

V16.3 Special Report: Comparative C-section Analysis

AHRQ IQI 33 Primary Cesarean Delivery Rate, Uncomplicated and Society for Maternal-Fetal Medicine (SMFM) Low Risk Cesarean Delivery Rate

I. Introduction

The Society for Maternal-Fetal Medicine (SMFM) has sought to refine the definition of low – risk cesarean delivery rate by modifying two existing measures. The first, PC 02 Cesarean Delivery, is used by the Joint Commission (JC) and is described as the rate of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean birth. The second is the Agency for Healthcare Research and Quality (AHRQ) Inpatient Quality Indicator (IQI) 33: Primary Cesarean Delivery Rate, Uncomplicated.¹ The refined definition was developed by maternal- fetal medicine specialists and is supported by the SMFM Coding and Health Policy Committees. The medical factors identified for exclusion in the JC and AHRQ measures are similar but not identical. The issue addressed by SMFM is that the JC and AHRQ measures do not exclude some well-established contradictions to vaginal birth including conditions that most likely result in cesarean delivery such as HIV infection.

The SMFM analysis included 612 hospitals across 46 states and was conducted on the 2011 National Inpatient Sample using ICD 9 diagnosis and procedure codes. SMFM results showed that more than 90% (n=563) of the hospitals had a lower rate of cesarean section with the SMFM model than when compared with the AHRQ measure. The mean hospital low-risk cesarean rate was lowest in the SMFM measure (12.65%) as compared to the AHRQ rate of 13.29%. The authors see their work as a starting point to getting a clinically valid definition of low risk. They suggest that the SMFM enhanced definition should be adopted into refinement of existing measures to help establish a single, universally agreed upon measure.

This ***V16.3 Special Report*** focuses on the comparison of two rates: AHRQ IQI 33 and the SMFM rate. We chose to look at just two measures because the JC PC 02 rate is calculated on nulliparous women *only* unlike the IQI 33 and SMFM rates. Additionally, most administrative data sets do not include parity so the ability to accurately replicate the JC rate is difficult without supplemental data (vital statistics, EMR or manually abstracted data).

This Report was run on data for the period **10/1/2015-9/30/2016**, and required translation of the SMFM ICD-9 codes to ICD-10 codes. *Appendix A* lists the NPIC/QAS translation of the coded exclusions for the SMFM definition compared to the AHRQ IQI 33 exclusions. (*AHRQ measure specifications for IQI 33 can be found at https://www.qualityindicators.ahrq.gov/Modules/iqi_resources.aspx*)

¹ Armstong, J., Kozhimannil, K., McDermott, P., Saade, G., & Srinivas, S. (2016, February). Comparing variation in hospital rates of cesarean delivery among low-risk women using 3 different measures. *American Journal of Obstetrics and Gynecology*, 153-163. Retrieved from <http://dx.doi.org/10.1016/j.ajog.2015.10.935>

The NPIC/QAS Perinatal Center Data Base shows the same pattern as the SMFM results, with an average AHRQ IQI 33 rate of 17.4% and average SMFM rate of 16.0%.²

Tables and Graphs

Table 1: Comparative C-section Profile displays your data in comparison to your peer subgroup (*subgroup assignment is listed in the lower left corner of the table*) and the entire NPIC/QAS Database. The Table subdivides C-sections into Primary and Repeat. It also includes a display of those cases with a prior uterine scar that had a successful trial of labor (TOL) resulting in a VBAC delivery and those with a failed TOL resulting in a repeat C-section.

C-section rates in Table 1 are displayed in a number of different ways depending on the denominator of total deliveries or cases with or without a prior uterine scar.

Table 2: Primary C-section Analysis displays data for only those cases eligible for a primary C-section - cases without a prior uterine scar. Applying the logic for each measure (AHRQ IQI 33 vs. SMFM Low Risk C-section Rate) results in your hospital's primary C-section rates in comparison to the Subgroup and NPIC/QAS Database average rates. We have also included comparative utilization metrics for each measure: Case Mix Index (CMI), Average Length of Stay (ALOS), Average Charge, CMI Adjusted ALOS and CMI Adjusted Charge.

Graph 1: Comparative Primary C-section Rates: IQI 33 vs. SMFM displays your hospital's rate for each measure with a 95% confidence interval. The graph also displays dashed and solid horizontal lines representing the average rates for your peer subgroup. The confidence interval bars allow you to determine if you are significantly different from the subgroup average rates. The NPIC/QAS Database average rates for each measure are noted in the legend.

Questions regarding this Report should be directed to Sandra Boyle, Director of Data Services (sboyle@npic.org) or Tara Wilcox, Senior Analyst/ Hospital Liaison (twilcox@npic.org). Case lists requests can be sent directly to Ann Webb, Senior Data Base Coordinator (awebb@npic.org).

² For this analysis, the AHRQ IQI 33 subgroup and database averages are calculated at the hospital level (unweighted averages), in order to compare consistently with the SMFM averages. As a result, the IQI 33 averages displayed here may not be the same as those displayed on your quarterly report, which are calculated as case-level (weighted) averages.

V16.3 Special Report: Comparative C-section Analysis
*AHRQ IQI 33 Primary Cesarean Delivery Rate, Uncomplicated and
 Society for Maternal-Fetal Medicine (SMFM) Low Risk Cesarean Delivery Rate*

Table 1: Comparative C-section profile	Hospital SAMPLE	Subgroup Average	Database Average
A. Total Deliveries			
Total Deliveries	2,597	3,731	3,486
Total C-sections	936	1,197	1,180
C-section rate	36.0%	32.9%	32.9%
B. Primary C-sections ¹			
Total Deliveries without a prior uterine scar	2,126	3,099	2,848
Percent of total deliveries	81.9%	82.6%	82.2%
C-section Deliveries without a prior uterine scar (Primary)	514	688	628
Percent of total deliveries without a prior uterine scar	24.2%	22.9%	21.3%
Percent of total deliveries	19.8%	18.9%	17.5%
C. Repeat C-sections ¹			
Total Deliveries with a prior uterine scar	471	632	638
Percent of total deliveries	18.1%	17.4%	17.8%
C-section Deliveries with a prior uterine scar (Repeat)	422	510	552
Percent of total deliveries with a prior uterine scar	89.6%	80.6%	86.4%
Percent of total deliveries	16.3%	14.0%	15.4%
D. VBAC Analysis ²			
VBAC cases (successful TOL)	49	122	86
Percent of total deliveries with a prior uterine scar	10.4%	19.4%	13.6%
Repeat C-sections coded with Failed trial of labor (TOL)	5	11	9
Total Successful and Failed TOL cases	54	133	95
Attempted TOL Rate (Total TOL cases as a percent of cases with prior uterine scar)	11.5%	21.2%	15.0%
Successful TOL Rate (VBAC as a percent of total TOL cases)	90.7%	91.8%	89.7%

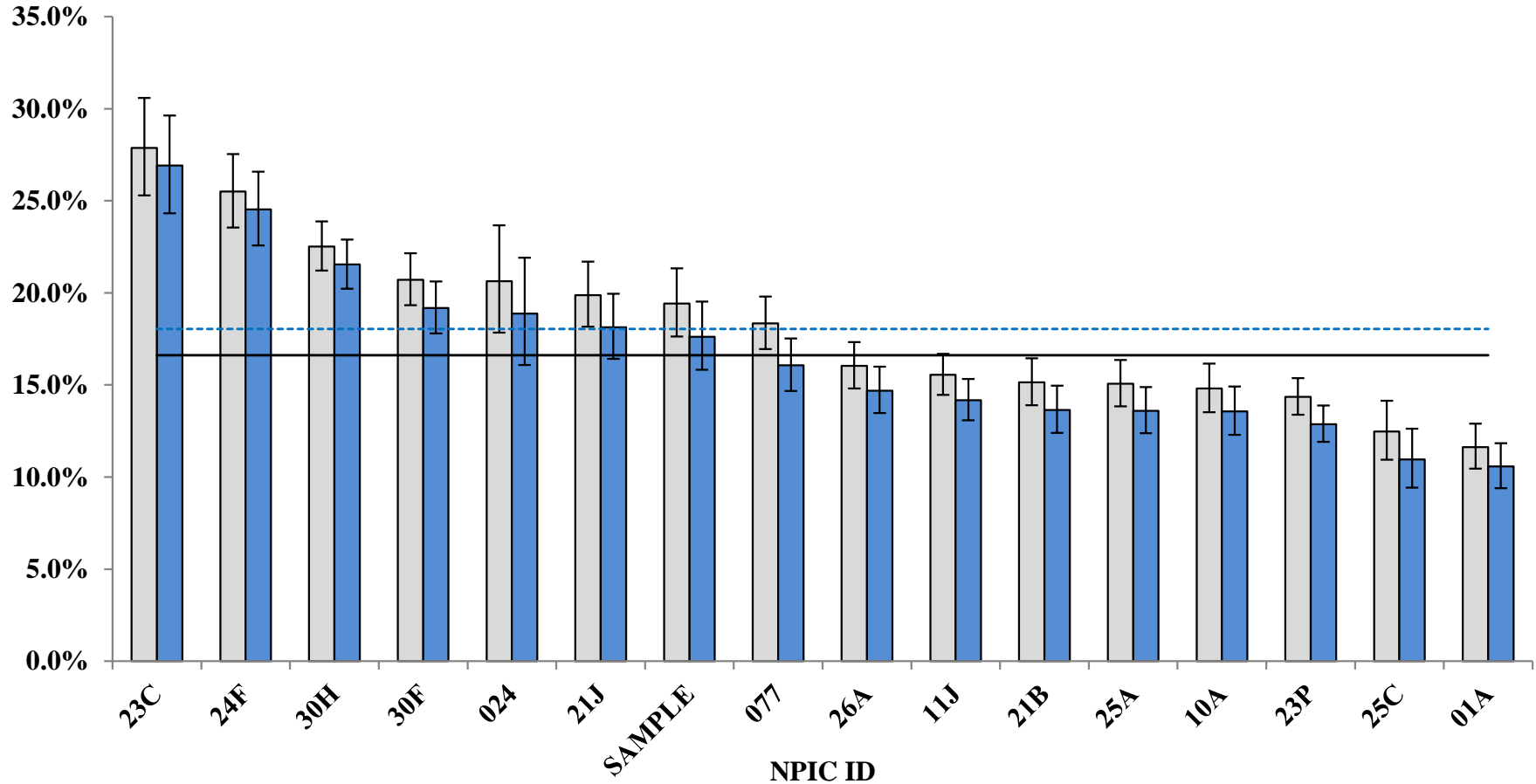
¹ Prior Uterine Scar ICD-10 code: **O34.21x** - Maternal care for low transverse scar from previous cesarean delivery

² TOL ICD-10 codes: **O66.40** - Failed trial of labor, unspecified; **O66.41** - Failed attempted vaginal birth after previous cesarean delivery

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Table 2: Primary C-section Analysis	Hospital SAMPLE	Subgroup Average	Database Average
A. C-section Deliveries without a prior uterine scar (Primary)	514	688	628
Percent of total deliveries	19.8%	18.9%	17.5%
Percent of total c-section deliveries	54.9%	57.2%	53.2%
Percent of deliveries without a prior uterine scar	24.2%	22.9%	21.3%
B. AHRQ IQI 33: Primary Cesarean Delivery Rate, Uncomplicated			
Numerator	342	467	453
Denominator	1,761	2,690	2,515
Rate	19.4%	18.0%	17.4%
CMI	0.6896	0.6913	0.6614
ALOS	3.6	4.6	4.0
CMI Adjusted ALOS	5.3	6.7	6.0
Average Charge	\$19,915	\$31,666	\$26,094
CMI Adjusted Average Charge	\$28,879	\$45,810	\$39,449
C. Society for Maternal-Fetal Medicine (SMFM) Low Risk C-section Rate			
Numerator	296	413	404
Denominator	1,680	2,592	2,424
Rate	17.6%	16.6%	16.0%
CMI	0.6866	0.6850	0.6561
ALOS	3.8	4.5	3.9
CMI Adjusted ALOS	5.5	6.6	6.0
Average Charge	\$20,305	\$31,247	\$25,935
CMI Adjusted Average Charge	\$29,576	\$45,617	\$39,531

Graph 1: Comparative Primary C-section Rates - IQI 33 vs. SMFM
NPIC ID: SAMPLE



Hospital IQI33 Rate (19.4%)
 Hospital SMFM Rate (17.6%)

Subgroup AR IQI33 Average Rate (18.0%)
 Subgroup AR SMFM Average Rate (16.6%)

Not displayed on graph:

NPIC Database IQI33 Average Rate: 17.4%
NPIC Database SMFM Average Rate: 16.0%

**Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions***

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Conduct of labor	O66.5	Attempted application of vacuum extractor and forceps	X	
Fetal Factors	O33.6XX0	Matern care for disproprt due to hydrocephalic fetus, unsp	X	
Fetal Factors	O33.6XX1	Matern care for disproprt due to hydrocephalic fetus, fts1	X	
Fetal Factors	O33.6XX2	Matern care for disproprt due to hydrocephalic fetus, fts2	X	
Fetal Factors	O33.6XX3	Matern care for disproprt due to hydrocephalic fetus, fts3	X	
Fetal Factors	O33.6XX4	Matern care for disproprt due to hydrocephalic fetus, fts4	X	
Fetal Factors	O33.6XX5	Matern care for disproprt due to hydrocephalic fetus, fts5	X	
Fetal Factors	O33.6XX9	Maternal care for disproprt due to hydrocephalic fetus, oth	X	
Fetal Factors	O33.7	Maternal care for disproportion due to oth fetal deformities	X	
Fetal factors	O35.0XX0	Maternal care for (suspected) cnsl malform in fetus, unsp	X	
Fetal factors	O35.0XX1	Maternal care for (suspected) cnsl malform in fetus, fetus 1	X	
Fetal factors	O35.0XX2	Maternal care for (suspected) cnsl malform in fetus, fetus 2	X	
Fetal factors	O35.0XX3	Maternal care for (suspected) cnsl malform in fetus, fetus 3	X	
Fetal factors	O35.0XX4	Maternal care for (suspected) cnsl malform in fetus, fetus 4	X	
Fetal factors	O35.0XX5	Maternal care for (suspected) cnsl malform in fetus, fetus 5	X	
Fetal factors	O35.0XX9	Maternal care for (suspected) cnsl malform in fetus, oth	X	
Malpresentation	O32.1XX0	Maternal care for breech presentation, unsp	X	X
Malpresentation	O32.1XX1	Maternal care for breech presentation, fetus 1	X	X
Malpresentation	O32.1XX2	Maternal care for breech presentation, fetus 2	X	X
Malpresentation	O32.1XX3	Maternal care for breech presentation, fetus 3	X	X
Malpresentation	O32.1XX4	Maternal care for breech presentation, fetus 4	X	X
Malpresentation	O32.1XX5	Maternal care for breech presentation, fetus 5	X	X
Malpresentation	O32.1XX9	Maternal care for breech presentation, other fetus	X	X
Malpresentation	O32.6XX0	Maternal care for compound presentation, unsp	X	
Malpresentation	O32.2XX0	Maternal care for transverse and oblique lie, unsp	X	X
Malpresentation	O32.2XX1	Maternal care for transverse and oblique lie, fetus 1	X	X
Malpresentation	O32.2XX2	Maternal care for transverse and oblique lie, fetus 2	X	X
Malpresentation	O32.2XX3	Maternal care for transverse and oblique lie, fetus 3	X	X
Malpresentation	O32.2XX4	Maternal care for transverse and oblique lie, fetus 4	X	X

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Malpresentation	O32.2XX5	Maternal care for transverse and oblique lie, fetus 5	X	X
Malpresentation	O32.2XX9	Maternal care for transverse and oblique lie, other fetus	X	X
Malpresentation	O32.3XX0	Maternal care for face, brow and chin presentation, unsp	X	X
Malpresentation	O32.3XX1	Maternal care for face, brow and chin presentation, fetus 1	X	X
Malpresentation	O32.3XX2	Maternal care for face, brow and chin presentation, fetus 2	X	X
Malpresentation	O32.3XX3	Maternal care for face, brow and chin presentation, fetus 3	X	X
Malpresentation	O32.3XX4	Maternal care for face, brow and chin presentation, fetus 4	X	X
Malpresentation	O32.3XX5	Maternal care for face, brow and chin presentation, fetus 5	X	X
Malpresentation	O32.3XX9	Maternal care for face, brow and chin presentation, oth	X	X
Malpresentation	O32.3XX0	Maternal care for face, brow and chin presentation, unsp	X	X
Malpresentation	O32.3XX1	Maternal care for face, brow and chin presentation, fetus 1	X	X
Malpresentation	O32.3XX2	Maternal care for face, brow and chin presentation, fetus 2	X	X
Malpresentation	O32.3XX3	Maternal care for face, brow and chin presentation, fetus 3	X	X
Malpresentation	O32.3XX4	Maternal care for face, brow and chin presentation, fetus 4	X	X
Malpresentation	O32.3XX5	Maternal care for face, brow and chin presentation, fetus 5	X	X
Malpresentation	O32.3XX9	Maternal care for face, brow and chin presentation, oth	X	X
Malpresentation	O32.8XX0	Maternal care for oth malpresentation of fetus, unsp	X	
Malpresentation	O32.9XX0	Maternal care for malpresentation of fetus, unsp, unsp	X	X
Malpresentation	O32.9XX1	Maternal care for malpresentation of fetus, unsp, fetus 1	X	X
Malpresentation	O32.9XX2	Maternal care for malpresentation of fetus, unsp, fetus 2	X	X
Malpresentation	O32.9XX3	Maternal care for malpresentation of fetus, unsp, fetus 3	X	X
Malpresentation	O32.9XX4	Maternal care for malpresentation of fetus, unsp, fetus 4	X	X
Malpresentation	O32.9XX5	Maternal care for malpresentation of fetus, unsp, fetus 5	X	X
Malpresentation	O32.9XX9	Maternal care for malpresentation of fetus, unsp, oth fetus	X	X
Malpresentation	O64.0XX0	Obstructed labor due to incmpl rotation of fetal head, unsp	X	
Malpresentation	O64.0XX1	Obst labor due to incmpl rotation of fetal head, fetus 1	X	
Malpresentation	O64.0XX2	Obst labor due to incmpl rotation of fetal head, fetus 2	X	
Malpresentation	O64.0XX3	Obst labor due to incmpl rotation of fetal head, fetus 3	X	
Malpresentation	O64.0XX4	Obst labor due to incmpl rotation of fetal head, fetus 4	X	

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Malpresentation	O64.0XX5	Obst labor due to incompl rotation of fetal head, fetus 5	X	
Malpresentation	O64.0XX9	Obstructed labor due to incompl rotation of fetal head, oth	X	
Malpresentation	O64.1XX0	Obstructed labor due to breech presentation, unsp	X	X
Malpresentation	O64.1XX1	Obstructed labor due to breech presentation, fetus 1	X	X
Malpresentation	O64.1XX2	Obstructed labor due to breech presentation, fetus 2	X	X
Malpresentation	O64.1XX3	Obstructed labor due to breech presentation, fetus 3	X	X
Malpresentation	O64.1XX4	Obstructed labor due to breech presentation, fetus 4	X	X
Malpresentation	O64.1XX5	Obstructed labor due to breech presentation, fetus 5	X	X
Malpresentation	O64.1XX9	Obstructed labor due to breech presentation, other fetus	X	X
Malpresentation	O64.2XX0	Obstructed labor due to face presentation, unsp	X	X
Malpresentation	O64.2XX1	Obstructed labor due to face presentation, fetus 1	X	X
Malpresentation	O64.2XX2	Obstructed labor due to face presentation, fetus 2	X	X
Malpresentation	O64.2XX3	Obstructed labor due to face presentation, fetus 3	X	X
Malpresentation	O64.2XX4	Obstructed labor due to face presentation, fetus 4	X	X
Malpresentation	O64.2XX5	Obstructed labor due to face presentation, fetus 5	X	X
Malpresentation	O64.2XX9	Obstructed labor due to face presentation, other fetus	X	X
Malpresentation	O64.3XX0	Obstructed labor due to brow presentation, unsp	X	X
Malpresentation	O64.3XX1	Obstructed labor due to brow presentation, fetus 1	X	X
Malpresentation	O64.3XX2	Obstructed labor due to brow presentation, fetus 2	X	X
Malpresentation	O64.3XX3	Obstructed labor due to brow presentation, fetus 3	X	X
Malpresentation	O64.3XX4	Obstructed labor due to brow presentation, fetus 4	X	X
Malpresentation	O64.3XX5	Obstructed labor due to brow presentation, fetus 5	X	X
Malpresentation	O64.3XX9	Obstructed labor due to brow presentation, other fetus	X	X
Maternal factors	B20	Human immunodeficiency virus [HIV] disease	X	
Maternal factors	O15.00	Eclampsia complicating pregnancy, unspecified trimester	X	
Maternal factors	O15.02	Eclampsia complicating pregnancy, second trimester	X	
Maternal factors	O15.03	Eclampsia complicating pregnancy, third trimester	X	
Maternal factors	O15.1	Eclampsia complicating labor	X	
Maternal factors	O15.2	Eclampsia complicating the puerperium	X	

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Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Maternal factors	O15.9	Eclampsia, unspecified as to time period	X	
Maternal factors	O44.01	Complete placenta previa NOS or without hemor, first tri	X	
Maternal factors	O44.02	Complete placenta previa NOS or without hemor, second tri	X	
Maternal factors	O44.03	Complete placenta previa NOS or without hemor, third tri	X	
Maternal factors	O44.11	Complete placenta previa with hemorrhage, first trimester	X	
Maternal factors	O44.12	Complete placenta previa with hemorrhage, second trimester	X	
Maternal factors	O44.13	Complete placenta previa with hemorrhage, third trimester	X	
Maternal factors	O99.411	Diseases of the circ sys comp pregnancy, first trimester	X	
Maternal factors	O99.412	Diseases of the circ sys comp pregnancy, second trimester	X	
Maternal factors	O99.413	Diseases of the circ sys comp pregnancy, third trimester	X	
Maternal factors	O99.419	Diseases of the circ sys comp pregnancy, unsp trimester	X	
Maternal factors	O99.42	Diseases of the circulatory system complicating childbirth	X	
Maternal factors	O99.43	Diseases of the circ sys complicating the puerperium	X	
Maternal factors	Z21	Asymptomatic human immunodeficiency virus infection status	X	
Multiple gestation	O30.001	Twin preg, unsp num plcnta & amnio sacs, first trimester	X	X
Multiple gestation	O30.002	Twin preg, unsp num plcnta & amnio sacs, second trimester	X	X
Multiple gestation	O30.003	Twin preg, unsp num plcnta & amnio sacs, third trimester	X	X
Multiple gestation	O30.009	Twin pregnancy, unsp num plcnta & amnio sacs, unsp trimester	X	X
Multiple gestation	O30.011	Twin pregnancy, monochorionic/monoamniotic, first trimester	X	X
Multiple gestation	O30.012	Twin pregnancy, monochorionic/monoamniotic, second trimester	X	X
Multiple gestation	O30.013	Twin pregnancy, monochorionic/monoamniotic, third trimester	X	X
Multiple gestation	O30.019	Twin pregnancy, monochorionic/monoamniotic, unsp trimester	X	X
Multiple gestation	O30.021	Conjoined twin pregnancy, first trimester	X	X
Multiple gestation	O30.022	Conjoined twin pregnancy, second trimester	X	X
Multiple gestation	O30.023	Conjoined twin pregnancy, third trimester	X	X
Multiple gestation	O30.029	Conjoined twin pregnancy, unspecified trimester	X	X
Multiple gestation	O30.031	Twin pregnancy, monochorionic/diamniotic, first trimester	X	X
Multiple gestation	O30.032	Twin pregnancy, monochorionic/diamniotic, second trimester	X	X
Multiple gestation	O30.033	Twin pregnancy, monochorionic/diamniotic, third trimester	X	X

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Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Multiple gestation	O30.039	Twin pregnancy, monochorionic/diamniotic, unsp trimester	X	X
Multiple gestation	O30.041	Twin pregnancy, dichorionic/diamniotic, first trimester	X	X
Multiple gestation	O30.042	Twin pregnancy, dichorionic/diamniotic, second trimester	X	X
Multiple gestation	O30.043	Twin pregnancy, dichorionic/diamniotic, third trimester	X	X
Multiple gestation	O30.049	Twin pregnancy, dichorionic/diamniotic, unsp trimester	X	X
Multiple gestation	O30.091	Twin preg, unable to dtrm num plcnta & amnio sacs, first tri	X	X
Multiple gestation	O30.092	Twin preg, unable to dtrm num plcnta & amnio sacs, 2nd tri	X	X
Multiple gestation	O30.093	Twin preg, unable to dtrm num plcnta & amnio sacs, third tri	X	X
Multiple gestation	O30.099	Twin preg, unable to dtrm num plcnta & amnio sacs, unsp tri	X	X
Multiple gestation	O30.101	Triplet preg, unsp num plcnta & amnio sacs, first trimester	X	X
Multiple gestation	O30.102	Triplet preg, unsp num plcnta & amnio sacs, second trimester	X	X
Multiple gestation	O30.103	Triplet preg, unsp num plcnta & amnio sacs, third trimester	X	X
Multiple gestation	O30.109	Triplet preg, unsp num plcnta & amnio sacs, unsp trimester	X	X
Multiple gestation	O30.111	Triplet preg w two or more monochorionic fetuses, first tri	X	X
Multiple gestation	O30.112	Triplet preg w two or more monochorionic fetuses, second tri	X	X
Multiple gestation	O30.113	Triplet preg w two or more monochorionic fetuses, third tri	X	X
Multiple gestation	O30.119	Triplet preg w two or more monochorionic fetuses, unsp tri	X	X
Multiple gestation	O30.121	Triplet preg w two or more monoamnio fetuses, first tri	X	X
Multiple gestation	O30.122	Triplet preg w two or more monoamnio fetuses, second tri	X	X
Multiple gestation	O30.123	Triplet preg w two or more monoamnio fetuses, third tri	X	X
Multiple gestation	O30.129	Triplet preg w two or more monoamnio fetuses, unsp trimester	X	X
Multiple gestation	O30.191	Trp preg, unable to dtrm num plcnta & amnio sacs, first tri	X	X
Multiple gestation	O30.192	Trp preg, unable to dtrm num plcnta & amnio sacs, second tri	X	X
Multiple gestation	O30.193	Trp preg, unable to dtrm num plcnta & amnio sacs, third tri	X	X
Multiple gestation	O30.199	Trp preg, unable to dtrm num plcnta & amnio sacs, unsp tri	X	X
Multiple gestation	O30.201	Quad preg, unsp num plcnta & amnio sacs, first trimester	X	X
Multiple gestation	O30.202	Quad preg, unsp num plcnta & amnio sacs, second trimester	X	X
Multiple gestation	O30.203	Quad preg, unsp num plcnta & amnio sacs, third trimester	X	X
Multiple gestation	O30.209	Quad pregnancy, unsp num plcnta & amnio sacs, unsp trimester	X	X

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Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Multiple gestation	O30.211	Quad preg w two or more monochorionic fetuses, first tri	X	X
Multiple gestation	O30.212	Quad preg w two or more monochorionic fetuses, second tri	X	X
Multiple gestation	O30.213	Quad preg w two or more monochorionic fetuses, third tri	X	X
Multiple gestation	O30.219	Quad preg w two or more monochorionic fetuses, unsp tri	X	X
Multiple gestation	O30.221	Quad preg w two or more monoamnio fetuses, first trimester	X	X
Multiple gestation	O30.222	Quad preg w two or more monoamnio fetuses, second trimester	X	X
Multiple gestation	O30.223	Quad preg w two or more monoamnio fetuses, third trimester	X	X
Multiple gestation	O30.229	Quad preg w two or more monoamnio fetuses, unsp trimester	X	X
Multiple gestation	O30.291	Quad preg, unable to dtrm num plcnta & amnio sacs, first tri	X	X
Multiple gestation	O30.292	Quad preg, unable to dtrm num plcnta & amnio sacs, 2nd tri	X	X
Multiple gestation	O30.293	Quad preg, unable to dtrm num plcnta & amnio sacs, third tri	X	X
Multiple gestation	O30.299	Quad preg, unable to dtrm num plcnta & amnio sacs, unsp tri	X	X
Multiple gestation	O30.801	Oth multiple gest, unsp num plcnta & amnio sacs, first tri	X	X
Multiple gestation	O30.802	Oth multiple gest, unsp num plcnta & amnio sacs, second tri	X	X
Multiple gestation	O30.803	Oth multiple gest, unsp num plcnta & amnio sacs, third tri	X	X
Multiple gestation	O30.809	Oth multiple gest, unsp num plcnta & amnio sacs, unsp tri	X	X
Multiple gestation	O30.811	Oth mult gest w two or more monochorionic fetuses, first tri	X	X
Multiple gestation	O30.812	Oth mult gest w two or more monochorionic fetuses, 2nd tri	X	X
Multiple gestation	O30.813	Oth mult gest w two or more monochorionic fetuses, third tri	X	X
Multiple gestation	O30.819	Oth mult gest w two or more monochorionic fetuses, unsp tri	X	X
Multiple gestation	O30.821	Oth multiple gest w two or more monoamnio fetuses, first tri	X	X
Multiple gestation	O30.822	Oth mult gest w two or more monoamnio fetuses, second tri	X	X
Multiple gestation	O30.823	Oth multiple gest w two or more monoamnio fetuses, third tri	X	X
Multiple gestation	O30.829	Oth multiple gest w two or more monoamnio fetuses, unsp tri	X	X
Multiple gestation	O30.891	Oth mult gest, unab to dtrm num plcnta & amnio sacs, 1st tri	X	X
Multiple gestation	O30.892	Oth mult gest, unab to dtrm num plcnta & amnio sacs, 2nd tri	X	X
Multiple gestation	O30.893	Oth mult gest, unab to dtrm num plcnta & amnio sacs, 3rd tri	X	X
Multiple gestation	O30.899	Oth mult gest, unab to dtrm num plcnta & amnio sacs, unsp tri	X	X
Multiple gestation	O30.90	Multiple gestation, unspecified, unspecified trimester	X	X

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Multiple gestation	O30.91	Multiple gestation, unspecified, first trimester	X	X
Multiple gestation	O30.92	Multiple gestation, unspecified, second trimester	X	X
Multiple gestation	O30.93	Multiple gestation, unspecified, third trimester	X	X
Multiple gestation	O31.10X0	Cont preg aft spon abort of one fts or more, unsp tri, unsp	X	X
Multiple gestation	O31.10X1	Cont preg aft spon abort of one fts or more, unsp tri, fts1	X	X
Multiple gestation	O31.10X2	Cont preg aft spon abort of one fts or more, unsp tri, fts2	X	X
Multiple gestation	O31.10X3	Cont preg aft spon abort of one fts or more, unsp tri, fts3	X	X
Multiple gestation	O31.10X4	Cont preg aft spon abort of one fts or more, unsp tri, fts4	X	X
Multiple gestation	O31.10X5	Cont preg aft spon abort of one fts or more, unsp tri, fts5	X	X
Multiple gestation	O31.10X9	Cont preg aft spon abort of one fetus or more, unsp tri, oth	X	X
Multiple gestation	O31.11X0	Cont preg aft spon abort of one fts or more, first tri, unsp	X	X
Multiple gestation	O31.11X1	Cont preg aft spon abort of one fts or more, first tri, fts1	X	X
Multiple gestation	O31.11X2	Cont preg aft spon abort of one fts or more, first tri, fts2	X	X
Multiple gestation	O31.11X3	Cont preg aft spon abort of one fts or more, first tri, fts3	X	X
Multiple gestation	O31.11X4	Cont preg aft spon abort of one fts or more, first tri, fts4	X	X
Multiple gestation	O31.11X5	Cont preg aft spon abort of one fts or more, first tri, fts5	X	X
Multiple gestation	O31.11X9	Cont preg aft spon abort of one fts or more, first tri, oth	X	X
Multiple gestation	O31.12X0	Cont preg aft spon abort of one fetus or more, 2nd tri, unsp	X	X
Multiple gestation	O31.12X1	Cont preg aft spon abort of one fetus or more, 2nd tri, fts1	X	X
Multiple gestation	O31.12X2	Cont preg aft spon abort of one fetus or more, 2nd tri, fts2	X	X
Multiple gestation	O31.12X3	Cont preg aft spon abort of one fetus or more, 2nd tri, fts3	X	X
Multiple gestation	O31.12X4	Cont preg aft spon abort of one fetus or more, 2nd tri, fts4	X	X
Multiple gestation	O31.12X5	Cont preg aft spon abort of one fetus or more, 2nd tri, fts5	X	X
Multiple gestation	O31.12X9	Cont preg aft spon abort of one fetus or more, 2nd tri, oth	X	X
Multiple gestation	O31.13X0	Cont preg aft spon abort of one fts or more, third tri, unsp	X	X
Multiple gestation	O31.13X1	Cont preg aft spon abort of one fts or more, third tri, fts1	X	X
Multiple gestation	O31.13X2	Cont preg aft spon abort of one fts or more, third tri, fts2	X	X
Multiple gestation	O31.13X3	Cont preg aft spon abort of one fts or more, third tri, fts3	X	X
Multiple gestation	O31.13X4	Cont preg aft spon abort of one fts or more, third tri, fts4	X	X

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Multiple gestation	O31.13X5	Cont preg aft spon abort of one fts or more, third tri, fts5	X	X
Multiple gestation	O31.13X9	Cont preg aft spon abort of one fts or more, third tri, oth	X	X
Multiple gestation	O31.20X0	Cont preg aft uterin dth of one fts or more, unsp tri, unsp	X	X
Multiple gestation	O31.20X1	Cont preg aft uterin dth of one fts or more, unsp tri, fts1	X	X
Multiple gestation	O31.20X2	Cont preg aft uterin dth of one fts or more, unsp tri, fts2	X	X
Multiple gestation	O31.20X3	Cont preg aft uterin dth of one fts or more, unsp tri, fts3	X	X
Multiple gestation	O31.20X4	Cont preg aft uterin dth of one fts or more, unsp tri, fts4	X	X
Multiple gestation	O31.20X5	Cont preg aft uterin dth of one fts or more, unsp tri, fts5	X	X
Multiple gestation	O31.20X9	Cont preg aft uterin dth of one fetus or more, unsp tri, oth	X	X
Multiple gestation	O31.21X0	Cont preg aft uterin dth of one fts or more, first tri, unsp	X	X
Multiple gestation	O31.21X1	Cont preg aft uterin dth of one fts or more, first tri, fts1	X	X
Multiple gestation	O31.21X2	Cont preg aft uterin dth of one fts or more, first tri, fts2	X	X
Multiple gestation	O31.21X3	Cont preg aft uterin dth of one fts or more, first tri, fts3	X	X
Multiple gestation	O31.21X4	Cont preg aft uterin dth of one fts or more, first tri, fts4	X	X
Multiple gestation	O31.21X5	Cont preg aft uterin dth of one fts or more, first tri, fts5	X	X
Multiple gestation	O31.21X9	Cont preg aft uterin dth of one fts or more, first tri, oth	X	X
Multiple gestation	O31.22X0	Cont preg aft uterin dth of one fetus or more, 2nd tri, unsp	X	X
Multiple gestation	O31.22X1	Cont preg aft uterin dth of one fetus or more, 2nd tri, fts1	X	X
Multiple gestation	O31.22X2	Cont preg aft uterin dth of one fetus or more, 2nd tri, fts2	X	X
Multiple gestation	O31.22X3	Cont preg aft uterin dth of one fetus or more, 2nd tri, fts3	X	X
Multiple gestation	O31.22X4	Cont preg aft uterin dth of one fetus or more, 2nd tri, fts4	X	X
Multiple gestation	O31.22X5	Cont preg aft uterin dth of one fetus or more, 2nd tri, fts5	X	X
Multiple gestation	O31.22X9	Cont preg aft uterin dth of one fetus or more, 2nd tri, oth	X	X
Multiple gestation	O31.23X0	Cont preg aft uterin dth of one fts or more, third tri, unsp	X	X
Multiple gestation	O31.23X1	Cont preg aft uterin dth of one fts or more, third tri, fts1	X	X
Multiple gestation	O31.23X2	Cont preg aft uterin dth of one fts or more, third tri, fts2	X	X
Multiple gestation	O31.23X3	Cont preg aft uterin dth of one fts or more, third tri, fts3	X	X
Multiple gestation	O31.23X4	Cont preg aft uterin dth of one fts or more, third tri, fts4	X	X
Multiple gestation	O31.23X5	Cont preg aft uterin dth of one fts or more, third tri, fts5	X	X

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Multiple gestation	O31.23X9	Cont preg aft uterin dth of one fts or more, third tri, oth	X	X
Multiple gestation	O31.30X0	Cont preg aft elctv fetl rdct of 1 fts or more,unsp tri,unsp	X	
Multiple gestation	O31.30X1	Cont preg aft elctv fetl rdct of 1 fts or more,unsp tri,fts1	X	
Multiple gestation	O31.30X2	Cont preg aft elctv fetl rdct of 1 fts or more,unsp tri,fts2	X	
Multiple gestation	O31.30X3	Cont preg aft elctv fetl rdct of 1 fts or more,unsp tri,fts3	X	
Multiple gestation	O31.30X4	Cont preg aft elctv fetl rdct of 1 fts or more,unsp tri,fts4	X	
Multiple gestation	O31.30X5	Cont preg aft elctv fetl rdct of 1 fts or more,unsp tri,fts5	X	
Multiple gestation	O31.30X9	Cont preg aft elctv fetl rdct of 1 fts or more,unsp tri, oth	X	
Multiple gestation	O31.31X0	Cont preg aft elctv fetl rdct of 1 fts or more,1st tri, unsp	X	
Multiple gestation	O31.31X1	Cont preg aft elctv fetl rdct of 1 fts or more,1st tri, fts1	X	
Multiple gestation	O31.31X2	Cont preg aft elctv fetl rdct of 1 fts or more,1st tri, fts2	X	
Multiple gestation	O31.31X3	Cont preg aft elctv fetl rdct of 1 fts or more,1st tri, fts3	X	
Multiple gestation	O31.31X4	Cont preg aft elctv fetl rdct of 1 fts or more,1st tri, fts4	X	
Multiple gestation	O31.31X5	Cont preg aft elctv fetl rdct of 1 fts or more,1st tri, fts5	X	
Multiple gestation	O31.31X9	Cont preg aft elctv fetl rdct of 1 fts or more, 1st tri, oth	X	
Multiple gestation	O31.32X0	Cont preg aft elctv fetl rdct of 1 fts or more,2nd tri, unsp	X	
Multiple gestation	O31.32X1	Cont preg aft elctv fetl rdct of 1 fts or more,2nd tri, fts1	X	
Multiple gestation	O31.32X2	Cont preg aft elctv fetl rdct of 1 fts or more,2nd tri, fts2	X	
Multiple gestation	O31.32X3	Cont preg aft elctv fetl rdct of 1 fts or more,2nd tri, fts3	X	
Multiple gestation	O31.32X4	Cont preg aft elctv fetl rdct of 1 fts or more,2nd tri, fts4	X	
Multiple gestation	O31.32X5	Cont preg aft elctv fetl rdct of 1 fts or more,2nd tri, fts5	X	
Multiple gestation	O31.32X9	Cont preg aft elctv fetl rdct of 1 fts or more, 2nd tri, oth	X	
Multiple gestation	O31.33X0	Cont preg aft elctv fetl rdct of 1 fts or more,3rd tri, unsp	X	
Multiple gestation	O31.33X1	Cont preg aft elctv fetl rdct of 1 fts or more,3rd tri, fts1	X	
Multiple gestation	O31.33X2	Cont preg aft elctv fetl rdct of 1 fts or more,3rd tri, fts2	X	
Multiple gestation	O31.33X3	Cont preg aft elctv fetl rdct of 1 fts or more,3rd tri, fts3	X	
Multiple gestation	O31.33X4	Cont preg aft elctv fetl rdct of 1 fts or more,3rd tri, fts4	X	
Multiple gestation	O31.33X5	Cont preg aft elctv fetl rdct of 1 fts or more,3rd tri, fts5	X	
Multiple gestation	O31.33X9	Cont preg aft elctv fetl rdct of 1 fts or more, 3rd tri, oth	X	

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Multiple gestation	O31.8X10	Oth comp specific to multiple gest, first trimester, unsp	X	X
Multiple gestation	O31.8X11	Oth comp specific to multiple gest, first trimester, fetus 1	X	X
Multiple gestation	O31.8X12	Oth comp specific to multiple gest, first trimester, fetus 2	X	X
Multiple gestation	O31.8X13	Oth comp specific to multiple gest, first trimester, fetus 3	X	X
Multiple gestation	O31.8X14	Oth comp specific to multiple gest, first trimester, fetus 4	X	X
Multiple gestation	O31.8X15	Oth comp specific to multiple gest, first trimester, fetus 5	X	X
Multiple gestation	O31.8X19	Oth comp specific to multiple gest, first trimester, oth	X	X
Multiple gestation	O31.8X20	Oth comp specific to multiple gest, second trimester, unsp	X	X
Multiple gestation	O31.8X21	Oth comp specific to multiple gest, second tri, fetus 1	X	X
Multiple gestation	O31.8X22	Oth comp specific to multiple gest, second tri, fetus 2	X	X
Multiple gestation	O31.8X23	Oth comp specific to multiple gest, second tri, fetus 3	X	X
Multiple gestation	O31.8X24	Oth comp specific to multiple gest, second tri, fetus 4	X	X
Multiple gestation	O31.8X25	Oth comp specific to multiple gest, second tri, fetus 5	X	X
Multiple gestation	O31.8X29	Oth comp specific to multiple gest, second trimester, oth	X	X
Multiple gestation	O31.8X30	Oth comp specific to multiple gest, third trimester, unsp	X	X
Multiple gestation	O31.8X31	Oth comp specific to multiple gest, third trimester, fetus 1	X	X
Multiple gestation	O31.8X32	Oth comp specific to multiple gest, third trimester, fetus 2	X	X
Multiple gestation	O31.8X33	Oth comp specific to multiple gest, third trimester, fetus 3	X	X
Multiple gestation	O31.8X34	Oth comp specific to multiple gest, third trimester, fetus 4	X	X
Multiple gestation	O31.8X35	Oth comp specific to multiple gest, third trimester, fetus 5	X	X
Multiple gestation	O31.8X39	Oth comp specific to multiple gest, third trimester, oth	X	X
Multiple gestation	O31.8X90	Oth comp specific to multiple gest, unsp trimester, unsp	X	X
Multiple gestation	O31.8X91	Oth comp specific to multiple gest, unsp trimester, fetus 1	X	X
Multiple gestation	O31.8X92	Oth comp specific to multiple gest, unsp trimester, fetus 2	X	X
Multiple gestation	O31.8X93	Oth comp specific to multiple gest, unsp trimester, fetus 3	X	X
Multiple gestation	O31.8X94	Oth comp specific to multiple gest, unsp trimester, fetus 4	X	X
Multiple gestation	O31.8X95	Oth comp specific to multiple gest, unsp trimester, fetus 5	X	X
Multiple gestation	O31.8X99	Oth comp specific to multiple gestation, unsp trimester, oth	X	X
Multiple gestation	O66.1	Obstructed labor due to locked twins	X	X

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Multiple gestation	O66.6	Obstructed labor due to other multiple fetuses	X	X
Multiple gestation	P01.5	Newborn affected by multiple pregnancy	X	X
Multiple gestation	Z37.2	Twins, both liveborn	X	X
Multiple gestation	Z37.3	Twins, one liveborn and one stillborn	X	X
Multiple gestation	Z37.4	Twins, both stillborn	X	X
Multiple gestation	Z37.50	Multiple births, unspecified, all liveborn	X	X
Multiple gestation	Z37.51	Triplets, all liveborn	X	X
Multiple gestation	Z37.52	Quadruplets, all liveborn	X	X
Multiple gestation	Z37.53	Quintuplets, all liveborn	X	X
Multiple gestation	Z37.54	Sextuplets, all liveborn	X	X
Multiple gestation	Z37.59	Other multiple births, all liveborn	X	X
Multiple gestation	Z37.60	Multiple births, unspecified, some liveborn	X	X
Multiple gestation	Z37.61	Triplets, some liveborn	X	X
Multiple gestation	Z37.62	Quadruplets, some liveborn	X	X
Multiple gestation	Z37.63	Quintuplets, some liveborn	X	X
Multiple gestation	Z37.64	Sextuplets, some liveborn	X	X
Multiple gestation	Z37.69	Other multiple births, some liveborn	X	X
Multiple gestation	Z37.7	Other multiple births, all stillborn	X	X
Preterm birth	O60.10X0	Preterm labor w preterm delivery, unsp trimester, unsp	X	X
Preterm birth	O60.10X1	Preterm labor with preterm delivery, unsp trimester, fetus 1	X	X
Preterm birth	O60.10X2	Preterm labor with preterm delivery, unsp trimester, fetus 2	X	X
Preterm birth	O60.10X3	Preterm labor with preterm delivery, unsp trimester, fetus 3	X	X
Preterm birth	O60.10X4	Preterm labor with preterm delivery, unsp trimester, fetus 4	X	X
Preterm birth	O60.10X5	Preterm labor with preterm delivery, unsp trimester, fetus 5	X	X
Preterm birth	O60.10X9	Preterm labor w preterm delivery, unsp trimester, oth fetus	X	X
Preterm birth	O60.12X0	Preterm labor second tri w preterm delivery second tri, unsp	X	X
Preterm birth	O60.12X1	Preterm labor second tri w preterm del second tri, fetus 1	X	X
Preterm birth	O60.12X2	Preterm labor second tri w preterm del second tri, fetus 2	X	X
Preterm birth	O60.12X3	Preterm labor second tri w preterm del second tri, fetus 3	X	X

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Preterm birth	O60.12X4	Preterm labor second tri w preterm del second tri, fetus 4	X	X
Preterm birth	O60.12X5	Preterm labor second tri w preterm del second tri, fetus 5	X	X
Preterm birth	O60.12X9	Preterm labor second tri w preterm delivery second tri, oth	X	X
Preterm birth	O60.13X0	Preterm labor second tri w preterm delivery third tri, unsp	X	X
Preterm birth	O60.13X1	Preterm labor second tri w preterm del third tri, fetus 1	X	X
Preterm birth	O60.13X2	Preterm labor second tri w preterm del third tri, fetus 2	X	X
Preterm birth	O60.13X3	Preterm labor second tri w preterm del third tri, fetus 3	X	X
Preterm birth	O60.13X4	Preterm labor second tri w preterm del third tri, fetus 4	X	X
Preterm birth	O60.13X5	Preterm labor second tri w preterm del third tri, fetus 5	X	X
Preterm birth	O60.13X9	Preterm labor second tri w preterm delivery third tri, oth	X	X
Preterm birth	O60.14X0	Preterm labor third tri w preterm delivery third tri, unsp	X	X
Preterm birth	O60.14X1	Preterm labor third tri w preterm del third tri, fetus 1	X	X
Preterm birth	O60.14X2	Preterm labor third tri w preterm del third tri, fetus 2	X	X
Preterm birth	O60.14X3	Preterm labor third tri w preterm del third tri, fetus 3	X	X
Preterm birth	O60.14X4	Preterm labor third tri w preterm del third tri, fetus 4	X	X
Preterm birth	O60.14X5	Preterm labor third tri w preterm del third tri, fetus 5	X	X
Preterm birth	O60.14X9	Preterm labor third tri w preterm delivery third tri, oth	X	X
Preterm birth	O60.20X0	Term delivery w preterm labor, unsp trimester, unsp	X	X
Preterm birth	O60.20X1	Term delivery with preterm labor, unsp trimester, fetus 1	X	X
Preterm birth	O60.20X2	Term delivery with preterm labor, unsp trimester, fetus 2	X	X
Preterm birth	O60.20X3	Term delivery with preterm labor, unsp trimester, fetus 3	X	X
Preterm birth	O60.20X4	Term delivery with preterm labor, unsp trimester, fetus 4	X	X
Preterm birth	O60.20X5	Term delivery with preterm labor, unsp trimester, fetus 5	X	X
Preterm birth	O60.20X9	Term delivery with preterm labor, unsp trimester, oth fetus	X	X
Preterm birth	O60.22X0	Term delivery w preterm labor, second trimester, unsp	X	X
Preterm birth	O60.22X1	Term delivery with preterm labor, second trimester, fetus 1	X	X
Preterm birth	O60.22X2	Term delivery with preterm labor, second trimester, fetus 2	X	X
Preterm birth	O60.22X3	Term delivery with preterm labor, second trimester, fetus 3	X	X
Preterm birth	O60.22X4	Term delivery with preterm labor, second trimester, fetus 4	X	X

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Preterm birth	O60.22X5	Term delivery with preterm labor, second trimester, fetus 5	X	X
Preterm birth	O60.22X9	Term delivery w preterm labor, second trimester, oth fetus	X	X
Preterm birth	O60.23X0	Term delivery w preterm labor, third trimester, unsp	X	X
Preterm birth	O60.23X1	Term delivery with preterm labor, third trimester, fetus 1	X	X
Preterm birth	O60.23X2	Term delivery with preterm labor, third trimester, fetus 2	X	X
Preterm birth	O60.23X3	Term delivery with preterm labor, third trimester, fetus 3	X	X
Preterm birth	O60.23X4	Term delivery with preterm labor, third trimester, fetus 4	X	X
Preterm birth	O60.23X5	Term delivery with preterm labor, third trimester, fetus 5	X	X
Preterm birth	O60.23X9	Term delivery with preterm labor, third trimester, oth fetus	X	X
Preterm birth	O63.2	Delayed delivery of second twin, triplet, etc.	X	X
Stillborn	O31.00X0	Papyraceous fetus, unsp trimester, not applicable or unsp	X	
Stillborn	O31.00X1	Papyraceous fetus, unspecified trimester, fetus 1	X	
Stillborn	O31.00X2	Papyraceous fetus, unspecified trimester, fetus 2	X	
Stillborn	O31.00X3	Papyraceous fetus, unspecified trimester, fetus 3	X	
Stillborn	O31.00X4	Papyraceous fetus, unspecified trimester, fetus 4	X	
Stillborn	O31.00X5	Papyraceous fetus, unspecified trimester, fetus 5	X	
Stillborn	O31.00X9	Papyraceous fetus, unspecified trimester, other fetus	X	
Stillborn	O31.01X0	Papyraceous fetus, first trimester, not applicable or unsp	X	
Stillborn	O31.01X1	Papyraceous fetus, first trimester, fetus 1	X	
Stillborn	O31.01X2	Papyraceous fetus, first trimester, fetus 2	X	
Stillborn	O31.01X3	Papyraceous fetus, first trimester, fetus 3	X	
Stillborn	O31.01X4	Papyraceous fetus, first trimester, fetus 4	X	
Stillborn	O31.01X5	Papyraceous fetus, first trimester, fetus 5	X	
Stillborn	O31.01X9	Papyraceous fetus, first trimester, other fetus	X	
Stillborn	O31.02X0	Papyraceous fetus, second trimester, not applicable or unsp	X	
Stillborn	O31.02X1	Papyraceous fetus, second trimester, fetus 1	X	
Stillborn	O31.02X2	Papyraceous fetus, second trimester, fetus 2	X	
Stillborn	O31.02X3	Papyraceous fetus, second trimester, fetus 3	X	
Stillborn	O31.02X4	Papyraceous fetus, second trimester, fetus 4	X	

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Stillborn	O31.02X5	Papyraceous fetus, second trimester, fetus 5	X	
Stillborn	O31.02X9	Papyraceous fetus, second trimester, other fetus	X	
Stillborn	O31.03X0	Papyraceous fetus, third trimester, not applicable or unsp	X	
Stillborn	O31.03X1	Papyraceous fetus, third trimester, fetus 1	X	
Stillborn	O31.03X2	Papyraceous fetus, third trimester, fetus 2	X	
Stillborn	O31.03X3	Papyraceous fetus, third trimester, fetus 3	X	
Stillborn	O31.03X4	Papyraceous fetus, third trimester, fetus 4	X	
Stillborn	O31.03X5	Papyraceous fetus, third trimester, fetus 5	X	
Stillborn	O31.03X9	Papyraceous fetus, third trimester, other fetus	X	
Stillborn	O36.4XX0	Maternal care for intrauterine death, not applicable or unsp	X	X
Stillborn	O36.4XX1	Maternal care for intrauterine death, fetus 1	X	X
Stillborn	O36.4XX2	Maternal care for intrauterine death, fetus 2	X	X
Stillborn	O36.4XX3	Maternal care for intrauterine death, fetus 3	X	X
Stillborn	O36.4XX4	Maternal care for intrauterine death, fetus 4	X	X
Stillborn	O36.4XX5	Maternal care for intrauterine death, fetus 5	X	X
Stillborn	O36.4XX9	Maternal care for intrauterine death, other fetus	X	X
Stillborn	Z37.1	Single stillbirth	X	X
Uterine/placental factors	O34.211	Matern care for low transverse scar from prev cesarean del	X	X
Uterine/placental factors	O34.212	Maternal care for vertical scar from previous cesarean del	X	X
Uterine/placental factors	O34.219	Maternal care for unsp type scar from previous cesarean del	X	X
Uterine/placental factors	O34.511	Maternal care for incarceration of gravid uterus, first tri	X	
Uterine/placental factors	O34.512	Maternal care for incarceration of gravid uterus, second tri	X	
Uterine/placental factors	O34.513	Maternal care for incarceration of gravid uterus, third tri	X	
Uterine/placental factors	O34.519	Maternal care for incarceration of gravid uterus, unsp tri	X	
Uterine/placental factors	O34.531	Maternal care for retroversion of gravid uterus, first tri	X	
Uterine/placental factors	O34.532	Maternal care for retroversion of gravid uterus, second tri	X	
Uterine/placental factors	O34.533	Maternal care for retroversion of gravid uterus, third tri	X	
Uterine/placental factors	O34.539	Maternal care for retroversion of gravid uterus, unsp tri	X	
Uterine/placental factors	O69.0XX	Labor and delivery complicated by prolapse of cord, unsp	X	

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.

Appendix A: ICD-10-CM diagnosis codes indicating medical exclusion conditions for calculating C-section rates
Comparison of SMFM vs. AHRQ definitions* (continued)

Risk Factor Classification	ICD-10-CM Diagnosis Code	ICD-10-CM Diagnosis Code Short Description	SMFM	AHRQ
Uterine/placental factors	O69.0XX1	Labor and delivery complicated by prolapse of cord, fetus 1	X	
Uterine/placental factors	O69.0XX2	Labor and delivery complicated by prolapse of cord, fetus 2	X	
Uterine/placental factors	O69.0XX3	Labor and delivery complicated by prolapse of cord, fetus 3	X	
Uterine/placental factors	O69.0XX4	Labor and delivery complicated by prolapse of cord, fetus 4	X	
Uterine/placental factors	O69.0XX5	Labor and delivery complicated by prolapse of cord, fetus 5	X	
Uterine/placental factors	O69.0XX9	Labor and delivery complicated by prolapse of cord, oth	X	
Uterine/placental factors	O69.4XX0	Labor and delivery complicated by vasa previa, unsp	X	
Uterine/placental factors	O69.4XX1	Labor and delivery complicated by vasa previa, fetus 1	X	
Uterine/placental factors	O69.4XX2	Labor and delivery complicated by vasa previa, fetus 2	X	
Uterine/placental factors	O69.4XX3	Labor and delivery complicated by vasa previa, fetus 3	X	
Uterine/placental factors	O69.4XX4	Labor and delivery complicated by vasa previa, fetus 4	X	
Uterine/placental factors	O69.4XX5	Labor and delivery complicated by vasa previa, fetus 5	X	
Uterine/placental factors	O69.4XX9	Labor and delivery complicated by vasa previa, other fetus	X	
Uterine/placental factors	O71.00	Rupture of uterus before onset of labor, unsp trimester	X	
Uterine/placental factors	O71.02	Rupture of uterus before onset of labor, second trimester	X	
Uterine/placental factors	O71.03	Rupture of uterus before onset of labor, third trimester	X	
Uterine/placental factors	O71.1	Rupture of uterus during labor	X	

*Comparison is based on the NPIC/QAS translation of the ICD-9 codes presented in the SMFM Special Report to ICD-10. See text for more information.