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Midwifery Licensure and Discipline Program in Washington State: Economic Costs and Benefits

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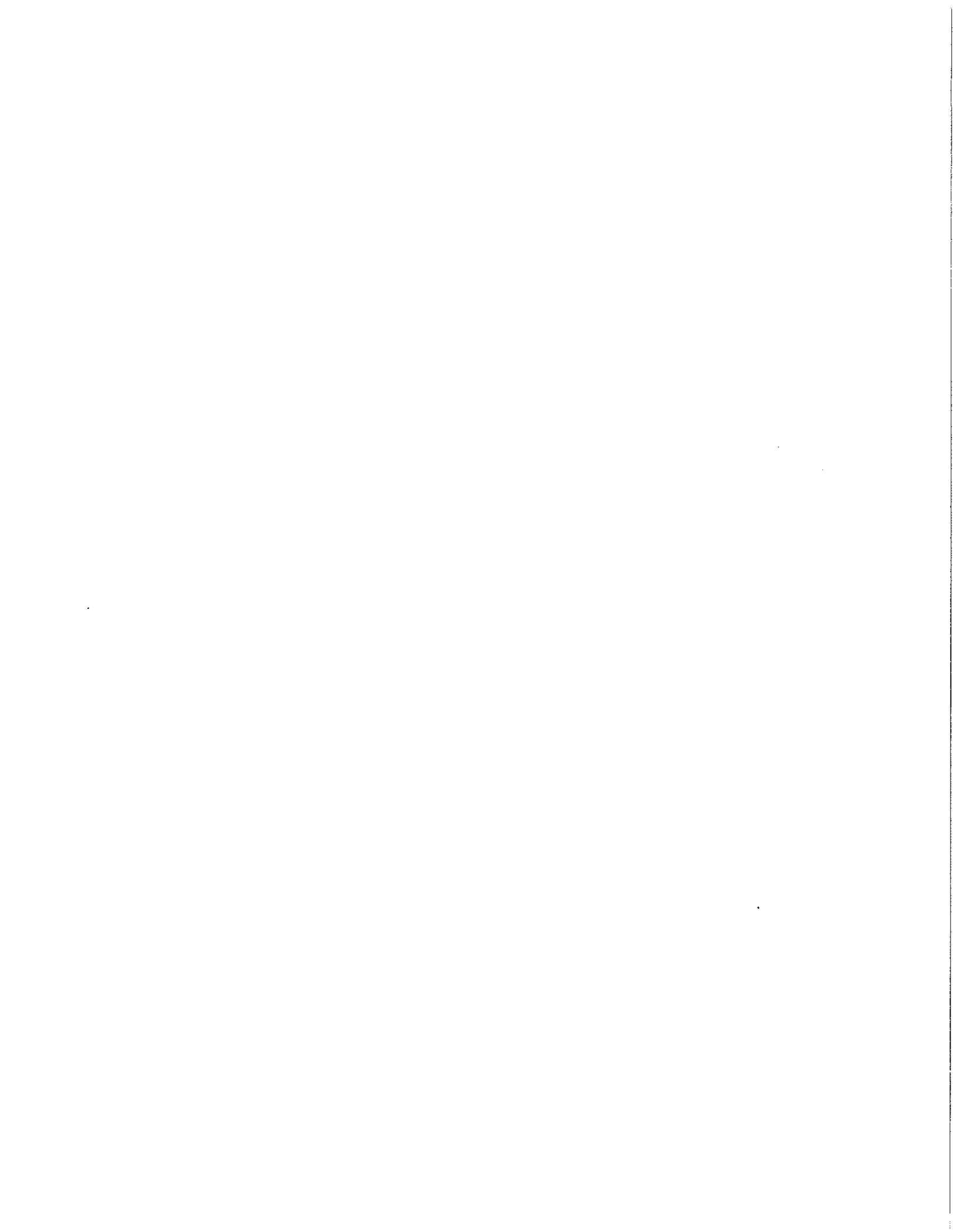
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Midwifery Licensure
and Discipline Program
in Washington State:
Economic Costs and Benefits

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Statement of Purpose and Summary of Findings

On August 6, 2007, Health Management Associates (HMA) was contracted by the State of Washington Department of Health (DOH) to conduct a review of existing research literature related to the economic costs and benefits of the practice of licensed midwifery. The review was to form the basis of a report, required by the legislature, to present the economic benefits of midwifery out-of-hospital births to the health care system and the economic benefits to the consumers who elect to have out-of-hospital births, including any reduced use of procedures that increase the costs of childbirth. The purpose of the report is to determine whether the economic benefits of the Midwifery Licensure and Discipline Program (subsequently referred to as "the Program") exceed the state expenditures to subsidize the cost of the Program under RCW 43.70.250.

HMA assembled a team comprised of a health economist, a physician, an obstetric nurse, a public health professional and an economics student intern. To better understand the Program and requirements of its operation, the team reviewed relevant legislation: RCW 43.70.250, Chapter 18.50 RCW, Chapter 18.130 RCW and Chapter 246-834 WAC. The team also reviewed disciplinary actions over the last five years. In addition, the team reviewed budget documents for the Program and calculated expenditures to operate the Program, for the most recent biennium, in the amount of \$277,400.82

We conducted a thorough review of the literature and identified credible and recent studies that provided sufficient evidence to enable us to draw the conclusion that planned out-of-hospital births attended by licensed professional midwives in the U.S., and in the State of Washington, had similar rates of intrapartum and neonatal mortality to those of low-risk hospital births, and that medical intervention rates for planned out-of-hospital births were lower than for planned low-risk hospital births.

The studies cited did not and could not account for all morbidity experienced by mothers and/or newborns in populations of women cared for by licensed midwives and compare them with populations of women cared for by other health professionals. Any differences are unknown, and may involve potential long term costs unaccounted for in the projections.

Medicaid claims data from the Washington Department of Social and Health Services First Steps Database were the basis of the economic analysis. Using conservative cost estimates, described in the report, we estimate the recoveries from Medicaid Fee for Service (FFS) alone to be more than \$473,000 which is about 1.8 times the cost of operating the Program. Cost savings to the health care system (public and private insurance) is estimated at \$2.7 million which is close to ten times the cost of the Program.

We do not believe it is possible to precisely quantify cost savings resulting from avoided medical intervention in out-of-hospital births and therefore did not include potential cost savings in the cost-benefit ratios. Instead, we cited literature that provides Level 1 evidence (systematic reviews) that one-on-one labor support,

inherent in the midwifery approach, has an effect on cesarean (c-section) rates, and provided a range of cost savings estimates for potentially avoided c-sections. These estimates demonstrate that even the most modest favorable effect on lowering the c-section rates associated with licensed midwives leads to substantial savings to the health care system, as well as lower medical risk and cost to the family.

Introduction

The Revised Code of Washington 43.70.250 sets forth the policy of the state that the cost of each professional, occupational, or business licensing program is to be fully borne by the members of that profession, occupation, or business. There are currently fewer than 100 midwives licensed in the State; the size of this group makes the cost of the Midwifery Licensure and Discipline Program per professional costly and prohibitive for some midwives. In the most recent biennium, 2005-07, the cost to operate the program was \$277,400.82

The legislature requested a report be prepared to present the economic benefits of midwifery out-of-hospital births to the health care system and the economic benefits to the consumers who elect to have out-of-hospital births, including any reduced use of procedures that increase the costs of childbirth.

The purpose of the report is to determine whether the economic benefits of the Program exceed the state expenditures to subsidize the cost of the Program.

Literature Review

The State of Washington's proposed boundaries for the literature review included:

- periodicals published within the past five years and books published within the past ten years;
- evidence-based;
- limited to the United States, and published in the English language; and
- exclusion of nurse midwives.

HMA conducted a thorough literature review of peer reviewed journal articles in medicine, nursing, public health, economics, finance, business and other fields. While there were several relevant articles on birth setting and cost, there were very few on provider and cost. With so few states licensing midwives, most provider and cost studies in the United States are aimed at certified nurse midwives. The team reviewed dozens of articles with only one falling into the bounds of the review provided, entitled: *Outcomes of planned home births with certified professional midwives: large prospective study in North America*. Published in the British Medical Journal in 2005, this article is one of the few, and the largest prospective study of home birth, allowing for relatively stable estimates of risk. We will refer to this article as the "Outcomes Study."¹

¹ Johnson, K., and Davis, B. "Outcomes of planned home births with certified professional midwives: large prospective study in North America." *BMJ* 2005; 300:1415

In addition, the HMA team conducted interviews with Washington physicians, midwives, state employees and health researchers to discuss the findings of the literature review, identify local data to inform the report, and discuss local issues that might influence risk of out-of-hospital births. Through these interviews, we were informed of two articles produced by the Department of Social and Health Services, which are scientifically valid but unpublished in the literature. The studies are entitled, *Planned Home Births: Outcomes Among Medicaid Women in Washington State, July 1996*, and a *Report by the Data Subcommittee of the Home Birth Task Force to summarize and present pertinent data concerning the safety and effectiveness of home birth in Washington State, June 1997*. While these studies were outside the bounds of the review due to the date of publication, updates to pertinent data from the most recent article were completed in March, 2007. We will refer to this data as the "Washington Medicaid Data."² The data from the Outcomes Study, described above, were used to corroborate the findings from the Washington Medicaid Data.

Study Findings

The Outcomes Study presents data on the safety and effectiveness of planned home births involving direct entry midwives in the United States (98% of cohort) and Canada where the practice is not well integrated into the healthcare system. The North American Registry of Midwives provided the opportunity to study the practice of a defined population of certified professional midwives. The target population included all women who engaged the services of a certified professional midwife (direct-entry midwife) in the United States or Canada as their primary care giver for a birth with an expected date of delivery in 2000. The Registry made participation in the study mandatory for recertification and provided an electronic database of 534 credentialed midwives. Of the 534 midwives, 409 were able to be reached, were currently practicing, and agreed to participate. A total of 5,418 women planning home births at the start of labor were compared with women who gave birth in hospital to singleton, vertex babies of at least 37 weeks or more gestation in the United States in 2000.

This large prospective study found that planned home births for low risk women in North America using certified professional midwives were associated with lower rates of medical intervention but similar intra-partum and neonatal mortality to that of low risk hospital births in the U.S. This study does not present or compare morbidity data of these births with those of low-risk hospital births. Overall, however, the study reports a high degree of safety and maternal satisfaction; over 87% of mothers and neonates did not require transfer to hospital.

Consistent with the findings from this study, is a series of analyses conducted by the Washington Department of Social and Health Services (DSHS) which presents

² Cawthon, L. Update to Tables 1, 2, 3 from "Summary of pertinent data concerning the safety and effectiveness of home birth in Washington State." Washington Department of Social and Health Services, Office of Research and Data Analysis. March 13, 2007.

pertinent data concerning the safety and effectiveness of planned home births in Washington State between January 2001 – December 2004. The researchers conducted three separate analyses: the Intent to Treat analysis, the Achieved Home Birth analysis, and the Sentinel Events analysis. Findings are presented in three data tables and summarized below. (Refer to Appendix A, Washington Medicaid Study - Data Tables.)

Intent to Treat Analysis. This analysis compares rates for selected birth outcomes (neonatal deaths, postneonatal deaths, infant deaths, fetal deaths, perinatal deaths, and birthweight <1800 grams) and c-sections for women enrolled in Medicaid who had at least some prenatal care from a licensed midwife as compared with women on Medicaid who did not receive prenatal care from a licensed midwife. There were no statistically significant differences in selected birth outcomes for those women receiving prenatal care by a licensed midwife as compared with those who did not receive prenatal care from a licensed midwife. The risk of cesarean section (c-section) is lower for women receiving care from a licensed midwife as compared with women who did not receive prenatal care from midwives (adjusted relative risk 0.49; 95% confidence interval = .45 - .53; p=0.00)

Achieved Home Birth Analysis. This analysis compares rates for selected birth outcomes for women on Medicaid who received prenatal care from a licensed midwife whose home deliveries were attended by a midwife as compared with women on Medicaid who did not receive prenatal care from a midwife. There were no statistically significant differences in selected birth outcomes for those women receiving prenatal care, with the exception of birth weight. The risk of low birth weight (<1,800 grams) was lower for infants delivered at home to women attended by a licensed midwife as compared with infants of women on Medicaid who did not seek prenatal care from a midwife (adjusted relative risk = 0.23; 95% confidence interval = 0.12-0.43; p=0.00).

Sentinel Events Analysis. Finally, the DSHS compiled data on specific sentinel events which were thought to be of importance. As anticipated, rates of sentinel events were low in women giving birth out-of-hospital. Sentinel events included in the analysis were either “mother-based,” (multiple birth, uterine rupture, vaginal birth after c-section, and post-partum hemorrhage) or “child-based” (low 5 minute Apgar, breech birth, newborn seizures, neonatal intensive care unit admission, very low birth weight and medium low birth weight.) There were no statistically significant differences in sentinel events that would attribute increased risk to the woman or infant having received prenatal care from a licensed midwife and planned an out-of-hospital birth. While the sentinel events measured are key indicators of morbidity, the study could not and did not include all measures of potential morbidity.

For each analysis, relative risk was adjusted for the following variables: mother’s race, mother’s age, mother’s marital status, maternal smoking status, mother’s number of prior births, mother’s Medicaid eligibility status, maternal substance abuse, pre-existing maternal medical conditions, complications of pregnancy, and previous preterm or small-for-gestational-age birth. This data is consistent with

previous reports from the Department of Social and Health Services for Washington Medicaid births from 1989 – 2004.

Review of Disciplinary Actions

The State of Washington's Midwifery Licensure and Discipline Program seeks to address "incompetence, negligence or malpractice which results in injury to a patient or which creates and unreasonable risk that a patient may be harmed." It includes "violation of any state or federal status or administrative rule regulating the profession in question, including any statute or rule defining or establishing standards of patient care or professional conduct or practice."

The Midwifery program had eight disciplinary actions in the last five years (October 1, 2002 through October 1, 2007). During this time, clinical mismanagement was determined to have increased risk of eight women and/or newborns resulting in unknown morbidity, and ultimately resulted in two newborn deaths and one stillbirth. One midwife was found responsible for two newborn deaths and her license was revoked. The midwife associated with the third newborn death retains a current license to practice midwifery in the State.

While each of these deaths is nothing less than a tragedy, unless we compare disciplinary actions of licensed midwives to disciplinary actions of professionals attending hospital births, we are unable to draw conclusions about their relative gravity. Well designed research studies, such as the Outcomes Study and the Washington Medicaid data analyses described above, must be relied upon to draw conclusions about relative risk.

Data Used by Other States to Assess the Safety of Licensed Midwifery Programs

To identify the information sources other state midwifery licensure and discipline programs use to base conclusions of program safety, HMA interviewed state officials in Arizona, California, Florida, New Hampshire, Oregon, and South Carolina. States have a variety of safeguards in place to help ensure the competency of midwives and establish practice regulations. States monitor consumer complaints, conduct investigations and oversee the disciplinary process. In addition, all six states have, or will soon have, a method for collecting and reporting safety statistics and birth outcomes for licensed midwives. In California, the legislature mandated an annual reporting system to begin March 2008 to capture safety measures and outcomes of out-of-hospital births to be aggregated and reported to the legislature. In Florida, a voluntary annual statistics report is completed by most midwives on safety measures and birth outcomes, and an annual report is prepared that addresses these statistics, among other items.

Arizona and South Carolina regulations require their licensed midwives to report on safety measures and birth outcomes every quarter, and the Boards initiate contact with individual midwives regarding any questionable practices. Oregon conducts an

annual vital statistics analysis that compares outcomes of out-of-hospital births with hospital births. New Hampshire regulations require birth certificate worksheets to be completed by each midwife that include safety measures and birth outcomes. Most of these states report, but do not conduct a rigorous analysis of these data. States like New Hampshire, for example, which have a small number of licensed midwives, lack a statistically significant sample of births and therefore rely heavily on peer reviewed literature to draw conclusions on safety. The New Hampshire official specifically referenced their use of the Outcomes Study cited throughout this report.

Economic Cost Analysis

The findings described in the literature review provide evidence of the safety of planned, low-risk, out-of-hospital births involving licensed midwives. Therefore, the economic cost analysis is built simply on differences in cost per delivery based on birth setting.

Medicaid claims data were obtained from the DSHS First Steps Database and used to estimate cost-savings to Medicaid Fee for Service (FFS) and project gross estimates of cost-savings to the health care system. Medicaid FFS delivery expenditure data by birth setting for women having received prenatal care (PNC) by a licensed midwife and having delivered between January 2001 – December 2004 are summarized below. (Refer to Appendix B, Claims Data.)

The average Medicaid payments are all-inclusive and account for every claim paid for any provider during the time immediately surrounding the delivery. For a hospital delivery, the claims included are those from admission to discharge of the child-bearing woman. The costs per delivery exclude costs for prenatal and newborn care which will be addressed later in the report.

Birth Setting	Cost per Delivery for Midwife Providing PNC
Home	\$1,000
Birth Center	\$1,635
Hospital (Vaginal)	\$3,971
Hospital (C-Section)	\$6,550

Source: Department of Social and Health Services, First Steps Database.

Birth Setting	Cost per Delivery for Non-Midwife Providing PNC
Hospital (Vaginal)	\$3,171
Hospital (C-Section)	\$5,798

Source: Department of Social and Health Services, First Steps Database.

Between January 2001 – December 2004, vital statistics indicate 6,065 births “attended” by licensed midwives. “Attended” is in quotes as transfers in care

ultimately led to a physician attending a portion of these births in hospital. Over this same four-year time period, according to DSHS, licensed midwives provided prenatal care to women intending to have an out-of-hospital delivery that resulted in 2,022 births covered by Medicaid FFS with many women transitioning to Medicaid Managed Care during their pregnancies.

Of these 2,022 deliveries, 1,036 were covered solely by Medicaid FFS. It is the Medicaid FFS rate upon which we based the cost analysis. Of the 1,036 Medicaid FFS deliveries, there were 415 home births, 235 birth center births, and 386 hospital births (263 vaginal, 123 c-section) over the four year time period as indicated below.

Birth Setting	Number (%) Deliveries for Midwife Providing PNC
Home	415 (40.0%)
Birth Center	235 (22.7%)
Hospital (Vaginal)	263 (25.4%)
Hospital (C-Section)	123 (11.9%)
Total	1036 (100%)

Source: Department of Social and Health Services, First Steps Database.

What was the cost to Medicaid FFS for deliveries of intended out-of-hospital births with prenatal care provided by licensed midwives?

Using the claims data during the four year period (January 2001- December 2004), and birth setting data during this time, the approximate cost for the 1,036 Medicaid FFS births is calculated below.

Number of Births	Cost per Birth	Total Cost
415 home births	\$1,000	\$415,000
235 birthing center births	\$1,635	\$384,225
263 hospital vaginal births	\$3,971	\$1,044,373
123 hospital c-section births	\$6,550	\$805,650
Cost estimate		\$2,649,248

What would be the cost to Medicaid FFS for deliveries if these were intended hospital births with prenatal care provided by a non-midwife?

While the hospital c-section rate for low-risk women is significantly higher as described later in this section, we will use the Washington licensed midwife c-section rate of 11.9% to calculate the most conservative cost estimates. Using the same claims data, the approximate cost for these 1,036 births, if they were all delivered in hospital, is calculated below.

Number of Births	Cost per Birth	Total Cost
917.9 hospital vaginal births (88.6% of births)	\$3,171	\$2,910,648
123.3 hospital c-section births (11.9% of births)	\$5,798	\$714,893

Cost Estimate	\$3,625,541
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What is the cost savings of the practice of licensed midwifery on the cost of deliveries to Medicaid FFS?

The estimated cost saving for the four year period (January 2001 – December 2004) for Washington Medicaid FFS is calculated below.

Cost savings estimate: \$3,625,541 - \$2,649,248 = \$976,293.

For a typical biennium, the cost savings to Washington Medicaid FFS would be approximately: \$488,147.

While the cost savings to Washington Medicaid FFS alone is significant, this represents only a portion of births attended by licensed midwives.

What would be the cost to all payors for intended out-of-hospital births with prenatal care provided by licensed midwives?

Assessing claims data from the other public and private insurers in the State of Washington is beyond the scope of this study; however, if we assumed all pregnant women in Washington are insured, and other payors have rates comparable to Medicaid FFS for delivery, we could grossly approximate a cost savings.

Using the same claims data as an estimate of costs with a total of 6,065 licensed midwife “attended” deliveries between January 2001 – December 2004, and using birth setting data from licensed midwife attended births from Medicaid FFS, the estimated cost to all payors is calculated below.

Number of Births	Cost per Birth	Total Cost
2,426 home births (40% of 6,065 births)	\$1,000	\$2,426,000
1,377 birth center births (22.7% of 6,065 births)	\$1,635	\$2,251,395
1,540 hospital vaginal births (25.4% of 6,065 births)	\$3,971	\$6,115,340
722 hospital c-section births (11.9% of 6,065 births)	\$6,550	\$4,729,100
Cost Estimate		\$15,521,835

What would be the cost to all payors for deliveries if these were intended hospital births with prenatal care provided by a non-midwife?

Number of Births	Cost per Birth	Total Cost
5,343 hospital vaginal births (88.1% of 6,065 births)	\$3,171	\$16,761,822
722 hospital c-section births (11.8% of 6,065 births)	\$5,798	\$4,729,100
Cost Estimate		\$20,947,978

What is the cost savings of the practice of licensed midwifery on the cost of deliveries to all payors?

Cost savings estimate: \$20,947,978 - \$15,521,835 = \$5,426,143.

For a typical biennium, the cost savings to all payors would be approximately: \$2,713,072.

What about prenatal costs, newborn costs, unknown long-term costs, and costs associated with differential intervention rates in hospital and out-of-hospital births?

The cost savings estimates above address the delivery only and do not include other associated costs. The following are notes on these associated costs.

Prenatal care costs

The Medicaid Fee-for Service claims data table in Appendix B provides reimbursement data for prenatal care (PNC) for women who received licensed midwife prenatal care and women receiving non-midwife prenatal care. The data indicates that on average, prenatal care provided by licensed midwives is less expensive.

Newborn costs

Data on newborn costs are not readily available from the DSHS First Steps Database; however, there are typically fewer costs for the newborn for an out-of-hospital birth as compared with an in-hospital birth due to newborn nursery costs.

Potential long term costs related to morbidity

The studies cited in this report did not and could not account for all morbidity experienced by mothers and/or newborns in populations of women cared for by licensed midwives and compare them with populations of women cared for by other health professionals. These are unknown, potentially long term costs that are unaccounted for in the projections.

The only sentinel event outcome measure presented in the Washington Medicaid data that had a statistically significant difference between a licensed midwife attended home birth, and a birth with no prenatal care provided by a licensed midwife, is the higher rate of low birth weight (less than 1800 grams) in infants born to women with no prenatal care provided by a licensed midwife. Low birth weight increases risk of health problems, involving unknown, potentially long term costs that are unaccounted for in the projections. (Refer to Appendix A, Table 2.)

Costs associated with differential intervention rates

The degree to which practice patterns of licensed midwives may contribute to differences in intervention rates is not entirely known. We do know, however, that the Outcomes Study reported rates of medical intervention for home births consistently less than half those in hospitals, whether compared with a relatively low risk group (singleton, vertex, 37 weeks or more gestation) that will have a small percentage of higher risk births or the general population having hospital births.

Compared with the relatively low risk hospital group, intended home births were associated with lower rates of electronic fetal monitoring (9.6% versus 84.3%), episiotomy (2.1% versus 33.%), vacuum extraction (0.6% versus 5.5%), and c-section (3.7% versus 19.0%). The c-section rate for intended home births was 8.3% among primiparous women and 1.6% among multiparous women. These rates compare with 24% of singleton births in all risk categories in U.S. in 2000.

Of the interventions compared in the Outcomes Study, the c-section rate is most costly to both the health care system and the consumer. Women covered by Medicaid FFS in Washington State who received prenatal care by a licensed midwife had a c-section rate of 11.9%. During the four year period of analysis (January 2001 – December 2004), the c-section rate of births to women on Medicaid who did not receive prenatal care from a licensed midwife was 23.9% -- consistent with the typical U.S. hospital rate of 24%.

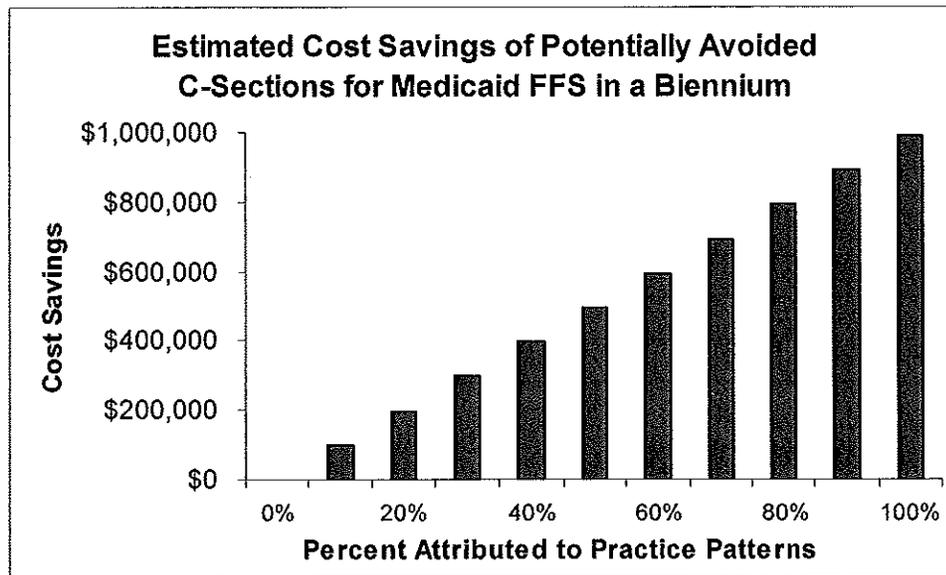
Due to the difficulty of precisely estimating the degree to which practice patterns contribute to c-section rates, and to provide the most conservative reasonable estimate of cost savings, we based the cost estimates on the licensed midwives c-section rates. There is, however, a long-standing body of literature that demonstrates a reduction in c-section rates with one-on-one trained labor support, such as the presence of a midwife throughout labor.³ These findings suggest there is very likely some effect and that even a small effect bears a large cost on both the health system and the consumer.

According to Beverly Atteridge, Clinical Nurse Program Manager, Department of Social and Health Services, current Washington Medicaid FFS expenditures for c-section with post partum care and newborn nursery costs (without complications) is estimated at \$7,981.56.

Potential Cost Savings of Avoided C-Sections

The Washington Medicaid Claims data indicated 1036 births to women covered by Medicaid FFS who received care from a licensed midwife between January 2001 – December 2004. Of these 1,036 births, 11.9% (or 123) were c-sections. If all 1,036 births were hospital births, we might expect an increase in the c-section rate of an unknown amount that might reflect up to the typical hospital c-section rate of 23.9% (or 248 c-sections.) In a biennium, this could account for up to about 124 potentially avoided c-sections.

³ Walker, R., Turnbull D., and C. Wilkinson. "Strategies to address global cesarean section rates: a review of the evidence." *Birth*. 2002 Mar: 29(1): 28-39.



Percent (Number) Attributed to Practice Patterns	Cost
0% (0)	\$0
10% (12.4)	\$98,971
20% (24.8)	\$197,943
30% (37.2)	\$296,914
40% (49.6)	\$395,885
50% (62.0)	\$494,857
60% (74.4)	\$593,828
70% (86.8)	\$692,799
80% (99.2)	\$791,770
90% (111.6)	\$890,742
100% (124)	\$989,713

Again, this represents potential cost savings to Medicaid FFS which is a portion of the births attended by licensed midwives. If all 6,065 births attended by licensed midwives during this four year period were hospital births, we might expect an increase in c-section rate of an unknown amount that might reflect up to the typical hospital rate of 23.9% (or 1,449 c-sections.) The licensed midwife rate of 11.9% would result in 721.7 c-sections. The difference would be $1449 - 721.7 = 727$ c-sections. In a biennium, this could account for up to 364 potentially avoided c-sections.

Percent (Number) Attributed to Practice Patterns	Cost
0% (0)	\$0
10% (36.4)	\$290,529

20%	(72.8)	\$581,058
30%	(109.2)	\$871,586
40%	(145.6)	\$1,162,115
50%	(182.0)	\$1,452,643
60%	(218.4)	\$1,743,173
70%	(254.8)	\$2,033,701
80%	(291.2)	\$2,324,230
90%	(327.6)	\$2,614,759
100%	(364)	\$2,905,288

Departmental Costs

The Department of Health provided HMA with all available copies of the monthly budget reports for the 2005 - 2007 biennium. There are two midwifery funds. Adding actual charges from the biennium for Midwifery Fund 62606 (\$169,620.62), and Midwifery GF-S Fund 62611 (\$107,780.20) yields a total cost of \$277,400.82 to operate the Midwifery Licensure and Discipline Program in this biennium. These dollars support functions related to licensing, investigation and disciplinary actions. (Refer to Appendix C, Budget Reports.)

Economic Cost-Benefit Analysis

The practice of licensed midwifery in Washington State during the time period January 2001 – December 2004, and using the most recent Program cost (2005-2007 biennium) yields a significant estimated cost savings for deliveries. Benefit to cost ratio estimates are presented below; however, they may well underestimate benefit to cost primarily because the estimates exclude associated costs, including differential intervention rates between planned home and hospital births.

Benefit to Cost Ratio:

Medicaid FFS Only, Excluding Cost Savings for Avoided Intervention

<u>Benefits</u>	<u>Costs</u>	<u>Benefit-Cost Ratio</u>
\$488,147.00	\$277,400.82	1.8: 1

Benefit to Cost Ratio:

All Payors, Excluding Cost Savings for Avoided Intervention

<u>Benefits</u>	<u>Costs</u>	<u>Benefit-Cost Ratio</u>
\$2,713,072.00	\$277,400.82	9.8:1

Conclusions

The economic benefits of the midwifery program to the State of Washington far exceed the costs of operating the Program in estimating cost of deliveries, using the most conservative assumptions regarding c-section rates. These figures exclude prenatal care costs, newborn costs, and potential long term costs related to morbidity.

The estimated cost savings for deliveries to Medicaid FFS in the most recent biennium is \$488,147; about 1.8 times the cost of operating the state program which is \$277,400.82. Cost savings to the health care system (Medicaid and private insurance) are much greater, about \$2.7 million and this savings is close to 10 times the cost of operating the state program.

Challenges to Ensuring Safety of Out-of-Hospital Births

Physician Consultation, Collaboration and Referral

The midwifery model of care views childbirth as a normal process that does not require medical intervention unless there are signs of pathology or deviations from normal. It is at the point when medical intervention is indicated that the midwife makes the appropriate consultation, referral or transfer. According to RCW 18.50.108, every licensed midwife shall develop a written plan for consultation with other health care providers to be submitted annually to the state, and according to 18.50.010, it shall be the duty of a midwife to consult with a physician whenever there are significant deviations from normal in either the mother or the infant. Systems of consultation, collaboration and referral can provide integrated and uninterrupted care to women, and is critical to ensuring optimal outcomes for women and their infants.

Interviewees described the difficulty licensed midwives in Washington have in securing back-up for out-of-hospital births. It was inferred that some midwives do not, in reality, have any coordinated physician back up. Physicians are concerned about medico-legal liability for the actions of licensed midwives with whom they have no clinical or administrative supervisory relationship. The lack of consistent formalized physician communication with licensed midwives may increase the risk of out-of-hospital births.

Selected Sentinel Events

The DSHS Washington Medicaid data establishes that in the four year time period between January 2001 and December 2004, the rates of multiple births (0%), breech births (1.1%) and vaginal birth after previous cesarean (1.8%) are lower than hospital rates suggesting licensed midwives make efforts to avoid out-of-hospital births when these conditions are expected. These sentinel events are traditionally considered high risk in women giving birth out of hospital, and the fact that even a limited number are done out-of-hospital may indicate a need for further development of guidelines for the management of out-of-hospital births.

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Information Contacts/Interviewees

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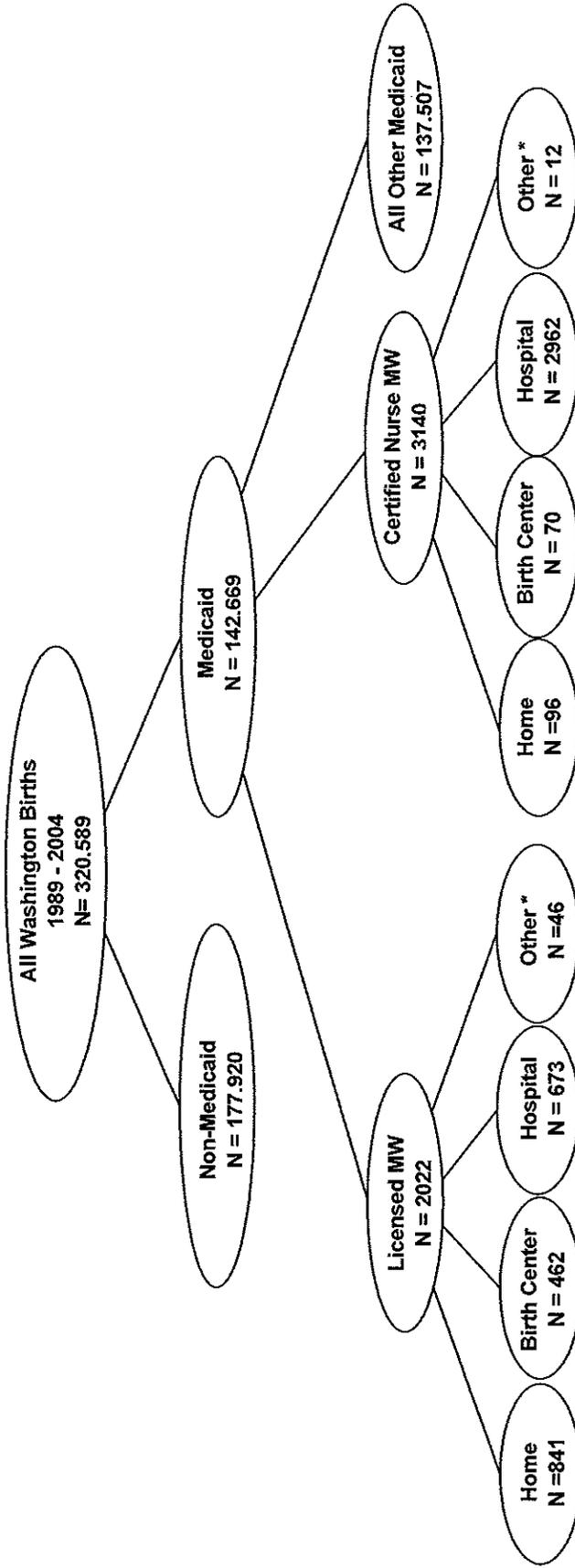
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Appendix A: Washington Medicaid Study – Data Tables

Washington State Births 2001 - 2004 Planned Home Births Analysis



* Other includes the following birth place types:

- Home Delivery, not attended by the midwife type
- En Route
- Other Medical Facility
- Other / Not Stated

TABLE 1. INTENT TO TREAT ANALYSIS
 SUMMARY OUTCOME MEASURES: RELATIVE RISK FOR MEDICAID FUNDED BIRTHS WITH PRENATAL CARE (PNC) FROM A
 LICENSED MIDWIFE (LMW) COMPARED TO MEDICAID BIRTHS WITH NO PNC BY A MIDWIFE (MW)
 JANUARY 2001 - DECEMBER 2004

OUTCOME	PNC by an LMW (N= 2,013) # / 1,000		No PNC by an MW (N= 70,847) # / 1,000		Crude Relative Risk RR p-value 95% C.I.		Adjusted Relative Risk* RR p-value 95% C.I.	
	Neonatal Deaths*	3	1.5	303	4.3	0.35	0.06 (0.11, 1.08)	0.12
Postneonatal Deaths*	2	1.0	63	0.9	1.11	0.88 (0.27, 4.56)	0.60	0.60 (0.08, 4.25)
Infant Deaths*	3	1.5	354	5.0	0.30	0.03 (0.10, 0.93)	0.21	0.01 (0.05, 0.82)
Fetal Deaths	9	4.5	449	6.3	0.71	0.30 (0.37, 1.37)	0.65	0.26 (0.31, 1.37)
Perinatal Deaths (1)	4	2.0	426	6.0	0.33	0.02 (0.12, 0.88)	0.32	0.02 (0.12, 0.89)
Perinatal Deaths (2)	7	3.5	544	7.7	0.45	0.03 (0.22, 0.95)	0.30	0.01 (0.12, 0.77)
Birthweight <1,800 Grams	36	17.8	2,034	28.5	0.62	0.00 (0.45, 0.87)	0.59	0.00 (0.41, 0.85)
Cesarean Sections	230	113.7	17,036	238.9	0.48	<.0001 (0.42, 0.54)	0.44	<.0001 (0.38, 0.50)

* Indicates deaths from non-preventable causes are excluded from calculations.

+Relative risk was adjusted for the following variables: mother's race, mother's age, mother's marital status, maternal smoking status, mother's number of prior children, mother's Medicaid eligibility status, maternal substance abuse, pre-existing maternal medical conditions, complications of pregnancy, and previous preterm or small-for-gestational-age birth.

Definitions of Summary Outcome Measures:

Neonatal Deaths - include all infants that died of preventable causes in the first 28 days of life.

Postneonatal Deaths- include all infants that survived the first 28 days of life and died of preventable causes in the first year of life.

Infant Deaths - include all liveborn infants that died of preventable causes in the first year of life

Fetal Deaths - include all stillborn fetuses with fetal death certificates received by DOH.

Perinatal Deaths - (1) NCHS definition of perinatal death: fetal deaths where delivery occurred after the 28th week of gestation and deaths to liveborn children in the first 7 days of life. (2) ACOG definition of perinatal death: Fetal deaths where delivery occurred after the 20th week of gestation or stillborn fetuses with birthweight greater than 500 grams, and deaths to liveborn children in the first 28 days of life.

Birthweight <1,800 grams - include all births with birthweights from 227 to 1,799 grams based on birth certificate records using NCHS standards.

Cesarean Sections - include live births with either Medicaid claims indicating a c-section or birth certificate records with primary or repeat c-section indicated as method of delivery.

TABLE 2. ACHIEVED HOME BIRTH ANALYSIS
 SUMMARY OUTCOME MEASURES: RELATIVE RISK FOR MEDICAID FUNDED BIRTHS WITH PRENATAL CARE (PNC) AND HOME BIRTH (HB) FROM A LICENSED MIDWIFE (LMW) COMPARED TO MEDICAID BIRTHS WITH NO PNC BY A MIDWIFE (MW) JANUARY 2001 - DECEMBER 2004

OUTCOME	LMW Attended HB (N= 753) # / 1,000		No PNC by an MW (N= 71,296) # / 1,000		Crude Relative Risk		Adjusted Relative Risk*		
					RR	p-value	RR	p-value	95% C.I.
Neonatal Deaths*	1	1.3	303	4.2	0.31	0.22 (0.04, 2.21)	0.00	0.14	
Postneonatal Deaths*	0	0.0	178	2.5	0.00	0.17	0.00	0.43	
Infant Deaths*	1	1.3	481	6.8	0.20	0.07 (0.03, 1.39)	0.00	0.09	
Birthweight <1,800 Grams	3	4.0	2,034	28.5	0.14	<.0001 (0.05, 0.43)	0.17	0.00	(0.06, 0.54)

* Indicates deaths from non-preventable causes are excluded from calculations.

+Relative risk was adjusted for the following variables: mother's race, mother's age, mother's marital status, maternal smoking status, mother's number of prior children, mother's Medicaid eligibility status, maternal substance abuse, pre-existing maternal medical conditions, complications of pregnancy, and previous preterm or small-for-gestational-age birth. Relative risks were not available ("na") for some groups due to small numbers of events.

Definitions of Summary Outcome Measures:

Neonatal Deaths - include all infants that died of preventable causes in the first 28 days of life.

Postneonatal Deaths- include all infants that survived the first 28 days of life and died of preventable causes in the first year of life.

Infant Deaths - include all liveborn infants that died of preventable causes in the first year of life.

Birthweight <1,800 grams - include all births with birthweights from 227 to 1,799 grams based on birth certificate records using NCHS standards.

**TABLE 3. SENTINEL EVENTS
MEDICAID FUNDED BIRTHS WITH PRENATAL CARE PROVIDED BY LICENSED MIDWIVES
JANUARY 2001 - DECEMBER 2004**

MOTHER BASED SENTINEL EVENTS	Home (Midwife Attended) (N = 753)	Birth Center (N = 462)	Hospital (N = 667)	Other (N = 134)	Total (N = 2,016)	ALL MEDICAID No PNC by a MW (N = 135,785)
Multiple Birth	0 (0.0%)	0 (0.0%)	6 (0.9%)	0 (0.0%)	6 (0.3%)	1,697 (1.2%)
Uterine Rupture	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	46 (0.0%)
VBAC	14 (1.9%)	0 (0.0%)	22 (3.3%)	6 (4.5%)	42 (2.1%)	2,412 (1.8%)
Post-Partum Hemorrhage	21 (2.8%)	7 (1.5%)	27 (4.0%)	3 (2.2%)	58 (2.9%)	3,370 (2.5%)
CHILD BASED SENTINEL EVENTS	(N = 753)	(N = 462)	(N = 673)	(N = 134)	(N = 2,022)	(N = 137,507)
Low 5 Minute Apgar	31 (4.1%)	26 (5.6%)	56 (8.3%)	2 (1.5%)	115 (5.7%)	6,782 (4.9%)
Breech Birth	9 (1.2%)	4 (0.9%)	46 (6.8%)	1 (0.7%)	60 (3.0%)	5505 (4.0%)
Newborn seizures	4 (0.5%)	0 (0.0%)	1 (0.1%)	0 (0.0%)	5 (0.2%)	237 (0.2%)
NICU admission	1 (0.1%)	1 (0.2%)	9 (1.3%)	0 (0.0%)	11 (0.5%)	1357 (1.0%)
Very Low Birthweight	1 (0.1%)	0 (0.0%)	15 (2.2%)	0 (0.0%)	16 (0.8%)	1892 (1.4%)
Medium Low Birthweight	3 (0.4%)	2 (0.4%)	44 (6.5%)	1 (0.7%)	50 (2.5%)	7630 (5.5%)

The following definitions were used to flag sentinel events:

Multiple Birth - Birth certificates indicating a multiple birth or multiple births identified by the FSDB.

Uterine Rupture - Medicaid claims with a diagnosis of 665.0 or 665.1.

VBAC - Birth certificates indicating vaginal birth after previous c-section as the method of delivery.

Post-Partum Hemorrhage - Medicaid claims with a diagnosis of 666.

Low 5 Minute Apgar - Birth certificates with a five minute Apgar score of 0 to 7.

Breech Birth - Medicaid claims with a hospital procedure beginning with 72.5 or with a diagnosis of 652.2, 669.6, or 763.0. Birth certificates indicating breech/malpresentation as a complication of delivery.

Newborn Seizures - Medicaid claims with a diagnosis of 779.0. Birth certificates indicating seizures as an abnormal condition of the newborn.

NICU Admission - Medicaid claims with a neonatal intensive care unit revenue code.

Very Low Birthweight - Births with a birthweight of 227 to 1,499 grams based on birth certificate records and NCHS standards.

Medium Low Birthweight - Births with a birthweight of 1,500 to 2,499 grams based on birth certificate records and NCHS standards.

Appendix B: Claims Data

**Medicaid Paid Maternal and Infant Services for Births to Washington Fee-for-Service Medicaid Mothers
With and Without Prenatal Care Provided by a Midwife**

Licensed Midwife Prenatal Care

	2001		2002		2003		2004		2001-2004	
	N	Ave \$	N	Ave \$	N	Ave \$	N	Ave \$	N	Ave \$
Home Delivery										
PNC	98	\$1,100	103	\$1,212	149	\$1,366	91	\$1,207	441	\$1,238
Delivery	90	\$1,019	96	\$997	141	\$981	88	\$1,015	415	\$1,000
Infant 1st Year	95	\$2,203	101	\$3,000	145	\$3,081	89	\$2,686	430	\$2,786
Birth Center										
PNC	40	\$1,305	79	\$1,250	75	\$1,248	52	\$1,336	246	\$1,276
Delivery	38	\$1,613	74	\$1,574	72	\$1,652	51	\$1,717	235	\$1,635
Infant 1st Year	38	\$1,201	76	\$1,904	72	\$2,471	52	\$6,171	238	\$2,895
Hospital (Vaginal)										
PNC	67	\$1,546	80	\$1,334	80	\$1,767	46	\$1,559	273	\$1,551
Delivery	65	\$4,133	76	\$3,764	79	\$4,047	43	\$3,951	263	\$3,971
Infant 1st Year	66	\$4,875	76	\$6,891	76	\$6,344	45	\$5,072	263	\$5,916
Hospital (C-section)										
PNC	33	\$1,472	38	\$1,265	32	\$1,661	24	\$1,505	127	\$1,464
Delivery	33	\$6,241	36	\$6,386	32	\$6,426	22	\$7,463	123	\$6,550
Infant 1st Year	33	\$5,185	38	\$5,230	32	\$11,297	22	\$23,226	125	\$9,939

No Midwife Care

	2001		2002		2003		2004		2001-2004	
	N	Ave \$	N	Ave \$						
Hospital (Vaginal)										
PNC	12,717	\$1,495	11,992	\$1,586	12,250	\$1,640	11,496	\$1,635	48,455	\$1,587
Delivery	11,893	\$3,095	11,162	\$3,204	11,417	\$3,250	10,682	\$3,136	45,154	\$3,171
Infant 1st Year	12,760	\$4,617	12,054	\$5,027	12,228	\$5,495	11,476	\$5,557	48,518	\$5,162
Hospital (C-section)										
PNC	3,363	\$1,648	3,411	\$1,731	3,841	\$1,754	3,804	\$1,756	14,419	\$1,724
Delivery	3,127	\$5,706	3,118	\$5,908	3,500	\$5,782	3,515	\$5,798	13,260	\$5,798
Infant 1st Year	3,499	\$8,378	3,544	\$8,948	3,951	\$8,632	3,891	\$9,418	14,885	\$8,853

Appendix C: Budget Reports

Board Report
62611-MIDWIFERY GF-S



	Biennium Budget		Current Month Jun 2007		2007 Biennium-To-Date Jul 01, 2005 Thru Jun 30, 2007		
	13.20	13.20	Actual	Encumbrance	Actual	Encumbrance	Variance
FTE, Staff and Board	13.20	13.20	2.34	0.00	2.34	0.00	10.86
Expenditures							
Direct Charges							
Salaries Staff (A)	115,352.00	60,946.00	9,560.99	0.00	9,560.99	0.00	105,791.01
Board (AE)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benefits (B)	33,836.00	15,653.00	2,855.11	0.00	2,855.11	0.00	30,980.89
Personal Svcs (C)	12,000.00	12,000.00	2,773.66	0.00	2,773.66	0.00	9,226.34
Goods and Supplies (E)	113,871.00	110,071.00	6,808.58	0.00	14,525.07	0.00	99,345.93
Object (E) No Sub-Object	29,415.00	29,415.00	0.00	0.00	0.00	0.00	29,415.00
Supplies (EA)	0.00	0.00	72.06	0.00	72.06	0.00	(72.06)
Communications (EB)	0.00	0.00	452.83	0.00	452.83	0.00	(452.83)
Bldg/Rent/Utilities (EC/ED)	0.00	0.00	1,286.19	0.00	1,286.19	0.00	(1,286.19)
Meeting Rm Rental (ED 2111)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Printing (EF)	0.00	0.00	1,165.83	0.00	1,165.83	0.00	(1,165.83)
Training/Dues/Conference (EG)	0.00	0.00	44.84	0.00	44.84	0.00	(44.84)
Consolidated Mail (EK)	0.00	0.00	931.05	0.00	931.05	0.00	(931.05)
AG Support (E M)	84,456.00	80,656.00	2,465.79	0.00	10,182.28	0.00	74,273.72
Insurance (EP)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contractual Services (ER)	0.00	0.00	321.52	0.00	321.52	0.00	(321.52)
Other (EE, EJ, EL, ES, EZ)	0.00	0.00	68.47	0.00	68.47	0.00	(68.47)
Travel (S)	4,892.00	3,158.00	5.76	0.00	5.76	0.00	4,886.24
Equipment (J)	0.00	0.00	26.62	0.00	26.62	0.00	(26.62)
Grants and Subsidies (N)	0.00	0.00	1.00	0.00	1.00	0.00	(1.00)
Lease Purchase (P)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inter-Agency Reimb. (S)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intra-Agency Reimb. (T)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Goods and Services (TE)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enterprise Clearing (3112)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Campus IS Support (6666)	4,000.00	2,167.00	976.90	0.00	976.90	0.00	3,023.10
Exchange (6667)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Co-Location (6768)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Debt Service (TP)	0.00	0.00	163.49	0.00	163.49	0.00	(163.49)
Other (TE)	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SUB TOTAL DIRECT CHARGES	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub Total Direct Charges	283,951.00	203,995.00	23,172.11	0.00	30,888.60	0.00	253,062.40



Board Report
62611-MIDWIFERY GF-S

Biennium Budget	Current Month Jun 2007			2007 Biennium-To-Date Jul 01, 2005 Thru Jun 30, 2007				
	Allotment	Actual	Encumbrance	Variance	Allotment	Actual	Encumbrance	Variance
Service Units (TA)								
Information Services (6111)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Office of Professional (6112)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Adjudication Clerk (6113)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WHPS Base Charges (6115)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Investigative Services (6116)	0.00	45,766.92	0.00	(45,766.92)	0.00	45,766.92	0.00	(45,766.92)
Drug Investigations (6117)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FSL Invest & Enforcement (6118)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Regulatory Services (6120)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tort Claim Services (6121)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Legal Services Section (6122)	0.00	10,599.62	0.00	(10,599.62)	0.00	10,599.62	0.00	(10,599.62)
Division Level AG (6123)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Customer Ser-Center (6125)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Public disclosure (6126)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Integrated Licensing System (6128)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Volunteer Med Worker (6129)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Multicultural ED HLTH (6130)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Health Prof Discipline (6131)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other (TA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub Total Service Units (TA)	0.00	56,366.54	0.00	(56,366.54)	0.00	56,366.54	0.00	(56,366.54)
Sub Total Expenditures	203,995.00	79,538.65	0.00	124,456.35	283,951.00	87,255.14	0.00	196,695.86
Indirect Charges								
Agency Management	38,501.09	10,836.68	0.00	16,390.61	38,501.09	11,924.71	0.00	26,576.38
Assistant Secretary	11,693.89	3,297.20	0.00	4,958.58	11,693.89	3,629.35	0.00	8,064.54
Director	16,045.11	4,516.06	0.00	6,811.64	16,045.11	4,971.00	0.00	11,074.11
Sub Total Indirect Charges	66,240.09	18,649.94	0.00	28,160.83	66,240.09	20,525.06	0.00	45,715.03
Total Charges	350,191.09	98,188.59	0.00	152,617.18	350,191.09	107,780.20	0.00	242,410.89
				Beginning Balance				
				Revenue				
				Fines				
				Total Revenue				(107,780.20)
				Current Balance				



	Biennium Budget		2007 Biennium-To-Date Jul 01, 2005 Thru Jun 30, 2007							
	4.80		Allotment	Current Month Jun 2007	Variance	Actual	Encumbrance	Variance		
FTE, Staff and Board	4.80		0.20	(2.12)	0.00	2.32	4.80	0.00	2.26	
Expenditures										
Direct Charges										
Salaries Staff (A)	17,837.00		748.00	(8,677.00)	0.00	9,425.00	17,837.00	9,607.80	0.00	8,229.20
Board (AE)	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Benefits (B)	4,946.00		208.00	(2,583.63)	0.00	2,791.63	4,946.00	2,517.78	0.00	2,428.22
Personal Svcs (C)	9,000.00		375.00	68.03	(13,000.00)	13,306.97	9,000.00	9,417.93	0.00	(417.93)
Goods and Supplies (E)	39,009.00		2,885.00	(3,538.50)	(15.75)	6,439.25	39,009.00	60,476.46	0.00	(21,467.46)
Object (E) No Sub-Object	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Supplies (EA)	102.00		4.00	(33.82)	0.00	37.82	102.00	120.78	0.00	(18.78)
Communications (EB)	421.00		17.00	(420.98)	0.00	437.98	421.00	441.13	0.00	(20.13)
Bldg/Rent/Utilities (EC/ED)	317.00		13.00	(1,177.21)	0.00	1,190.21	317.00	1,229.35	0.00	(912.35)
Meeting Rm Rental (ED 2111)	184.00		7.00	0.00	0.00	7.00	184.00	9.00	0.00	175.00
Printing (EF)	1,785.00		74.00	(669.69)	0.00	743.69	1,785.00	154.53	0.00	1,630.47
Training/Dues/Conference (EG)	270.00		11.00	(40.84)	0.00	51.84	270.00	25.27	0.00	244.73
Consolidated Mail (EK)	1,104.00		46.00	(814.10)	0.00	860.10	1,104.00	895.79	0.00	208.21
AG Support (EM)	35,858.00		2,756.00	0.00	0.00	2,756.00	35,858.00	57,309.41	0.00	(21,451.41)
Insurance (EP)	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Contractual Services (ER)	216.00		9.00	(321.52)	(15.75)	346.27	216.00	241.07	0.00	(25.07)
Other (EE, EJ, EL, ES, EZ)	(1,248.00)		(52.00)	(60.34)	0.00	8.34	(1,248.00)	50.13	0.00	(1,298.13)
Travel (G)	557.00		23.00	(5.76)	0.00	28.76	557.00	215.09	0.00	341.91
Equipment (J)	223.00		0.00	39.35	0.00	(39.35)	223.00	198.81	0.00	24.19
Grants and Subsidies (N)	0.00		0.00	(1.00)	0.00	1.00	0.00	13.54	0.00	(13.54)
Lease Purchase (P)	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Inter-Agency Reimb. (S)	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Intra-Agency Reimb. (T)	0.00		0.00	4.61	0.00	(4.61)	0.00	4.61	0.00	(4.61)
Goods and Services (TE)	0.00		0.00	715.20	0.00	(715.20)	0.00	701.06	0.00	(701.06)
Enterprise Clearing (3112)	72.00		36.00	35.90	0.00	0.10	72.00	66.36	0.00	5.64
Campus IS Support (6666)	480.00		40.00	(951.88)	0.00	991.88	480.00	(525.60)	0.00	1,005.60
Exchange (6667)	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Co-Location (6768)	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Debt Service (TP)	304.00		13.00	(160.49)	0.00	173.49	304.00	146.14	0.00	157.86
Other (TE)	0.00		0.00	0.85	0.00	(0.85)	0.00	0.85	0.00	(0.85)
SUB TOTAL DIRECT CHARGES	0.00		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sub Total Direct Charges	72,428.00		4,328.00	(15,054.32)	(13,015.75)	32,398.07	72,428.00	82,840.83	0.00	(10,412.83)



Board Report
62606-MIDWIFERY

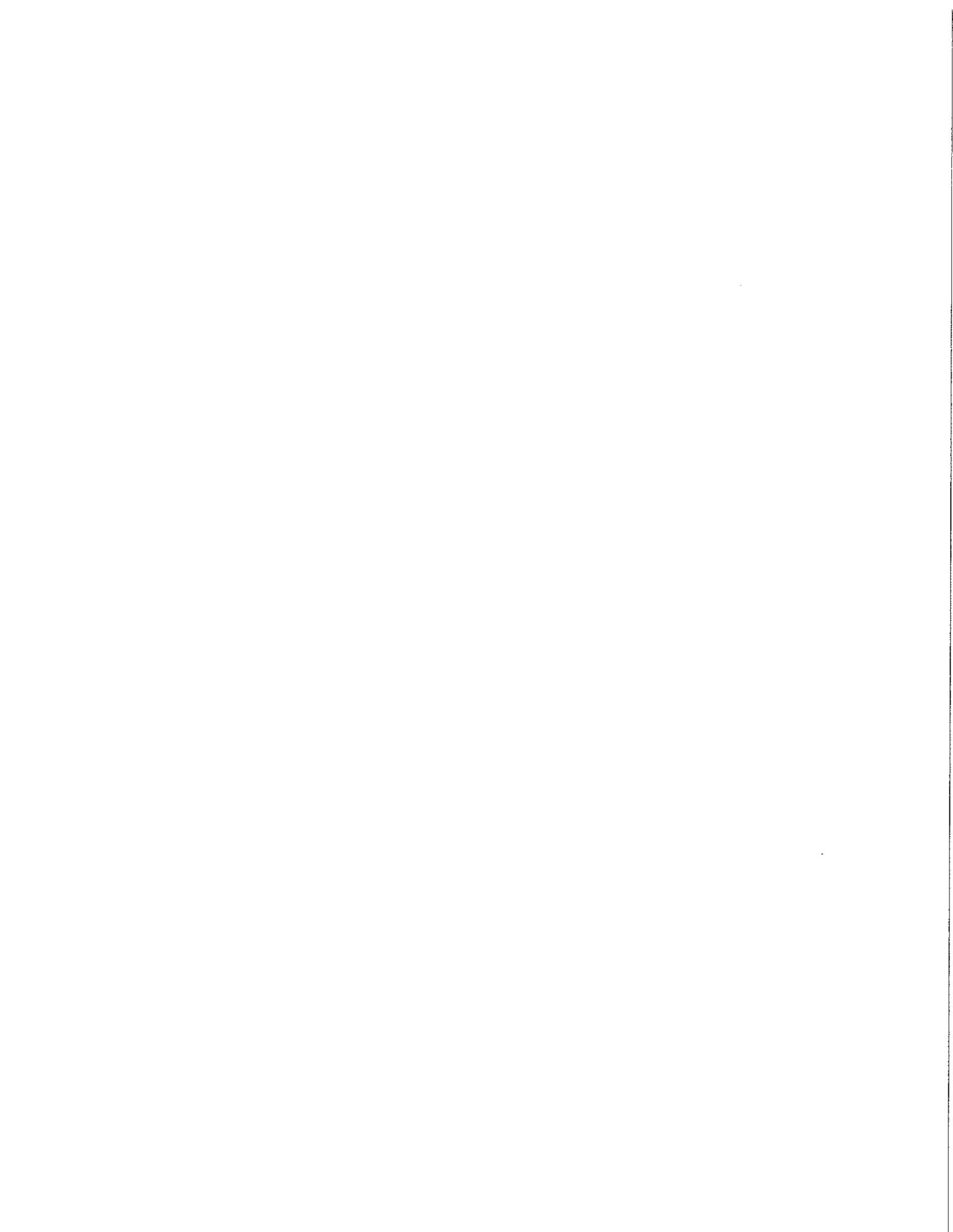
Biennium Budget	Current Month Jun 2007				2007 Biennium-To-Date Jul 01, 2005 Thru Jun 30, 2007			
	Allotment	Actual	Encumbrance	Variance	Allotment	Actual	Encumbrance	Variance

Service Units (TA)

Information Services (6111)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Office of Professional (6112)	10,690.00	(2,053.79)	0.00	2,668.79	10,690.00	31,660.51	0.00	(20,970.51)	
Adjudication Clerk (6113)	2,553.00	219.05	0.00	(113.05)	2,553.00	3,037.20	0.00	(484.20)	
WHPS Base Charges (6115)	89.00	4.90	0.00	(1.90)	89.00	106.32	0.00	(17.32)	
Investigative Services (6116)	33,776.00	(44,530.62)	0.00	45,953.62	33,776.00	(76.01)	0.00	33,852.01	
Drug Investigations (6117)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
FSL Invest & Enforcement (6118)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Regulatory Services (6120)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Tort Claim Services (6121)	606.00	0.00	0.00	26.00	606.00	367.67	0.00	238.33	
Legal Services Section (6122)	47,626.00	(9,924.43)	0.00	11,921.43	47,626.00	8,744.89	0.00	38,881.11	
Division Level AG (6123)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Customer Ser-Center (6125)	803.00	50.34	0.00	(16.34)	803.00	923.46	0.00	(120.46)	
Public disclosure (6126)	9,335.00	518.10	0.00	(112.10)	9,335.00	9,641.65	0.00	(306.65)	
Integrated Licensing System (6128)	1,428.00	(223.15)	0.00	283.15	1,428.00	1,062.33	0.00	365.67	
Volunteer Med Worker (6129)	25.00	0.45	0.00	(0.45)	25.00	0.98	0.00	24.02	
Multicultural ED HLTH (6130)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Health Prof Discipline (6131)	103.00	171.98	0.00	(165.98)	103.00	171.98	0.00	(68.98)	
Other (TA)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Sub Total Service Units (TA)	107,034.00	(55,767.17)	0.00	60,443.17	107,034.00	55,640.98	0.00	51,393.02	
Sub Total Expenditures	179,462.00	(70,821.49)	(13,015.75)	92,841.24	179,462.00	138,481.81	0.00	40,980.19	

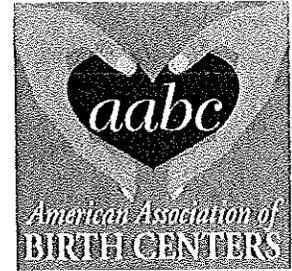
Indirect Charges

Agency Management	24,152.14	(9,922.04)	0.00	11,143.60	24,152.14	17,954.67	0.00	6,197.47
Assistant Secretary	7,329.87	(3,029.25)	0.00	3,400.30	7,329.87	5,563.70	0.00	1,766.17
Director	10,057.26	(4,149.01)	0.00	4,658.12	10,057.26	7,620.44	0.00	2,436.82
Sub Total Indirect Charges	41,539.27	(17,100.30)	0.00	19,202.02	41,539.27	31,138.81	0.00	10,400.46
Total Charges	221,001.27	(87,921.79)	(13,015.75)	112,043.26	221,001.27	169,620.62	0.00	51,380.65
				Beginning Balance	26,023.00			
				Revenue	127,671.75			
				Fines	1,000.00			
				Total Revenue	128,671.75			
				Current Balance	(14,925.87)			



American Association of Birth Centers

America's Birth Center Resource

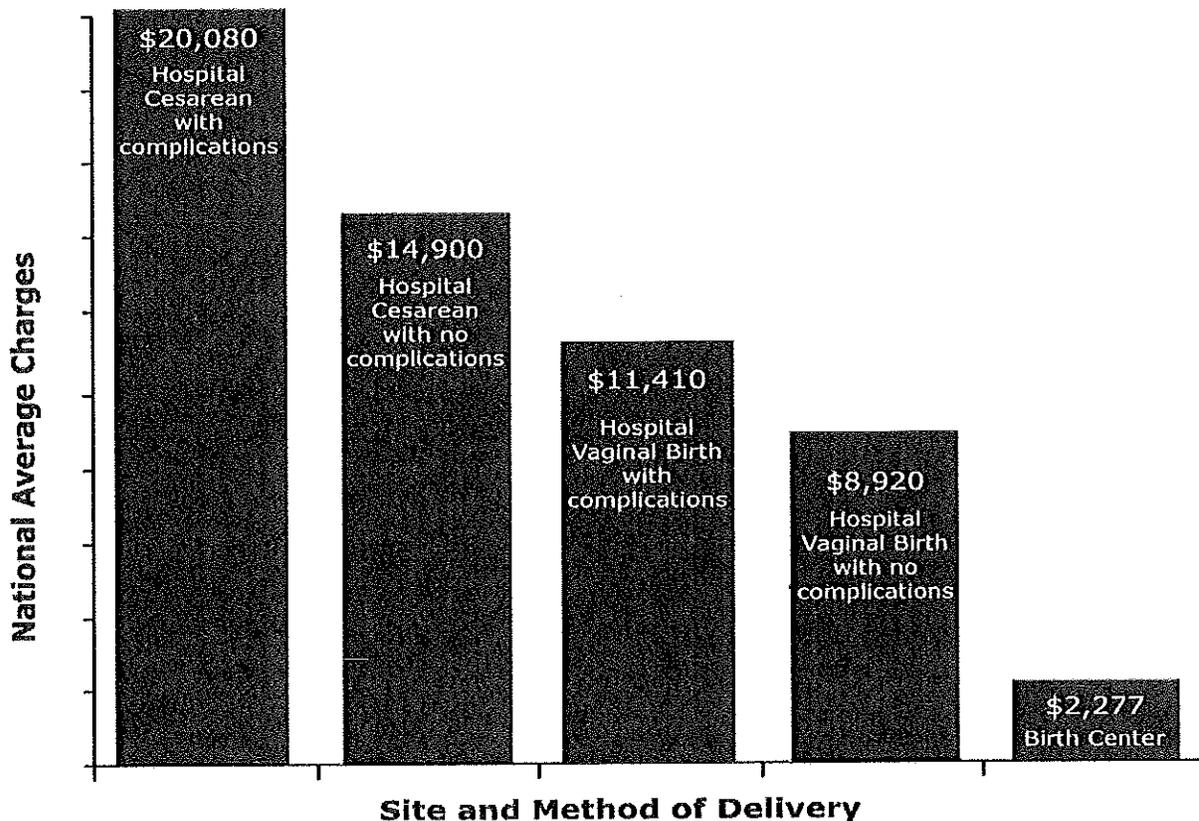


3123 Gottschall Road ~ Perkiomenville, PA 18074 ~ Tel: 215-234-8068 ~ Fax: 215-234-8829 ~ aabc@birthcenters.org ~ www.birthcenters.org

Birth Center Savings

For the past 30 years, Birth Centers have consistently shown dramatic savings when compared with hospital birth. Birth Centers provide quality, time and education intensive care that is both safe, cost-effective.

If even 10 percent of women (400,000) delivered in Birth Centers, the facility fee savings alone would be at least \$2.6 billion.



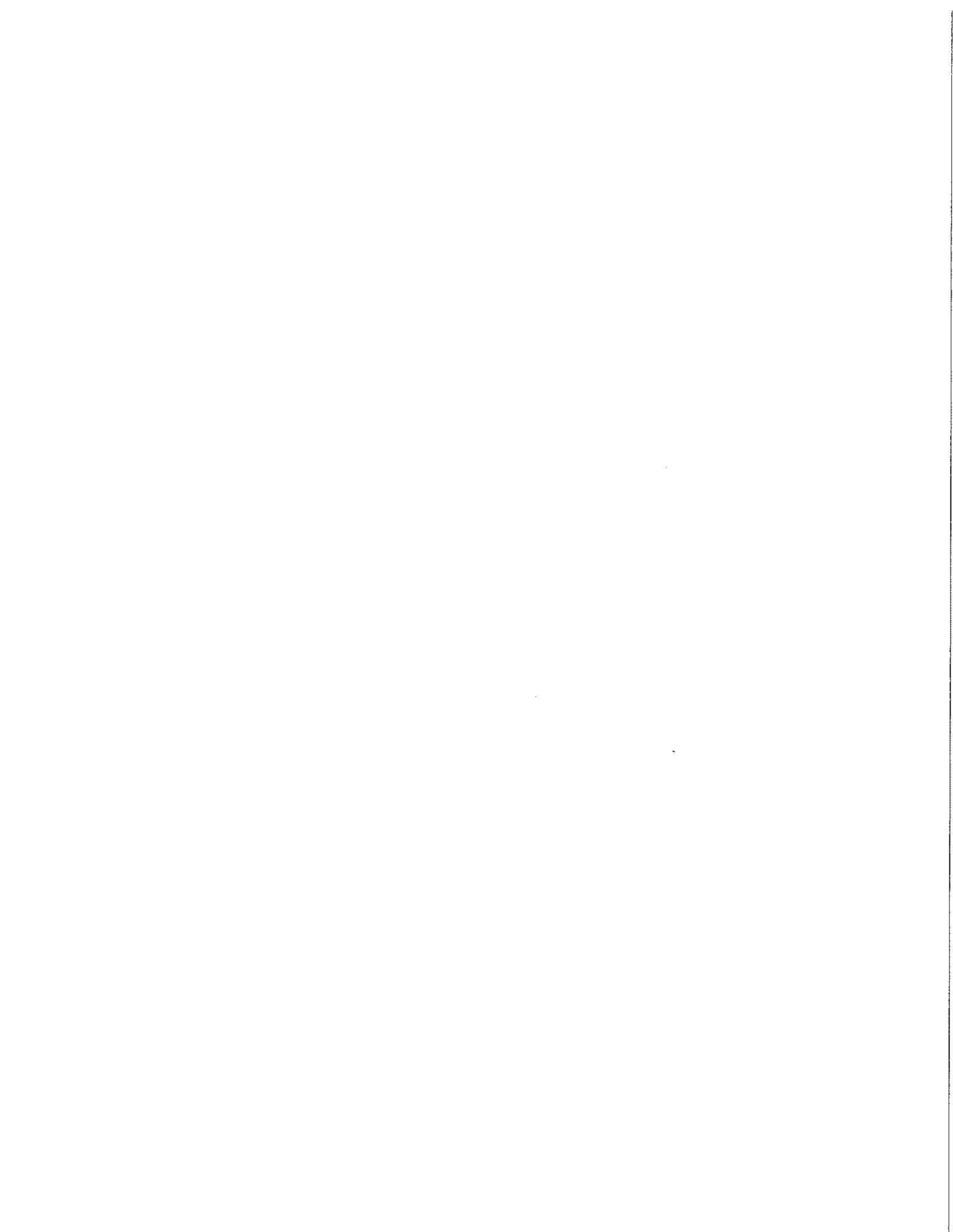
NOTES

- Data for birth centers is from 2010. Data for hospitals is from 2008.
- Chart shows facility charges only. Provider fees additional.
- Charges for hospital births do not include newborn care .

Sources:

American Association of Birth Centers. Uniform Data Set. 2010 Data

U.S. Agency for Healthcare Research and Quality, HCUPnet, Healthcare Cost and Utilization Project. 2008 Data



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FAMILY FINANCES | July 22, 2012

Giving Birth for Less

By AVERY JOHNSON

For young, healthy women, having a baby may be the costliest experience they have with the health-care system.

A typical delivery costs between \$6,000 and \$8,000, with prenatal care in the months before averaging \$2,000, according to the American Pregnancy Association, a nonprofit that promotes pregnancy wellness. And that's for an uncomplicated delivery—the figures go up for multiple births, cesarean sections and other complications.

Insurance plans vary in terms of what pregnancy costs they cover. Some require you to meet a deductible before coverage kicks in. Some require that you pay a portion of the hospital bill. Some individual policies don't cover pregnancy at all.

By 2014 all insurance plans will have to provide a minimum level of maternity coverage under the federal health law. But bringing home baby needn't break the bank now. Here are some tips from health-care experts on how to pare costs.

If you are at low risk for complications and like the idea of natural childbirth, consider delivering at a birthing center instead of a hospital. Birthing centers try to limit interventions such as episiotomies, anesthesia and induction.

The average cost of a vaginal delivery at a birthing center is \$1,872, while a c-section at a hospital could run as much as \$21,495, according to the American College of Nurse-Midwives.

Birthing centers go hand in hand with another cost saver, which is using a midwife instead of a doctor, says Brad Imler, president of the American Pregnancy Association. Midwives often provide the care at birthing centers, though they can be used for hospital deliveries, too.

"Midwives save money because of the way we utilize resources—we use less," says Joan Slager, director of nurse-midwifery at Bronson Women's Service in Kalamazoo, Mich.

Some obstetricians agree that in certain cases, midwives can be more economical. "If you are low-risk, probably if you go with a midwife your chances of c-section are lower," says Laura Riley, a high-risk ob/gyn at Massachusetts General Hospital.

Check that your insurance will cover a birthing center or midwife before deciding to go that route. Most plans contract with birthing centers, provided they are licensed and accredited, says Susan Pisano, a spokeswoman for America's Health Insurance Plans, a trade group representing insurers. High-risk women would be unlikely to qualify for coverage at a birthing center, she says, and home births aren't widely covered for anyone.

If you want to deliver in a hospital, do some comparison shopping beforehand. In the same city, delivery costs can vary by as much as \$3,000, depending on the facility, says Nancy Metcalf, an editor at Consumer Reports specializing in health care.

Don't scrimp on prenatal care, but talk to your provider about a different schedule of visits if the standard schedule is too costly, suggests Mr. Imler.

Ask questions about any prenatal tests your doctor or midwife may order. Knowing the precise date of your last menstrual period can reduce the need for early ultrasounds to determine your baby's due date, which can ratchet up costs.

For bills that aren't covered by insurance, try negotiating with your provider. Some will give you a 20% discount if you pay pregnancy costs up front or in cash, says Ms. Slager.

Finally, if you don't have health insurance, Medicaid, the state and federally run programs for low-income Americans, may be an option for pregnant women who wouldn't otherwise meet the program's income requirements. Many states use presumptive eligibility, so it doesn't take half your pregnancy to get coverage, says Karen Pollitz, senior fellow at the Kaiser Family Foundation, a health policy organization.

—Email: forum.sunday03@wsj.com

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What to reject when you're expecting

10 procedures to think twice about during your pregnancy

Published: May 2012

Despite a health-care system that outspends those in the rest of the world, infants and mothers fare worse in the U.S. than in many other industrialized nations. The infant mortality rate in Canada is 25 percent lower than it is in the U.S.; the Japanese rate, more than 60 percent lower. According to the World Health Organization, America ranks behind 41 other countries in preventing mothers from dying during childbirth.

With technological advances in medicine, you would expect those numbers to steadily improve. But the rate of maternal deaths has risen over the last decade, and the number of premature and low-birth-weight babies is higher now than it was in the 1980s and 1990s.

Why are we doing so badly? Partly because mothers tend to be less healthy than in the past, "which contributes to a higher-risk pregnancy," says Diane Ashton, M.D., deputy medical director of the March of Dimes.

But another key reason appears to be a health-care system that has developed into a highly profitable labor-and-delivery machine, operating according to its own timetable rather than the less predictable schedule of mothers and babies. Childbirth is the leading reason for hospital admission, and the system is set up to make the most of the opportunity. Keeping things chugging along are technological interventions that can be lifesaving in some situations but also interfere with healthy, natural processes and increase risk when used inappropriately.

Topping the list are unnecessary cesarean sections. The rate has risen steadily since the mid-1990s to the point that nearly one of every three American babies now comes into the world through this surgical delivery. That's double or even triple what the World Health Organization considers optimal.

Some people say that the increase in C-sections and other interventions stems mostly from women, who may be requesting more of the procedures. That could be a contributing cause but it's not the major one, says Carol Sakala, Ph.D., director of programs at Childbirth Connection, a nonprofit organization that promotes evidence-based maternity care.

"We see rates going up across all birthing groups, including all ages, races, and classes," Sakala says. "What we are seeing is a change in practice standards, a lowering of the bar for what's an acceptable indication for medical interventions."

10 overused procedures

Of course, the idea is not to reject all interventions. The course of childbirth is not something that anyone can completely control. In some situations, inducing labor or doing a C-section is the safest option. And complications are the exception, not the norm. But when they're not medically necessary, the interventions listed below are associated with poorer outcomes for moms and babies.

1. A C-section with a low-risk first birth

While C-sections are generally quite safe, "the safest method for both mom and baby is an uncomplicated vaginal birth," says Catherine Spong, M.D., chief of the pregnancy and perinatology branch at the Eunice Kennedy Shriver National Institute of Child Health and Human Development.

The best way to reduce the number of C-sections overall is to decrease the number of them among low-risk women delivering their first child. That's because having an initial C-section "sets the stage for a woman's entire reproductive life," says Elliott Main, M.D., chairman of the department of obstetrics and gynecology at the California Pacific Medical Center and director of the California Maternal Quality Care Collaborative. "In this country, if your first birth is a C-section, there's a 95 percent chance all subsequent births will be as well," he says.

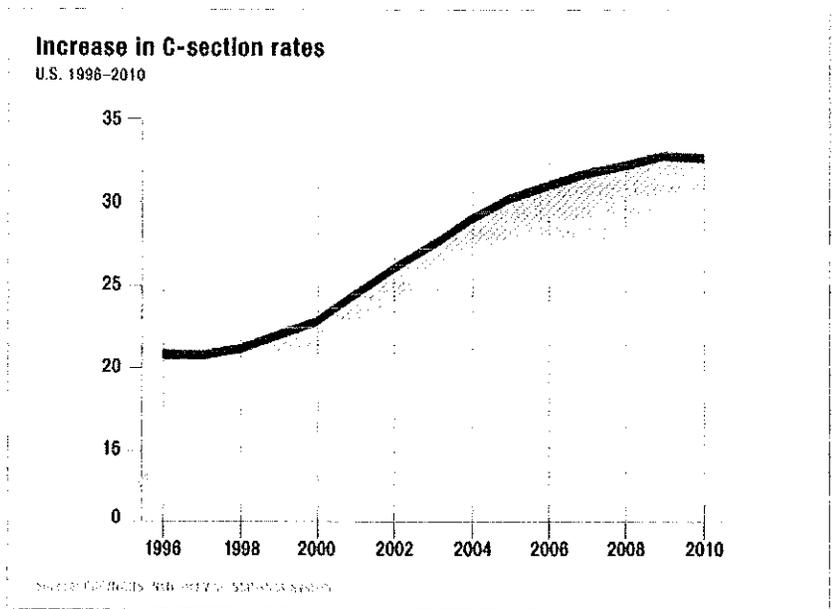
A C-section is major surgery. So it's no surprise that as rates for the procedure go down, so do the numbers for several complications, especially infection or pain at the site of the incision. Rare but potentially life-threatening complications include severe bleeding, blood clots, and bowel obstruction. A C-section can also complicate future pregnancies, increasing the risk of problems with the placenta, ectopic pregnancies (those that occur outside the uterus), or a rupture of the uterine scar. And the risks increase with each additional cesarean birth.

Babies born by C-section can be accidentally injured or cut during the procedure and are more likely to have breathing problems. They are also less likely to breast-feed, perhaps because of the challenges of starting in a post-surgical setting.

In some situations, such as when the mother is bleeding heavily or the baby's oxygen supply is compromised, surgical delivery is absolutely necessary. But women can maximize their chances of avoiding an unnecessary cesarean by finding a caregiver and birthing environment that supports vaginal birth.

When choosing a practitioner and hospital or birthing center, ask about C-section rates, particularly rates for low-risk women having their first child. The target rate for that population should be around 15 percent, according to the American Congress of Obstetrics and Gynecology (ACOG). Although it can be difficult to find a hospital with a C-section rate that low, you might be able to find one that meets the more modest goal of about 24 percent, which was set by the government's Healthy People 2020 initiative.

The U.S. health-care system has developed into a profitable labor-and-delivery machine that operates on its own timetable—not the schedule of mothers and babies.



About a third of the babies born in the U.S. are now delivered by C-section.

2. An automatic second C-section

Just because your first baby was delivered by C-section doesn't mean your second has to be, too. In fact, most women who have had a C-section with a "low-transverse incision" on the uterus are good candidates for a vaginal birth after cesarean (VBAC), according to ACOG. (Note that a "bikini scar" on the skin does not indicate the type of uterine scar.) About three quarters of such women who attempt a VBAC are able to deliver vaginally.

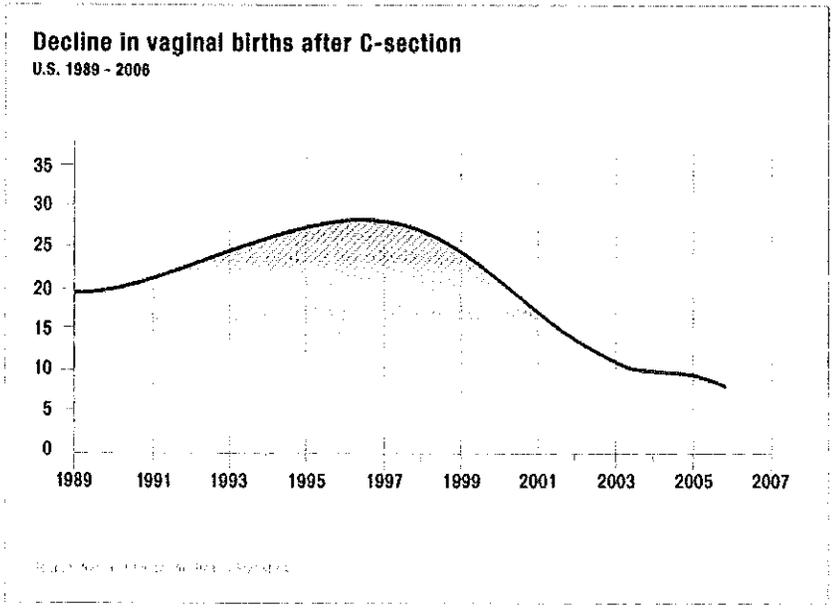
Yet the percentage of VBACs has declined sharply since the mid-1990s, particularly after ACOG said in 1999 that they should be considered only if hospitals had staff "immediately available" to do emergency C-sections if necessary. And some obstetricians don't do VBACs because they lack hospital support or training or because their malpractice insurance won't provide coverage. So women seeking a VBAC delivery might have trouble finding a supportive practitioner and hospital.

"It's tragic, really," Main says. "In many parts of the country, the option has all but disappeared."

In response, ACOG recently relaxed its guidelines. For example, it makes clear that while it's preferable for staff to be at the ready, hospitals can make do with a clear plan for dealing with uterine ruptures and assembling an emergency team quickly. Experts we spoke with say it's too early to tell if the move will lead to a change in clinical practice.

Although some women turn to home births as an alternative, our experts say that isn't a good idea in this situation. "The risk of uterine rupture is low," Main says, "but if it happens, it can be catastrophic."

Instead, if you had a C-section, find out whether your obstetrician and hospital are willing to try a VBAC. Let them know that you understand that you your baby will be monitored continuously during labor, and ask what the hospital would do if an emergency C-section became necessary.



Vaginal births after a C-section have declined sharply since the late 1990s.

3. An elective early delivery

A full-term pregnancy goes to at least 39 weeks, but over the last two decades many doctors have come to think they can deliver babies sooner than Mother Nature intended. Between 1990 and 2007, births at 37 and 38 weeks increased 45 percent, according to the March of Dimes. At the same time, full-term births dropped by 26 percent.

Because nearly all late preterm babies survive and eventually thrive, many doctors see no harm in moving up a delivery date to fit a schedule. "Although we knew 39 weeks or later was the optimal time for delivery, until recently there wasn't a good evidence showing that a lot of maturation took place after 37 weeks," says Ashton of the March of Dimes, who terms research from the last five years "eye opening."

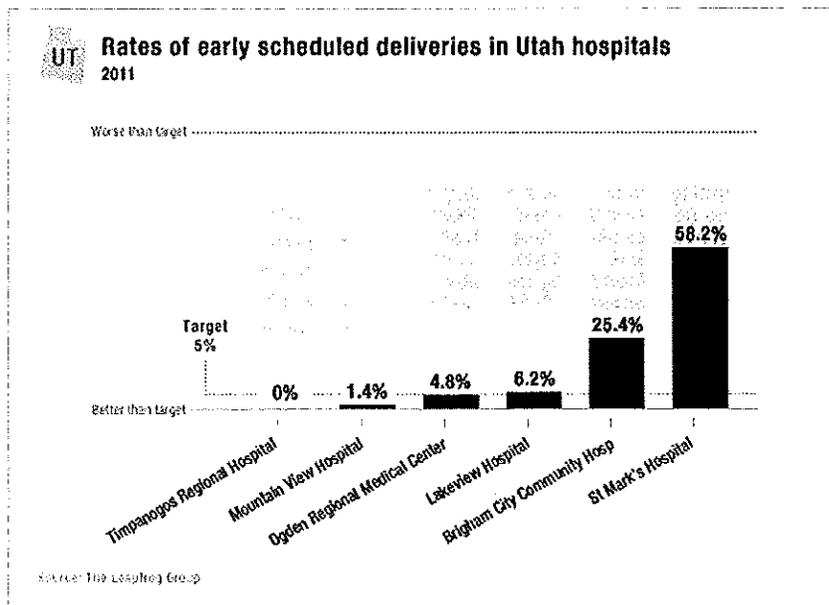
Late preterm babies "may look like full term babies," she says, "but they are different in important ways."

It turns out that carrying an infant to term has health benefits for both moms and babies. Research shows that babies born at 39 weeks or later have lower rates of breathing problems and are less likely to need neonatal intensive care. Full-term babies may also be less likely to be affected by cerebral palsy or jaundice, have fewer feeding problems, and have a higher rate of survival in their first year. Some research even suggests that full-term infants benefit from cognitive and learning advantages that continue through adolescence.

Perhaps because late preterm infants have more problems, mothers are more likely to suffer from postpartum depression. In addition, the procedures required to intentionally deliver a baby early—either an induced labor or a C-section—also carry a higher risk of complications than a full-term vaginal delivery. "There is just much more chance of things going wrong if you interrupt the normal course of pregnancy," Spong says.

Of course, some babies arrive sooner than expected and complications during pregnancy, such as skyrocketing blood pressure in the mother, can make early delivery the safest option. But hastening the conclusion of an otherwise healthy pregnancy—even by a couple of days—is never a good idea.

The rate of early deliveries varies widely among hospitals, as demonstrated in the table below of all six hospitals in Utah that report that data to Leapfrog Group. It shows the percentage of early deliveries in each hospital that were done without medical reason. See the rates of planned early deliveries for the hospitals in your state on Leapfrog's website.



The rate of scheduled early deliveries varies widely in six Utah hospitals.

4. Inducing labor without a medical reason

The percentage of births resulting from artificially induced labor more than doubled from 1990 to 2008. "In many ways the system has become centered on convenience rather than evidence-based care," says Sakala of the Childbirth Connection. She points out that it's no coincidence that more babies are born on Tuesdays than any other day of the week. "The births are scheduled so that parents and providers can all be home by the weekend."

But whether artificially induced or spontaneous, labor is labor, right? "Absolutely not," says Debra Bingham Dr.PH., R.N., vice president of the Association of Women's Health, Obstetric and Neonatal Nurses. She points out that women who go into labor naturally can usually spend the early portion at home, moving around as they feel most comfortable. An induced labor takes place in a hospital, where a woman will be hooked up to at least one intravenous line and an electronic fetal monitor. In addition, most hospitals don't allow eating or drinking once induction begins.

"An induced labor may also occur prior to a woman's body or baby being ready," Bingham says. "This means labor may take longer and that the woman is two to three times more likely to give birth surgically." In addition, induced labor frequently leads to further interventions—including epidurals for pain relief, deliveries with the use of forceps or vacuums, and C-sections—that carry risks of their own. For example, a 2011 study found that women who had labor induced without a recognized indication were 67 percent more likely to have a C-section, and their babies were 64 percent more likely to wind up in a neonatal intensive care unit, compared with women allowed to go into labor on their own.

Induction is justified when there's a medical reason, such as when a woman's membranes rupture, or her "water breaks," and labor doesn't start immediately, or when she's a week or more past her due date.

It's no coincidence that more babies are born on Tuesdays. The births are scheduled so the parents and providers can all be home by the weekend.

5. Ultrasounds after 24 weeks

Unless there is a specific condition your provider is tracking, you don't need an ultrasound after 24 weeks. Although some practitioners use ultrasounds after this point to estimate fetal size or due date, it's not a good idea because the margin of error increases significantly as the pregnancy progresses. And the procedure doesn't provide any additional information leading to better outcomes for either mother or baby, according to a 2009 review of eight trials involving 27,024 women. In fact, the practice was linked to a slightly higher C-section rate.

6. Continuous electronic fetal monitoring

Continuous monitoring, during which you're hooked up to monitor to record your baby's heartbeat throughout labor, restricts your movement and increases the chance of a cesarean and delivery with forceps. In addition, it doesn't reduce the risk of cerebral palsy or death for the baby, research suggests. The alternative is to monitor the baby at regular intervals using an electronic fetal monitor, a handheld ultrasound device, or a special stethoscope. Continuous electronic monitoring is recommended if you're given oxytocin to strengthen labor, you've had an epidural, or you're attempting a VBAC.

7. Early epidurals

An epidural places anesthesia directly into the spinal canal, so that you remain awake but don't feel pain below the administration point. But the longer an epidural is in place, the more medication accumulates and the less likely you will be able to feel to push. Epidurals can also slow labor. By delaying administration and using effective labor support strategies, you might be able to get past a tough spot and progress to the point you no longer feel it's needed. If you do have an epidural, ask the anesthesiologist about a lighter block. "Ideally, a woman should still be able to move her legs and lift her buttocks," Main says.

8. Routinely rupturing the amniotic membranes

Doctors sometimes rupture the amniotic membranes or "break the waters," supposedly to strengthen contractions and shorten labor. But the practice doesn't have that affect and may increase the risk of C-sections, according to a 2009 review of 15 trials involving 5,583 women. In addition, artificially rupturing amniotic membranes can cause rare but serious complications, including problems with the umbilical cord or the baby's heart rate.

9. Routine episiotomies

Practitioners sometimes make a surgical cut just before delivery to enlarge the opening of the vagina. That can be necessary in the case of a delivery that requires help from forceps or a vacuum, or if the baby is descending too quickly for the tissues to stretch. But in other cases, routine episiotomies don't help and are associated with several significant problems, including more damage to the perineal area and a longer healing period, according to a 2009 review involving more than 5,000 women.

10. Sending your newborn to the nursery

If your baby has a problem that needs special monitoring, then sending him or her to a nursery or even an intensive care unit is essential. But in other cases, allowing healthy infants and mothers to stay together promotes bonding and breast-feeding. Moms get just as much sleep, research shows, and they learn to respond to the feeding cues of their babies. Allowing mothers and babies to stay together is one of the criteria hospitals must meet to be certified as "baby friendly" by the Baby-Friendly Hospital Initiative, a program sponsored by the World Health Organization (WHO) and the United Nations Children's Fund (UNICEF).

Allowing healthy infants and moms to stay together right after delivery promotes bonding and breast-feeding.

10 things you should do during your pregnancy

Families don't have to wait for the whole system to change to seek out practitioners who are already following more patient-centered models of care. "We need to raise women's awareness that there will be a big difference in how they are cared for depending on who is in charge and what policies are in place," Bingham says. Below are 10 steps you can take to ensure the best possible experience.

1. Set your due date. If you aren't positive about the date of conception or your last menstrual period, get an ultrasound early in the pregnancy to establish your due date. Subsequent ultrasounds might suggest other dates, but that first ultrasound provides the most accurate one. "If we aren't sure about the dates," Spong says, "it can turn into a real mishmash in the end."

2. Make a plan—and have a backup. For example, if you've had a C-section and would like to consider a vaginal birth, discuss that up front because not all doctors and hospitals provide care for VBACs. A birth plan can help you talk about concerns and desires with your provider and with hospital staff. Look for a template that is current, applicable to your situation, and flexible. Here is an example from the California Pacific Medical Center. But remember that things rarely go exactly as planned, so have a backup in mind. For example, you might want to have a delivery without pain medication, but consider what you will do if it turns out you need it. Finally, think about breast-feeding when planning. "An important thing a mother can do is learn about breast-feeding while she is pregnant," says Rebecca Mannel, a lactation coordinator at the University of Oklahoma Medical Center. "Providing advice and support prenatally is a key time that is often missed."

3. Consider a midwife. If your pregnancy is low-risk, consider using a certified midwife, a health professional who can provide a range of women's health care during pregnancy, childbirth, and the postpartum period. Certified nurse midwives (CNMs) and certified midwives (CMs) have graduate degrees, have completed an accredited education program, and must pass a national certification exam. CNMs also have a nursing degree. Certified professional midwives (CPMs) have special training in delivering babies outside of hospitals.

Midwives practice in diverse settings—including homes, hospitals, and birthing clinics—and provide many of the same services as physicians, including prescribing medication and ordering tests. The care that midwives provide is based on the philosophy of not intervening unless there is a current or potential health problem. That approach has several benefits, according to a 2009 review of 11 studies involving more than 12,000 women. Women who used midwives were more likely to be cared for in delivery by their primary provider (rather than whoever was on call) and were more likely to have a spontaneous vaginal birth without the need for an epidural, forceps, or vacuum extraction. They are also more likely to report feeling in control during their birth experience and to initiate breast-feeding.



Most health insurance plans cover midwife care and include some in their list of covered providers. The American College of Nurse-Midwives maintains a list of CNMs and CMs. Make sure the midwife you're considering is licensed to practice in your state. CNMs are licensed in every state, but CPMs and CMs are not.

4. Reduce the risks of an early delivery. Women who have a history of spontaneous premature delivery can reduce the risk of another preterm birth by about one-third by taking a special form of progesterone weekly starting at 16 to 20 weeks. In addition, women with a significant risk of delivering their baby early—due to their water breaking, for example—and who are between 23 and 34 weeks pregnant can reduce risks to the baby by taking corticosteroids such as betamethasone and dexamethasone. If your doctor doesn't prescribe those medications ask why not, and get a second opinion if necessary.

5. Ask if a breech baby can be turned. Because a baby delivered buttocks- or feet-first can be in danger, many practitioners recommend a C-section when the baby is not coming out head first. But by using a technique called external version, a skilled practitioner can often turn a breech baby in the last weeks of pregnancy. Because it carries some risk—membranes might rupture, for example, or in rare cases the baby can become tangled in the umbilical cord—it should be done in a hospital, where both mother and baby can be monitored closely. With the increasing use of C-sections, some practitioners have little training or experience with the external version procedure. If yours is not, consider asking for a referral to someone who is.

6. Stay at home during early labor. Discuss with your provider at what point in labor you should go to the hospital or maternity center. Don't be disappointed, though, if the staff checks you and sends you home. "Until a woman's cervix is dilated to 3 or 4 centimeters, she usually doesn't need to be in the hospital setting," Main says. "She'll usually be more comfortable and labor will even progress more smoothly at home."

7. Be patient. Mothers are likely to be in labor longer than their grandmothers were, recent research suggests. That may be because they tend to be heavier or older when they give birth, or it may be a side effect of epidural anesthesia. In any case, most doctors learned about the course of labor from timetables set in the 1950s. "Obstetricians may be too quick to intervene because they think labor is not progressing as quickly as it should," Main says. Talk with your practitioner as well as anyone who will be supporting you in advance about your desire to allow your labor to progress on its own.

8. Get labor support. Women who receive continuous support are in labor for shorter periods and are less likely to need intervention. The most effective support comes from someone who is not a member of the hospital staff and is not in your social network—a doula, or trained birth assistant, for example—according to a systematic review of 21 studies involving more than 15,000 women in a range of circumstances and settings. Ask your provider for a referral, and see if your insurance company will cover doula care.

9. Listen to yourself. Walking, rocking, or moving during contractions, and changing positions between contractions, can make you more comfortable and speed labor along. "Each labor coping strategy, such as walking or showering, tends to last for about 20 minutes," Main says. "It's good to plan five or six strategies and then rotate through them." When it comes time to push, being upright or on your side rather than flat on your back allows your pelvis to open and keeps you working with rather than against gravity. Hollywood-style pushing, in which the woman is coached to hold her breath and push hard according to someone else's count, turns out to be less effective than trusting your instincts. "Self-directed pushing, in which the mother can push when she feels like it in the way that feels right to her, can actually make things go faster," Bingham says.

Placing healthy newborns naked on their mother's bare chest after birth has many benefits for both.

10. Touch your newborn. Placing healthy newborns naked on their mother's bare chest immediately after birth has numerous benefits for both of them, according to a review of 30 studies involving nearly 2,000 mother-infant pairs. Babies that get skin-to-skin contact interact more with their mothers, stay warmer, cry less, and are more likely to be breast-fed and to breast-feed longer than those that are taken away to be cleaned up, measured, and dressed.

5 things to do before you become pregnant

One approach to improving birth outcomes is to focus on improving health before pregnancy. "Entering pregnancy healthy gives you the best possible chance to stay that way yourself and have a healthy baby," Spong says. "If you have medical problems, get those under control. Get yourself in as good shape as you can for that baby."

And if you aren't planning a pregnancy in the near future? There's no downside to optimizing your health. Plus, over half of all pregnancies are unplanned, so it only makes sense for women who are sexually active to consider their reproductive health.

A two-year collaborative effort by experts from government agencies, national medical organizations, and nonprofits such as the March of Dimes yielded recommendations for health-care providers and consumers to improve preconception health and care. Here are the top five.

1. Take folic acid. Aim for 400 mcg of a day starting at least 3 months before becoming pregnant to cut the risk of neural tube defects by at least half.

2. Stop bad habits. That means smoking, drinking alcohol excessively, and using illegal drugs. Smoking is associated with premature birth, low birth weight, and other pregnancy complications. It's never safe to smoke or use recreational drugs during pregnancy because those substances can harm the developing fetus even before you realize you are pregnant. Any alcohol during pregnancy—especially during the second half of the first trimester—puts your baby at risk for fetal alcohol syndrome, according to a recent study.

3. Take control of chronic disease. If you have a medical condition such as asthma, diabetes, epilepsy, or high blood pressure, be sure to get it under control. For example, losing excess weight before pregnancy decreases the risk of neural tube defects, preterm delivery, gestational diabetes, blood clots, and other adverse effects. Also be sure that your vaccinations are up to date; rubella (German measles) and chicken pox can cause birth defects and complications if you get them while pregnant.

4. Watch for harmful drugs and supplements. Talk with your doctor and pharmacist about any over-the-counter and prescription medicine you are taking, including vitamins and other dietary or herbal supplements. Some medication, such as the acne drug isotretinoin (Accutane), can cause miscarriages and birth defects and shouldn't be taken by women who are—or might become—pregnant. For other medication, your doctor may prescribe a lower dosage or an alternative drug.



5. Avoid toxins. Those include hazardous chemicals or potentially infectious materials at work or at home. Stay away from solvents such as paint thinner. Don't change the litter in your cat's box; let someone else do it. And avoid handling pet hamsters, mice, and guinea pigs because they can carry a virus that can harm your baby.

Success stories

Laura Sundstrom, New Haven, Conn.

Laura Sundstrom was surprised that her expertise as a nurse midwife didn't fully prepare her for her own pregnancy and childbirth. "I felt humbled, fresh, naive—less like a midwife and much more like one of my patients taken over by this powerful change happening inside me," she says.



The next surprise was that despite a healthy pregnancy and excellent care, the birth of her first child did not go according to plan. When the baby wouldn't budge after hours of pushing, she was delivered by C-section. After attending the vaginal births of so many of her patients, Sundstrom expected her own child to come into the world the same way. But she has no regrets. "I feel fortunate in that I had one of those C-sections that is truly medically necessary," she says.

Fast forward three years and Sundstrom, pregnant with her second child, found that not everyone in her professional community was supportive of her choice to again try for a vaginal birth because of the risks she encountered the first time. "Even I had a hard time believing I could go through with it," says Sundstrom, who put herself in the hands of a skilled colleague who reminded her to "allow for normal." In addition to her midwife, she also consulted with a team of doctors who were supportive of VBACs, and she and her caregivers put together a comprehensive plan for a hospital birth.

This time everything went smoothly, and Sundstrom says the mood in the delivery room was upbeat. In between contractions, she was excited, joyful even, right up until she needed to push. "At that point, all my fears and anxieties came flooding back," she says. "If I could have gotten up and left, I would have. I just didn't believe I could do it." Her midwife then encouraged her to do the same thing Sundstrom had advised so many of her own patients to do—reach down and feel the baby's head. In that moment, the possibility of a natural birth became real. She recalls feeling "so much calmer, really at peace."

Her son was born about 10 minutes later. "Going into the second birth, I was totally prepared for another C-section and would have been OK with it," Sundstrom says. "But I didn't realize until the moment it happened how incredible it was to receive that fresh, warm baby. I was elated. It was fabulous."

Emily Timmel, Croton-on-Hudson, N.Y.

Emily Timmel's describes her first pregnancy as totally normal. Although laboring for more than 24 hours had left her exhausted, she was still up for a vaginal birth. She only got to push twice. "The baby was in distress," she recalls. "The doctor tried a vacuum extraction, but when that didn't work, I was wheeled into another room for an emergency C-section, and knocked out with gas." She would learn that her bouncing baby boy was fine when she was reunited with him two hours later.



Timmel's own recovery was complicated by a series of infections at her incision site. "The first two months were pretty rough," she says. She admits to second-guessing her choices, wondering if she could have done anything to have a vaginal birth. But ultimately she was reassured that because the umbilical cord had been "wrapped like a noose" around her baby's neck, the doctor took the steps necessary to save his life.

Timmel was considered a great candidate for a vaginal birth with her second child because the problems related to her first childbirth were not likely to occur. Still, not everyone was supportive. An obstetrician she knew told her that a VBAC would be unwise, Timmel says. "She told me all these horrible scary stories—that I wouldn't be able to push the baby out or that my uterus would rupture," she said.

Timmel was reassured by her own maternal-care team that going into labor in a hospital setting was a reasonable option. This time, she came fully prepared. "I engaged a doula for support," she said. "I also had a wonderfully supportive midwife and husband." Everything went like clockwork. Labor started at 3 a.m., she went to the hospital at 9 a.m., and by 10:45 a.m. had what she calls "an amazing experience" giving birth to her second son.

Timmel credits the hospital she chose for helping to make her second childbirth much better all-around. "Staff at the first hospital started talking to me about interventions from the second I walked in the door," she says. "They had a very condescending attitude about natural childbirth," adding that they were also not supportive of breast-feeding and despite her protests kept trying to give the baby a bottle.

The difference between that experience and the second hospital was "like night and day," Timmel says. "Every nurse supported me as a mother and supported bonding with my baby, including breast-feeding. It was such a gift."

Resources

The care you get during pregnancy depends in part on where you live. For example, among 757 hospitals that voluntarily share data, the rate of elective early deliveries ranges from 5 percent to more than 40 percent, according to the Leapfrog Group, a national quality watchdog organization. "What we are seeing is extreme disparities in the quality of care," says Carol Sakala of Childbirth Connection. "It varies from state to state, from hospital to hospital, and sometimes even within the same hospital."

The good news is that when there's a concerted effort to follow best practices, the numbers improve—often significantly. Main, who has developed and led quality-improvement initiatives at 20 hospitals in the Sutter Health system in northern California, says "We've reduced the rate of early elective deliveries from 22 percent to 6 percent, with many hospitals at or near zero." Sutter Health also reduced the rate of episiotomies from 45 percent to 14 percent in first-time births.

How do the hospitals you are considering stack up? Many states make comparison data available to consumers on the web. Here are some of the best sites.

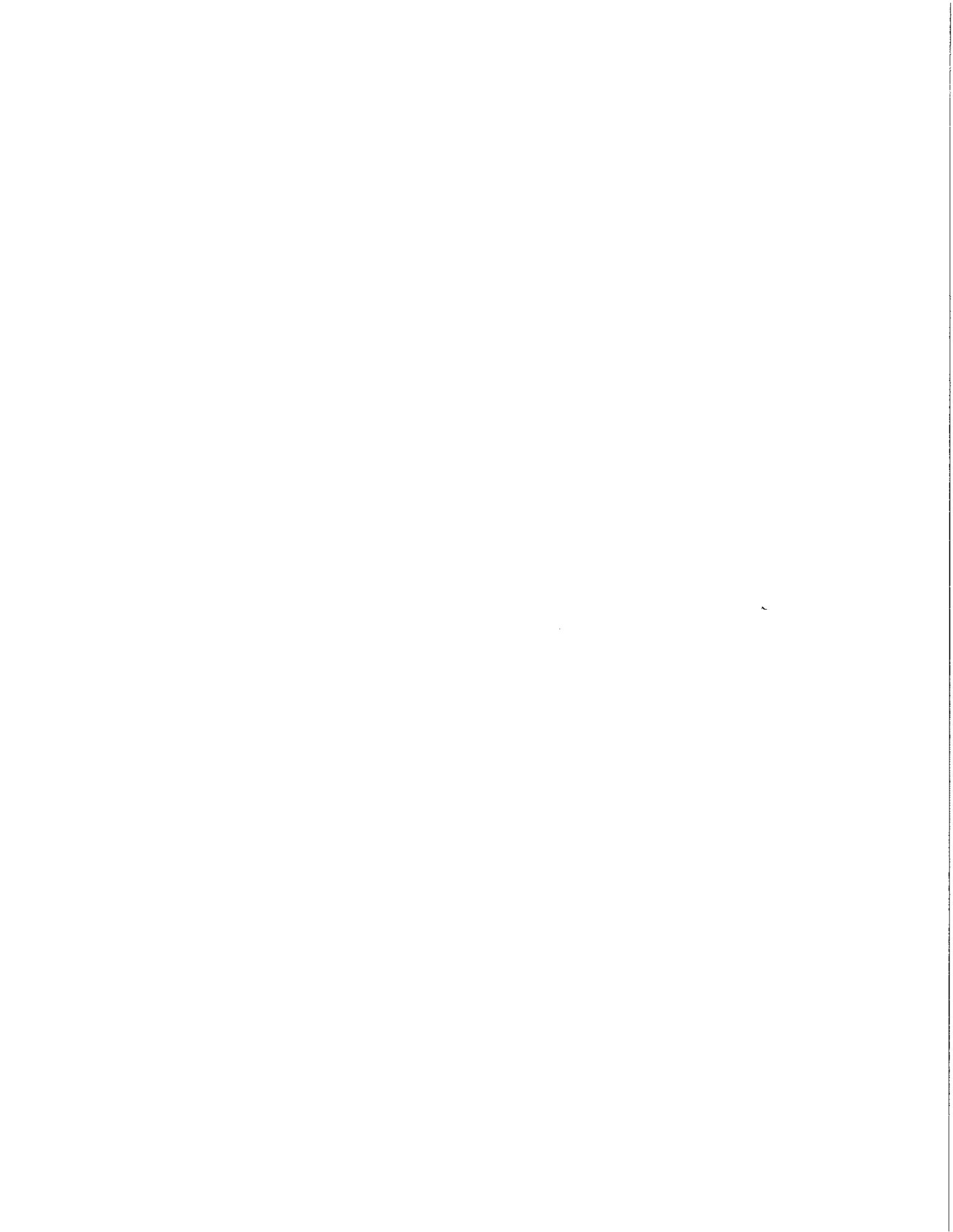
Resources for hospital data, by state

- California. Comprehensive site includes rates for C-section, episiotomy, breastfeeding, and NICU admission; VBAC availability, and ratings based on maternity patient experience. ratings for patient care.
- Florida. Bare bones information on cost, length of stay, and volume.
- Illinois. Allows you to easily compare hospitals by rates of total C-sections, first C-section, and VBACs.
- Maryland. Provides basic information on types of deliveries by hospital, but you have to calculate rates and perform your own comparisons.
- Massachusetts. Shows how hospitals compare to state average for C-sections and VBACs. Also provides 2006 data on several other maternity procedures.
- New York. Provides C-section rates and compares them to state average.
- Ohio. Allows you to easily compare hospitals on numerous maternity measures.
- Tennessee. Provides data on C-sections and vaginal deliveries, including morality, infection, and readmission rates.
- Texas. Allows you to compare hospitals based on number of primary C-sections and VBACs; also compares complication rate to state average.
- Utah. Provides information on C-section and VBAC rates, hospital costs, and some patient safety measures.
- Virginia. Rates hospitals based on C-sections, episiotomy, length of stay, and cost as well as several prenatal and postpartum measures.
- Washington. Limited to data on early elective deliveries.
- Wisconsin. Limited to data on length of stay and cost.

General resources

- Baby Friendly USA. Includes a map of hospitals in the U.S. that have been certified as "Baby Friendly," meaning that they follow best practices to establish and support breastfeeding.
- Centering Healthcare Institute. Provides a list of Centering Pregnancy Centers, which provide assessment, care, and support in a group setting.
- Childbirth Connection. Nonprofit organization that provides evidence-based information on maternity care.
- Health4Mom. Consumer information site sponsored by the Association of Women's Health, Obstetric, and Neonatal Nurses (AWHONN).
- March of Dimes. Nonprofit organization dedicated to education and research.

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My name is Alison Duren-Sutherland and I am a midwifery consumer. My daughter was born in Washington State with the assistance of licensed midwives in 2008, and the cost of my maternity care was covered by my insurance company. I am also here as a representative of the Oregon Alliance of Free-Standing Birth Centers. I manage Trillium Waterbirth Center in Medford, OR. My employer provides an alternative to hospital birth that uses fewer costly interventions, and improves clinical outcomes and patient satisfaction. In 2011, our cesarean section rate was 10% (one out of every ten births) as compared with the national rate of 34% (one out of every three births). The World Health Organization has stated that a cesarean rate no higher than 15% is optimal. Our midwifery practice includes both nationally certified, state-licensed direct-entry midwives and certified nurse midwives, practicing in a state-licensed free-standing birth center. We serve clients with private insurance, clients with no insurance, and clients with Oregon Health Plan, though the current restructuring of OHP will eliminate our ability to serve OHP clients next year unless the CCOs accept our requests to join their organizations.

Along with my written testimony, I am submitting articles from The Wall Street Journal and Consumer Reports highlighting the safety and reduced costs provided by out-of-hospital births with midwives, as well as a study from our neighbor to the north, Washington State, where midwives are better integrated into the health care system, showing equivalent health outcomes and reduced costs to state Medicaid provided by licensed midwifery care. State-licensed midwives practicing outside the hospital provide cost-savings to the payer and improved satisfaction for the consumer.

The Oregon Alliance of Free-Standing Birth Centers is excited about the innovative changes Oregon is making to our state's healthcare delivery system. We are excited about the non-discrimination provisions in both the Affordable Care Act (section 2706) and the state rulemaking around Coordinated Care Organizations, which ultimately requires participating health plans not to exclude any particular category of state-licensed provider. We are excited about section 2301 of the Affordable Care Act, which requires state Medicaid programs to reimburse state-licensed providers providing maternity care in state-licensed facilities. We see that the intent of these laws is to include coverage of licensed midwifery care into the healthcare system, and we are ready to be integrated into that system. We recognize that out-of-hospital maternity care works best when we have physician and hospital back-up in the rare event that a normal birth becomes a healthcare emergency. We want to serve clients of all income levels, and be reimbursed by state and private health plans, and our clients want this care. I have included with my written testimony a petition to Oregon's new CCOs with over 1000 signatories requesting that CCO provide coverage for out-of-hospital birth with state-licensed midwives.

These signatures were collected because we have some grave concerns about the real-life implementation of the laws and rules we are discussing today. At this time, neither PacificSource, CareOregon nor MidRIPPA/AllCare (our local Jackson & Josephine County CCO/Managed Care Plan) will cover services provided by state-licensed direct-entry midwives in state-licensed birth centers. Last week, the AllCare provider relations specialist told me that

their organization “do[es] not recognize out of hospital birth.” CareOregon has told our sister birth center Bella Vie in Salem that they are “awaiting CMS guidance” on the inclusion of licensed midwives in their Managed Care Plan since 2010. We believe that CMS has spoken, and it is clear that Oregon has: providers that have shown themselves worthy of state licensure belong in these networks and our services must be covered by public and private health plans.

While the Essential Healthcare Services recommended for coverage will surely include maternity care, unless the state specifies that licensed midwives and licensed free-standing birth centers must be included, these health plans have demonstrated that they will not provide this coverage. The midwifery model of care is not the same as hospital-based birth care. Prenatal and postpartum visits last a full hour, and midwives are present, providing one-to-one care to the laboring mom throughout the labor. Licensed midwives offer the same prenatal testing and monitoring health of mother and baby, but use their longer visits to provide patient education and active listening to their clients. It is up to you, the state, to ensure that all pregnant women, regardless of income, have access to our high-quality, low-cost midwifery care if they so choose.

Thank you for hearing my testimony today. Midwives and birth centers want to be part of the solution to the problems of preterm birth and maternal morbidity and mortality all too often associated with childbirth in this country. With your help, we can become part of the life-saving health-care infrastructure for moms and babies across the state of Oregon. Please explicitly instruct the insurance companies participating in the exchange, as well as the new OHP CCOs, to include state-licensed direct-entry midwives and birth centers in their networks. Thank you for your time today. This concludes my testimony.