reported a notably larger number of delivery records than newborn records for one or more quarters in 1999. The number of newborns was defined as the number of cases where the date of admission was the same as the date of birth. The number of deliveries was defined as the number of cases grouped to DRG 370 – 375.

| Hospital Name | # Newborns | # Deliveries | % Difference |
|---|---|---|---|
| Good Samaritan Regional Medical Center | 85 | 246 | 65.4 |
| Pocono Medical Center | 667 | 872 | 23.5 |
| Saint Joseph Hospital/Lancaster | 789 | 1,227 | 35.7 |
| Saint Joseph Medical Center | 278 | 897 | 69.0 |
| Wayne Memorial Hospital | 226 | 439 | 48.5 |

# *Risk Stratification*

In order to allow equitable comparisons between hospitals, a methodology to risk stratify C-sections was implemented. Patients were categorized as either high or low risk with respect to the probability of having a C-section procedure. <u>Clinical evidence that was gathered to evaluate whether a patient was at high risk for C-section should not be confused with clinical evidence of a high-risk pregnancy.</u>

After review of the literature, several conditions were identified that are associated with a high probability for C-section. It is important to note that while other additional conditions may contribute to the risk of having a C-section procedure, only those conditions that have been coded in a patient's record can be used in the risk stratification methodology. In this instance, therefore, ICD.9.CM coding was the method used to analyze hospital data. ICD.9.CM codes that corresponded with the high-risk conditions were used to stratify the cases into high- and low-risk groups. A fifth digit of 1 was used with the codes to specify that the high-risk conditions were present at the time of delivery.

Patients were labeled as high-risk for C-section if they were coded with at least one of the following conditions:

| High Risk Conditions | ICD.9.CM Codes |
|---|---|
| Malposition: | |
|      Breech | 652.21 |
|      Face or Brow Presentation | 652.41 |
|      High Head at Term | 652.51 |
|      Transverse or Oblique Presentation | 652.31 |
|      Unspecified Malposition | 652.91 |
| Obstruction From Malpositioned Fetus at Onset of Labor | 660.01 |
| Placenta Previa | 641.01 or 641.11 |
| Pre-eclampsia (severe) | 642.51 |
| Premature Separation of Placenta | 641.21 |
| Prolapsed Cord | 663.01 |

The five conditions of breech, prolapsed cord, placenta previa, pre-eclampsia, and premature separation of placenta were identified in a C-section study done by the Maine Medical Assessment Foundation (MMAF). In assessing the statewide data from Pennsylvania, it was confirmed that patients who had at least one of those five conditions also had a high C-section rate.

Upon further analysis of the data from Pennsylvania, five additional conditions appeared to be strong indicators for a C-section procedure. The malpositions of transverse or oblique presentation, face or brow presentation, high head at term, and unspecified malposition were added as conditions associated with a high C-section rate. Obstruction from malpositioned fetus at onset of labor was also identified as a high-risk condition. In analyzing the data, it was discovered that those patients who had at least one of these conditions, <u>without having any of the high-risk conditions identified in the MMAF study,</u> had a high C-section rate. The decision as to which conditions had high enough C-section rates to warrant their inclusion as high-risk indicators was made in conjunction with the Pittsburgh Regional Healthcare Initiative, C-section subcommittee.

A patient was categorized as high-risk, if she had at least one of the ten high-risk conditions. The total number of high-risk cases served as the denominator for the C-section rate calculation; of these cases (in the denominator), patients who also had a C-section DRG in the record were counted in the numerator. An additive effect was not incorporated into the risk stratification; that is, a patient was not placed in a "higher risk" category as a result of being diagnosed with multiple high-risk conditions. The following table summarizes statewide C-section rates for the ten high-risk conditions:

| High Risk Conditions | ICD.9.CM Code(s) | # of Cases | % of Cases | C-section Rate |
|---|---|---|---|---|
| Obstruction From Malpositioned Fetus at Onset of Labor ....................................... | *660.01* | 1,041 | 0.7% | 92.9% |
| Malposition, High Head at Term ............... | *652.51* | 1,527 | 1.1% | 88.7% |
| Malposition, Breech ................................. | *652.21* | 4,875 | 3.5% | 88.1% |
| Placenta Previa.......................................... | *641.01 or 641.11* | 624 | 0.4% | 81.3% |
| Malposition, Transverse or Oblique Presentation.............................................. | *652.31* | 969 | 0.7% | 77.2% |
| Malposition, Face or Brow Presentation... | *652.41* | 222 | 0.2% | 65.8% |
| Prolapsed Cord......................................... | *663.01* | 536 | 0.4% | 63.8% |
| Malposition, Unspecified Malposition ....... | *652.91* | 93 | 0.1% | 62.4% |
| Pre-eclampsia (severe)............................. | *642.51* | 1,083 | 0.8% | 62.3% |
| Premature Separation of Placenta............ | *641.21* | 1,664 | 1.2% | 50.4% |

# Trim Methodology

Outlier cases were trimmed for average LOS for statewide data. Cases were also trimmed for charges based on 9 separate regions of Pennsylvania so that reasonable comparisons could be made across geographic locations.

The "+/- 3.0 interquartile range" method was used to trim data for charges. This non-parametric methodology was used because historically the distribution for charge data does not follow a "normal, bell-shaped" pattern. The distribution is generally right-skewed, with values gathered closely together at the lower end of the distribution, becoming more widely dispersed at the upper end of the distribution. Trim points were determined as follows:

Q1 = the first quartile ($25^{th}$ percentile charge value) of all delivery records

Q3 = the third quartile ($75^{th}$ percentile charge value) of all delivery records

Interquartile Range (IQR) = Q3 – Q1

Lower Trim Point = Q1 – (3.0 x IQR)
Upper Trim Point = Q3 + (3.0 x IQR)

Listed below are the details of the trimming processes for average LOS (statewide data) and charges (each of the nine PA regions reported separately).

### Number and Percent of Cases Trimmed for Average Stay by DRG

### Statewide

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|-----|-----------------|-----------------|-------------------------|-----------------------------|------------------|
| 370 | C-section with CC* | 8,755 | 39 | 0.4% | 34 days |
| 371 | C-section without CC* | 20,718 | 103 | 0.5% | 14 days |
| 372 | Vaginal Delivery with CC* | 13,267 | 60 | 0.5% | 16 days |
| 373 | Vaginal Delivery without CC* | 90,696 | 386 | 0.4% | 6 days |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 5,847 | 29 | 0.5% | 11 days |
| 375 | Vaginal Delivery with OR Procedure Except Sterilization and/or D & C | 85 | 5 | 5.9% | 11 days |
| **Total** | | **139,368** | **622** | **0.4%** | **N/A** |

* Complication or comorbid condition

# PA Regions Used for Trimming Charges

| Region | Counties |
|---|---|
| 1 | Allegheny, Armstrong, Beaver, Fayette, Greene, Washington, Westmoreland and Butler |
| 2 | Cameron, Clarion, Clearfield, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Potter, Venango and Warren |
| 3 | Bedford, Blair, Cambria, Indiana and Somerset |
| 4 | Centre, Clinton, Columbia, Lycoming, Mifflin, Montour, Northumberland, Snyder, Tioga and Union |
| 5 | Adams, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Perry and York |
| 6 | Bradford, Lackawanna, Luzerne, Monroe, Pike, Sullivan, Susquehanna, Wayne and Wyoming |
| 7 | Berks, Carbon, Lehigh, Northampton and Schuylkill |
| 8 | Bucks, Chester, Delaware and Montgomery |
| 9 | Philadelphia |

# Number and Percent of Cases Trimmed for Charge by DRG

## Statewide

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|---|---|---|---|---|---|
| 375[†] | Vaginal Delivery with OR Procedure Except Sterilization and/or D & C | 85 | 6 | 7.1% | $44,826 |

## Region 1

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|---|---|---|---|---|---|
| 370 | C-section with CC* | 1,791 | 56 | 3.1% | $25,129 |
| 371 | C-section without CC* | 3,412 | 57 | 1.7% | $19,039 |
| 372 | Vaginal Delivery with CC* | 2,611 | 63 | 2.4% | $15,880 |
| 373 | Vaginal Delivery without CC* | 17,080 | 195 | 1.1% | $11,645 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 1,368 | 25 | 1.8% | $17,140 |

* Complication or comorbid condition
[†] Data for DRG 375 was trimmed based on statewide rather than regional data due to low case counts

# Number and Percent of Cases Trimmed for Charge by DRG

## Region 2

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Lower Trim Point | Upper Trim Point |
|-----|----------------|-----------------|-------------------------|----------------------------|------------------|------------------|
| 370 | C-section with CC* | 616 | 17 | 2.8% | $1 | $13,607 |
| 371 | C-section without CC* | 1,611 | 22 | 1.4% | $1 | $10,636 |
| 372 | Vaginal Delivery with CC* | 810 | 12 | 1.5% | $1 | $7,991 |
| 373 | Vaginal Delivery without CC* | 7,200 | 55 | 0.8% | $1 | $6,318 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 478 | 14 | 2.9% | $40 | $9,051 |

## Region 3

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|-----|----------------|-----------------|-------------------------|----------------------------|------------------|
| 370 | C-section with CC* | 204 | 4 | 2.0% | $19,342 |
| 371 | C-section without CC* | 829 | 2 | 0.2% | $15,528 |
| 372 | Vaginal Delivery with CC* | 299 | 8 | 2.7% | $9,370 |
| 373 | Vaginal Delivery without CC* | 3,265 | 14 | 0.4% | $6,899 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 423 | 2 | 0.5% | $13,404 |

\* Complication or comorbid condition

# Number and Percent of Cases Trimmed for Charge by DRG

## Region 4

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|-----|----------------|-----------------|-------------------------|-----------------------------|------------------|
| 370 | C-section with CC* | 324 | 12 | 3.7% | $16,545 |
| 371 | C-section without CC* | 1,217 | 7 | 0.6% | $11,249 |
| 372 | Vaginal Delivery with CC* | 515 | 21 | 4.1% | $9,749 |
| 373 | Vaginal Delivery without CC* | 4,067 | 69 | 1.7% | $5,938 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 331 | 4 | 1.2% | $10,893 |

## Region 5

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|-----|----------------|-----------------|-------------------------|-----------------------------|------------------|
| 370 | C-section with CC* | 1,333 | 54 | 4.1% | $18,289 |
| 371 | C-section without CC* | 2,703 | 48 | 1.8% | $13,523 |
| 372 | Vaginal Delivery with CC* | 1,943 | 62 | 3.2% | $10,917 |
| 373 | Vaginal Delivery without CC* | 12,239 | 137 | 1.1% | $7,345 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 995 | 8 | 0.8% | $11,954 |

* Complication or comorbid condition

## Number and Percent of Cases Trimmed for Charge by DRG

### Region 6

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Lower Trim Point | Upper Trim Point |
|---|---|---|---|---|---|---|
| 370 | C-section with CC* | 587 | 22 | 3.7% | N/A | $17,602 |
| 371 | C-section without CC* | 1,440 | 11 | 0.8% | N/A | $15,302 |
| 372 | Vaginal Delivery with CC* | 497 | 10 | 2.0% | N/A | $9,506 |
| 373 | Vaginal Delivery without CC* | 5,458 | 35 | 0.6% | N/A | $7,899 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 268 | 1 | 0.4% | $26 | $11,499 |

### Region 7

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|---|---|---|---|---|---|
| 370 | C-section with CC* | 748 | 44 | 5.9% | $16,790 |
| 371 | C-section without CC* | 1,842 | 37 | 2.0% | $11,865 |
| 372 | Vaginal Delivery with CC* | 1,244 | 28 | 2.3% | $11,992 |
| 373 | Vaginal Delivery without CC* | 8,539 | 57 | 0.7% | $8,371 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 447 | 6 | 1.3% | $12,305 |

* Complication or comorbid condition

# Number and Percent of Cases Trimmed for Charge by DRG

## Region 8

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|---|---|---|---|---|---|
| 370 | C-section with CC* | 1,426 | 57 | 4.0% | $50,428 |
| 371 | C-section without CC* | 4,684 | 47 | 1.0% | $36,020 |
| 372 | Vaginal Delivery with CC* | 2,495 | 39 | 1.6% | $27,178 |
| 373 | Vaginal Delivery without CC* | 18,585 | 98 | 0.5% | $21,991 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 512 | 17 | 3.3% | $24,295 |

## Region 9

| DRG | DRG Description | Number of Cases | Number of Cases Trimmed | Percentage of Cases Trimmed | Upper Trim Point |
|---|---|---|---|---|---|
| 370 | C-section with CC* | 1,726 | 52 | 3.0% | $43,829 |
| 371 | C-section without CC* | 2,980 | 48 | 1.6% | $30,610 |
| 372 | Vaginal Delivery with CC* | 2,853 | 67 | 2.3% | $25,831 |
| 373 | Vaginal Delivery without CC* | 14,263 | 129 | 0.9% | $20,490 |
| 374 | Vaginal Delivery with Sterilization and/or D & C | 1,025 | 14 | 1.4% | $27,765 |
| **Total (9 regions)** | | **139,368** | **1,793** | **1.3%** | **N/A** |

* Complication or comorbid condition