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Analysis of the Primary Cesarean Delivery Rate: A Legal and Policy Approach

*Lisa Zolotusky**

I. INTRODUCTION

In 2010, the rate of delivery by cesarean section, the surgical extraction of a baby through an incision in the mother's abdomen, reached a record high in the United States: 32.8% of deliveries were performed by cesarean.¹ The rate of cesarean deliveries has rapidly increased since the mid-1990s.² This surgery may be a life-saving procedure and may be necessary when the mother or baby has a range of health conditions. However, the extraordinarily high rate of cesarean delivery in the United States begs consideration of the risks associated with cesarean delivery, and whether the risks warrant such a high rate of surgery.

This note analyzes the current rate of primary cesarean delivery, and posits possible theories for the increase in rate, including: (1) defensive medicine in a complex medico-legal environment; (2) insurance reimbursement rates for cesarean delivery compared to vaginal delivery; and, (3) the availability of quality prenatal care. This note proposes several methods of alleviating the effect these factors have on cesarean rates: (1) encouraging evidence-based practices by permitting evidence-based findings to bear on standard-of-care determinations in malpractice litigation; (2) equalizing reimbursement of uncomplicated cesarean and vaginal deliveries for Medicaid enrollees; and, (3) improving the prenatal care provided to Medicaid beneficiaries, including use of decision-aids and patient education.

Researchers often categorize cesarean deliveries as either primary cesarean deliveries or repeat cesarean deliveries. In a primary cesarean, the

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1. Brady E. Hamilton et al., *Births: Preliminary Data for 2010*, 60 NAT'L VITAL STAT. REP. 2, 16 (2011).

2. Fay Menacker & Brady E. Hamilton, Ctrs. for Disease Control & Prevention, *Recent Trends in Cesarean Delivery in the United States*, 35 NAT'L CENTER FOR HEALTH STAT. DATA BRIEF 1 (Mar. 2010), available at www.cdc.gov/nchs/data/databriefs/db35.pdf.

mother has not had a previous cesarean delivery.³ In 2011, there were 61,746 primary cesarean deliveries performed in California.⁴ The Office of Statewide Health Planning and Development classifies this procedure as being “over-utilized.”⁵ The distinction between primary and secondary cesareans is significant; there has been controversy about the safety of vaginal birth after cesarean (VBAC) delivery, and guidelines issued by the American Congress of Obstetricians and Gynecologists (ACOG) encouraged cesarean deliveries among women who had previously undergone surgical delivery.⁶ Repeat cesareans are not entirely responsible for the increase in the rate of cesarean deliveries, as the rate of primary cesarean deliveries has been sharply increasing as well.⁷ While ACOG has recently issued less restrictive VBAC guidelines,⁸ this analysis is focused on the rate of primary cesarean section, which would not have been affected by the changing guidelines related to repeat cesareans.

A high rate of cesarean deliveries is problematic because of the health risks associated with this surgery, for both the mother and the child. While there are certainly cases in which the benefit of cesarean delivery outweighs the risks associated with the procedure,⁹ researchers have posited that the high rate currently experienced in the United States indicates that a substantial number of these surgeries are being performed unnecessarily, in cases where the benefits do not outweigh the risk.¹⁰ Cesarean delivery is a major abdominal surgery and is associated with higher rates of maternal rehospitalization than vaginal birth.¹¹ Women who undergo cesarean deliveries have significantly increased risk of adverse

3. Jutta M. Joesch, *Primary Cesarean Deliveries Prior to Labor in the United States, 1979-2004*, 12 *MATERNAL CHILD HEALTH J.* 323, 323 (2008).

4. *Utilization Rates for Selected Medical Procedures in California Hospitals, 2011*, OFFICE OF STATEWIDE HEALTH PLANNING AND DEV., 1, available at http://www.oshpd.ca.gov/HID/Products/PatDischargeData/ResearchReports/HospIPQualInd/Vol-Util_IndicatorsRpt/index.html.

5. *Id.*

6. *Ob Gyns Issue Less Restrictive VBAC Guidelines*, AM. CONG. OF OBSTETRICIANS AND GYNECOLOGISTS, 1 (July 21, 2010), available at http://www.acog.org/About_ACOG/News_Room/News_Releases/2010/Ob_Gyns_Issue_Less_Restrictive_VBAC_Guidelines [hereinafter ACOG, *Guidelines*].

7. *Primary Births Driving the Increased Rate of Cesarean Deliveries in the US*, *CONTEMPORARY OB/GYN*, 1 (Aug. 01, 2011).

8. ACOG, *Guidelines supra*, note 6.

9. For a list of the medical risk factors for cesarean deliveries, see Marian F. MacDorman et al., *Infant and Neonatal Mortality for Primary Cesarean and Vaginal Births to Women with “No Indicated Risk,” United States, 1998–2001 Birth Cohorts*, 33 *BIRTH* 175, 176 (2006). A cesarean delivery may be medically necessary, for example, in cases of placental abruption, placenta previa, uterine rupture, or maternal illness making it impossible to withstand labor.

10. Robyn Kennare et al., *Risks of Adverse Outcomes in the Next Birth After a First Cesarean Delivery*, 109 *J. OBSTETRICS & GYNECOLOGY* 270, 272 (2007); Jeffrey L. Ecker & Fredric D. Frigoletto, *Cesarean Delivery and the Risk-Benefit Calculus*, 356 *NEW ENG. J. MED.* 9, 885 (2007); Menacker & Hamilton, *supra* note 2, at 6.

11. Menacker & Hamilton, *supra* note 2, at 6.

outcomes in a subsequent pregnancy,¹² including higher risk of infertility or miscarriage.¹³ One 2006 study found that infant mortality is higher in babies delivered by voluntary cesarean section, even where there was no medical indication to perform the surgery.¹⁴ This finding may be due to the release of hormones during vaginal birth that are beneficial to the infant's development.¹⁵ Vaginal delivery is thought to improve the lung function of the infant, and children born via cesarean delivery are more likely to suffer from childhood asthma.¹⁶ The numerous risks associated with cesarean deliveries are currently being studied, but the potential negative outcomes of the surgery are not in great dispute. Given the danger of surgery, there should be an examination of the reasons for this delivery method and an assessment of whether or not they are justified.

At least one study of cesarean deliveries indicated that the increase in the overall rate of cesareans was due to an increase in emergency procedures, cases where the cesarean was performed after trial of labor was attempted.¹⁷ This finding suggests that nonmedical reasons for performing cesareans are becoming more common, since cesarean deliveries due to underlying medical conditions are often planned in advance, and no trial of labor is initiated. Primary cesarean deliveries have increased among all types of mothers—in all age categories, income groups, and ethnicities.¹⁸ The universality of this trend suggests some underlying nonmedical factors, which would affect all types of patients. Defensive medicine and the cost incentives of reimbursement rates may have that kind of broadly reaching effect.

II. DEFENSIVE MEDICINE

The threat of a lawsuit is a daily part of a physician's practice, particularly for obstetricians-gynecologists (ob-gyns). Nearly 77% of obstetricians-gynecologists have been sued at least once; half have been sued three or more times.¹⁹ The practice of "defensive medicine"—treating a patient with an eye towards reduction of legal liability—is often characterized by ordering excessive diagnostic testing, prescribing

12. Kennare, *supra*, note 10, at 276.

13. A.P. LaSala, *Primary Cesarean Section and Subsequent Fertility*, 157 AM. J. OBSTETRICS & GYNECOLOGY 2, 379 (1987).

14. MacDorman et al., *supra* note 9 at 177.

15. *Id.*

16. Mette Tollanes et al., *Cesarean Section and Risk of Severe Childhood Asthma: A Population-Based Cohort Study*, 153 J. PEDIATRICS 1, 112, 112 (2008).

17. Jutta M. Joesch, *Primary Cesarean Deliveries Prior to Labor in the United States, 1979-2004*, 12 MATERNAL CHILD. HEALTH J. 323, 326 (2008).

18. *Id.* at 323.

19. VICTORIA L. GREEN, *Chapter 43: Liability in Obstetrics and Gynecology*, in LEGAL MEDICINE, 441 (2007).

unnecessary medicines, and recommending unneeded surgery.²⁰ One study found that nearly 40% of ob-gyns prescribe more medications than medically necessary because of lawsuit fears.²¹

A 2009 study published in *Medical Care* found that malpractice premiums had an effect on rates of cesarean deliveries.²² The researchers measured litigation pressure using liability insurance premiums. Their findings indicated that each \$10,000 decrease in malpractice insurance premiums is associated with a 1.18% decrease in primary cesareans performed (which would have resulted in 3600 fewer primary cesareans in 2003).²³ The researchers concluded that reducing the threat of litigation would lead to a decrease in the number of cesarean deliveries performed.²⁴ Another analysis found that “[m]alpractice reform is a necessary but insufficient component of cost containment . . . unless liability concerns are successfully addressed, it is unlikely that most physicians will be willing to adopt the systemic strategies needed for cost control.”²⁵ While those findings may not show a large increase in cesareans with increased malpractice risk, the correlation is nonetheless present, and similar findings have been shown in previous years: one 1999 study published in the *Journal of Health Economics* found that a higher malpractice claims risk, as measured through obstetricians’ malpractice premiums, is correlated with an increased rate of cesarean sections.²⁶ The study found a small, but measurable, effect. A similar study published in the *Journal of the American Medical Association* years earlier also found the same effect when controlling for clinical risk, patient socioeconomic status, and physician and hospital characteristics.²⁷ The study found a stronger correlation between cesarean delivery rates and physician perception of malpractice risk.^{28 29}

In order to prevail in a medical malpractice claim, the plaintiff must establish that the physician departed from the applicable standard of medical care owed, and that departure proximately caused the plaintiff’s

20. Laura D. Hermer & Howard Brody, *Defensive Medicine, Cost Containment, and Reform*, J. GEN. INTEREST MED. 470, 470 (2010).

21. Hermer & Brody, *supra* note 20, at 470.

22. Y. Tony Yang et al., *Relationship Between Malpractice Litigation Pressure and Rates of Cesarean Section and Vaginal Birth After Cesarean Section*, MED. CARE 234, 235, 442 (2009).

23. *Id.* at 440.

24. *Id.* at 442.

25. Hermer & Brody, *supra* note 20, at 470.

26. L. Dubay, et al., *The Impact of Malpractice Fears on Cesarean Section Rates*, 18 J. HEALTH ECON. 4, 491, 519 (1999).

27. A. Russell Localio et al., *Relationship Between Malpractice Claims and Cesarean Delivery*, 269 JAMA 366, 366 (1993).

28. *Id.*

29. HS Brown, *Lawsuit Activity, Defensive Medicine, and Small Area Variation: The Case of Cesarean Sections Revisited*, 2 HEALTH ECON. POL’Y L. 285, 285 (2007).

injury.³⁰ Expert testimony is ordinarily required to establish the standard of care required from a physician.³¹

While the medical malpractice system is sometimes maligned for exerting undue influence on medical professionals, it is a critical part of the healthcare system. It is important to preserve a patient's right to seek redress for negligent care. The legal process must be balanced to give physicians and patients a fair voice in the courtroom. The system should incentivize physicians to act in accordance with sound medical practices, instead of acting in accordance with defensive practices that reduce their risk of litigation. The current malpractice process may encourage cesarean rates for two reasons: (1) the surgery is the safer option for the physician, since a non-negligently performed cesarean and its associated risks are not characterized as an injury, and (2) standard-of-care determinations do not reflect evidence-based guidelines, and are often weighted to favor surgical intervention.

Of the nine most common reasons for obstetric malpractice suits, six of them allege failure to perform a cesarean delivery or failure to perform a timely cesarean delivery.³² Physicians are more frequently held liable for actions not performed (failing to administer a diagnostic test, for example) than for actions that they do perform.³³ Indeed, one court has ruled that a cesarean delivery is not considered medical harm, since, according to the court, it is a possibility in every childbirth.³⁴ While this reasoning is sound—it would be problematic to categorize a cesarean delivery as an injury in and of itself—the injury from a nonnegligently performed cesarean delivery is not recoverable. Furthermore, there is no legal recovery for increased risk of harm, such as a propensity for childhood asthma, or increased risk of miscarriage. For obstetricians considering legal liability, the current malpractice system makes performing a cesarean delivery the safer option.

It is difficult for a plaintiff to claim an unnecessary cesarean delivery is an “injury,” as required to sustain a claim of medical malpractice. Additionally, it is just as difficult to claim a bad outcome from a cesarean delivery is proximately caused by the surgery itself—the problems associated with cesarean deliveries could be caused by other factors, could present many years after the surgery, and are generally difficult to definitively link to the surgery in any given patient. Even if a plaintiff could successfully show that an injury was caused by a cesarean delivery, if

30. 70 C.J.S. Physicians and Surgeons § 134 (2011).

31. 61 AM. JUR. 2D *Physicians, Surgeons, Etc.* § 321 (2011) [hereinafter AM. JUR., *Physicians*].

32. James M. Shwayder, *Liability in High-Risk Obstetrics*, 34 OBSTETRICS & GYNECOLOGY CLINICS OF N. AM. 617, 618, 619 (2007).

33. *Id.* at 620.

34. *Sceusa v. Mastor*, 135 A.D.2d 117, 119 (1988).

the surgery itself was not negligently performed, then the plaintiff will not prevail in litigation.

One approach to reforming the malpractice system in regards to the rate of cesarean deliveries may involve permitting a plaintiff to bring an action for an unnecessary cesarean delivery. However, this approach would be counter-productive and would lead to more litigation and an even more fraught medico-legal environment for obstetricians. Instead of redefining "injury" and reforming the proximate cause prong of the medical malpractice claim, it would be more effective to reform the standard-of-care prong. This would lessen the risk of litigation, since physicians would be more confident in their ability to make a defense. Also, the standard-of-care approach would have the beneficial policy rationale of encouraging the use of evidence-based practices.

To sustain a claim for malpractice, the plaintiff must establish standard-of-care, usually through the use of expert testimony. The expert describes the "degree of skill and learning ordinarily used under the same or similar circumstances by the members of the defendant's profession in good standing practicing in similar localities."³⁵ The expert testifies to common practices, not best evidence-based practices. Physicians wishing to dispense with old, ineffective, and unsafe policies are placed in an incredibly vulnerable position—if the practice is not the common one and a suit is brought, the physician will have difficulty arguing that she was acting within the standard of practice. This vicious cycle perpetuates ineffective practices and prevents physicians from adopting improved treatment protocols. If the expert would testify to standard-of-care by providing information about research findings, or provide an explanation of meta-analyses or randomized control studies, physicians could be confident enough to use evidence-based practices in treating patients.

The guidelines issued by ACOG can be used to establish standard-of-care in medical malpractice suits. However, these guidelines do not consistently reflect current evidentiary findings about best practices. The guidelines reviewed (via the U.S. Department of Health and Human Services Agency for Healthcare Research and Quality, National Guideline Clearinghouse) were conservative in their recommendations, and only offered minimal recommendations aimed to encourage trial-of-labor and lessen the occurrence of cesarean deliveries.³⁶ For example, the guideline on the topic of electronic fetal monitoring states that the practice increases the likelihood of operative and surgical delivery, has a very high false-positive rate of predicting cerebral palsy, and is vulnerable to

35. AM. JUR., *Physicians*, *supra* note 31, at § 321.

36. ACOG Guidelines, US DEPT. HEALTH & HUM. SERVICES: NAT'L GUIDELINE CLEARINGHOUSE, <http://www.guideline.gov/browse/by-organization.aspx?orgid=85> (last visited Mar. 30, 2013).

misinterpretation,³⁷ but the guidelines do not indicate that it is appropriate for a provider to abstain from using electronic fetal monitoring. Disproved practices are over-utilized, and beneficial practices are under-used. The proliferation of evidence-based practice would shift the balance and encourage the use of proven techniques to maximize positive maternal and child outcomes.³⁸

Dystocia is a commonly cited reason for performing a cesarean section, and is defined as “abnormal labor that results from what have been categorized classically as abnormalities of the power (uterine contractions or maternal expulsive forces), the passenger (position, size, or presentation of the fetus), or the passage (pelvis or soft tissues).”³⁹ In ACOG’s dystocia guideline, there is no mention of the appropriate management of trial-of-labor, or recommendations about when to abandon trial-of-labor and perform a cesarean section.⁴⁰ However, according to one recent study, cesarean deliveries for dystocia should not be performed before active labor, especially for new mothers.⁴¹

Professional associations, understandably, may be loath to issue cumbersome and detailed guidelines that may expose practitioners to greater liability. For this reason, it is important to establish a legal framework to permit other sources of recommendations to determine the standard of care, including evidence-based findings from well-designed and peer-reviewed research in the field. The current edition of the *Attorneys Medical Deskbook* does not include evidence-based research as a possible source to establish standard of care.⁴²

Evidence-based conclusions should have more weight in determining appropriateness of care, since medical association guidelines can only offer a generalized, conservative, and often ambiguous structure for practice. According to a tutorial created by the University of North Carolina Health Sciences Library, evidence-based practice is “the integration of clinical expertise, patient values, and the best research evidence into the decision-making process for patient care.”⁴³ Clinicians using this method must

37. *Guideline Summary: Intrapartum Fetal Heart Rate Monitoring*, US DEPT. HEALTH & HUM. SERVS.: NAT’L GUIDELINE CLEARINGHOUSE, available at <http://www.guideline.gov/content.aspx?id=14885> (last visited Mar. 30, 2013).

38. CAROL SAKALA & MAUREEN P. CORRY, EVIDENCE-BASED MATERNITY CARE: WHAT IT IS AND WHAT IT CAN ACHIEVE 21 (2008).

39. *Guideline Summary: Dystocia and Augmentation of Labor*, US DEPT. HEALTH & HUM. SERVS.: NAT’L GUIDELINE CLEARINGHOUSE, <http://www.guideline.gov/content.aspx?id=10942&search=cesarean> (last visited Mar. 30, 2013).

40. *Id.*

41. Zhang et al., *Contemporary Cesarean Delivery Practice in the United States*, 203 AM. J. OBSTETRICS & GYNECOLOGY 326, 326 (2010).

42. 1 Attorneys Medical Deskbook § 10:1.20 (4th).

43. *Introduction to Evidence Based Practice Tutorial*, U.N.C. HEALTH SCIENCES LIBR., 1 available at http://www.hsl.unc.edu/Services/Tutorials/EBM/ebp_tutorial.pdf. (last visited on Jan. 30, 2013).

make use of the “best available external clinical evidence from systematic research.”⁴⁴

One recent study notes that the increase in primary cesarean sections (which account for over 50% of the increasing cesarean rate) due to subjective indications, such as nonreassuring fetal status and failure to progress, contributed a larger proportion to the overall increase than surgeries due to objective indications (malpresentation, maternal-fetal conditions, obstetric conditions).⁴⁵ This suggests that the ambiguity of subjective indications leaves physicians more vulnerable to lawsuits and more likely to practice defensive medicine. Ambiguity in the guidelines, combined with the method used to establish standard of care in medical malpractice suits (using common practice instead of evidence-based best practice) is driving an increase in cesarean rate even among low-risk patients.

Encouraging the use of evidence-based medicine may have an effect on one problematic practice: electronic fetal heart rate monitoring (EFM). EFM is intended to assess fetal health during labor. The heart rate of the fetus is monitored using an ultrasound sensor or an electrode, and the fetal heart rate (FHR) is recorded on a continuous strip of paper, often referred to as the FHR tracings. EFM is nearly universally used during labor, and illustrates the problem with defining standard of care as the common practice among physicians, instead of redefining the standard of care as being the best practice as per research findings. Numerous randomized trials have demonstrated that EFM is not effective in improving fetal outcome.⁴⁶ The practice was popularized following uncontrolled trials in the 1970s, but later trials have not duplicated the findings.⁴⁷ Several analyses have shown that EFM results do not predict infant health outcomes or decrease the incidence of cerebral palsy in infants, but randomized trials have found FHR monitoring to be correlated with a two- to three-fold increase in the cesarean rate.⁴⁸

There is little reliability in the way physicians interpret the tracings. When four obstetricians were asked to examine 50 FHR tracings, they only agreed on 22% of cases, and when the same physicians were asked to re-examine the tracings, they changed their interpretation nearly 20% of the time.⁴⁹ The subjective nature of these readings leads to great uncertainty

44. U.N.C. HEALTH SCIENCES LIBR., *supra* note 43.

45. Emma Barber et al., *Indications Contributing to the Increasing Cesarean Delivery Rate*, 118 *OBSTETRICS & GYNECOLOGY* 29, 34 (2011).

46. Thomas Downs & Evelyn Zlomke, *Fetal Heart Rate Pattern Notification Guidelines and Suggested Management Algorithm for Intrapartum Electronic Fetal Heart Rate Monitoring*, 11 *PERMANENTE J.* 22, 22 (2007).

47. *Id.*

48. *Id.*

49. *ACOG Refines Fetal Heart Rate Monitoring Guidelines*, *AM. CONG. OBSTETRICIANS & GYNECOLOGISTS* 1–2 (June 22, 2009) <http://www.acog.org/About%20ACOG/News%20>

among practitioners and leaves them vulnerable to malpractice claims, since expert testimony regarding the standard of care given subjective FHR tracings is unpredictable and variable.

Electronic fetal monitoring is known to produce false-positive results, and EFM is associated with increased rates of cesarean deliveries.⁵⁰ ACOG has attempted to standardize and improve the use of EFM, issuing guidelines that categorize fetal heart rate (FHR) tracings into three categories, where Category I indicates no fetal distress, Category II are considered indeterminate, and may indicate some problems with the fetus, and Category III are considered abnormal, requiring immediate action to return the tracings to normal, or to deliver the fetus via cesarean section.⁵¹ Yet there is no uniformity in how physicians interpret the subjective FHR tracings.⁵² One research group sought to evaluate the clinical significance and obstetrical outcomes of Category II FHR tracings, and found that deliveries with Category I tracings have outcomes similar to those with Category II tracings—the EFM does not predict danger to the fetus.⁵³ In fact, one study showed that most babies delivered by cesarean section because of nonreassuring FHR tracing are born healthy, which underscores the need to question the effectiveness of this monitoring technique.⁵⁴

While current practices in regard to EFM are inconsistent, and the benefits of the practice are elusive, a group of researchers were able to develop a system for using EFM tracings without increasing the operative delivery rate. A Kaiser Permanente study group was able to formulate guidelines for interpreting FHR tracings using a management algorithm, and their analysis concluded that their methodology did not increase the rate of operative deliveries.⁵⁵ This shows that adhering to ACOG guidelines or following common practices is not as beneficial as using a new, evidence-backed method. Improving the quality of the guidelines, or, untethering physicians from inadequate guidelines may decrease the rate of cesarean deliveries and improve maternal and child outcomes. A research group publishing in the *American Journal of Obstetrics & Gynecology*

Room/News%20Releases/2009/ACOG%20Refines%20Fetal%20Heart%20Rate%20Monitoring%20Guidelines.aspx (last visited Jan. 30, 2013).

50. Amir Sweha & Trevor W. Hacker, *Interpretation of the Electronic Fetal Heart Rate During Labor*, 59 AM. FAM. PHYSICIAN 2487, 2489 (1999).

51. *Id.* at 2490.

52. *Id.* at 2489.

53. Liat E. Applewhite et al., *Electronic Fetal Monitoring and the Outcome of Fetuses with NICHD Category II Tracings*, AM. COLL. OBSTETRICIANS & GYNECOLOGISTS: PAPERS ON CURRENT CLINICAL & BASIC INVESTIGATION (May 3, 2011).

54. Ecker & Frigoletto, *supra* note 10, at 888.

55. *See* Downs & Zlomke, *supra* note 46, at 27.

suggested that the development of unambiguous practice guidelines, along with other reforms, would bring down the rate of operative delivery.⁵⁶

The case for more detailed guidelines, anchored in evidence-based findings, is bolstered by a study showing that in certain areas, adherence to ACOG standards may be achieved.⁵⁷ This suggests that the failure to adhere to EFM guidelines may have more to do with their ambiguity and the associated vulnerability to liability, than physician's unwillingness to follow protocols. Researchers from the University of Washington found that providers in various specialties and localities were able to adhere to standards of prenatal care, when those guidelines were properly implemented.⁵⁸

However, one meta-analysis of studies on cesarean delivery for "fetal distress" found that physicians often failed to comply with ACOG guidelines for emergency cesarean deliveries.⁵⁹ This underscores the need to permit standard of care determinations to take into account the recent research findings, and their implications on evidence-based practice.

There are numerous other examples to illustrate areas where the protocols endorsed by research findings deviate from common practices, in addition to the treatment of dystocia and electronic fetal monitoring. In 2008, 61% of laboring women (in a 27-state reporting area) had epidural or spinal analgesia.⁶⁰ One recent study found that the use of an epidural increased the relative risk that a first-time mother would have a cesarean delivery by 2.4 times (more than doubling relative risk than if no epidural was administered). For women who have had one or more births, the epidural increased the relative risk of cesarean delivery by 1.8 times.⁶¹ This is a significant increase and should influence the manner in which the physician consults with the patient when developing a labor management plan.

Amniotomies (artificial rupture of membrane) are also a commonly performed procedure during childbirth, and were performed for the purpose of assisting in labor, reducing the duration of labor, and reducing the need

56. Steven L. Clark et al., *Improved Outcomes, Fewer Cesarean Deliveries, and Reduced Litigation: Results of a New Paradigm in Patient Safety*, 199 AM. J. OBSTETRICS & GYNECOLOGY 2, 105 (2008).

57. Laura-Mae Baldwin et al., *Do Providers Adhere to ACOG Standards? The Case of Prenatal Care*, 84 OBSTETRICS GYNECOLOGY 549, 554 (1994).

58. *Id.*

59. Suneet P. Chauhan et al., *Emergency Cesarean Delivery for Nonreassuring Fetal Heart Rate Tracings: Compliance with ACOG Guidelines*, 48 J. REPRODUCTIVE MED. 975, 975 (2003).

60. Michelle J.K. Osterman & Joyce A. Martin, *Epidural and Spinal Anesthesia Use During Labor: 27-State Report Area, 2008*, 59 CTR. FOR DISEASE CONTROL AND PREVENTION NAT'L VITAL DATA STATISTICS REPORTS 1, 5 (2011).

61. Uyen-Sa Nguyen et al., *Epidural Analgesia and Risks of Cesarean and Operative Vaginal Deliveries in Nulliparous and Multiparous Women*, 14 MATERNAL & CHILD HEALTH J. 707, 709 (2010).

for surgical intervention.⁶² However, research findings suggest that amniotomies do not have any effect on the reducing the duration of labor, and may even increase the need for additional intervention.⁶³ This procedure is another example of an unnecessary practice that exposes the patient to increased risk, with no measurable benefit. The proliferation of evidence-based practice would discourage the use of similarly unfounded techniques, which may improve patient outcomes.

The design of the medical malpractice system makes surgery the most conservative option when there are any potential challenges with a vaginal delivery, even if those challenges might be effectively met with patience or noninvasive techniques. However, some studies have shown that doctor's actions are not affected by the malpractice environment.⁶⁴ One analysis examined physician behavior after the physician or her colleague was contacted about a lawsuit. The researchers observed a very small temporary increase in cesarean section rates, but were not able to find data to support the theory that the rise in cesarean rates is due to fears of litigation.⁶⁵ Nonetheless, policies encouraging the use of evidence-based guidelines are likely to have a beneficial effect on maternal health outcomes. As this is a complex issue with multiple causes, it is necessary to view the cesarean delivery rate from a variety of angles.

III. REIMBURSEMENT

The increase in primary cesarean rates, which account for at least half of the increase in overall cesarean rates, has not been related to shifts in mothers' medical risk profiles.⁶⁶ The absence of a medical reason for the shift suggests the influence of nonmedical factors, such as the comparative cost of cesarean and vaginal birth.

Healthcare providers, like any other professionals, are motivated at least in part by the compensation they receive for their services. Cesarean deliveries cost more than a vaginal deliveries which may influence physician preference for the surgical procedure. I propose Medi-Cal implement a change to its reimbursement policy to close the gap between reimbursement rates for vaginal delivery and for cesarean section. This would remove the cost incentive from the healthcare providers, allowing them to focus only on the best outcome for the patient. It would also have

62. Jean-José Wolomy & Rahma R. Tozin, *Amniotomy for Shortening Spontaneous Labor: RHL Commentary*, THE WTOWHO REPRODUCTIVE HEALTH LIBRARY, http://apps.who.int/rhl/pregnancy_childbirth/childbirth/routine_care/CD006167_Wolomyj_.com/en/index.html (last visited Mar. 30, 2013).

63. Wolomy & Tozin, *supra* note 62.

64. David Dranove & Yasutora Watanabe, *Influence and Deterrence: How Obstetricians Respond to Litigation*, 12 AM. L. & ECON. REV. 69, 69 (2010).

65. *Id.*

66. Eugene DeClercq et al., *Maternal Risk Profiles and the Primary Cesarean Rate in the United States, 1991-2002*, 96 AM. J. PUB. HEALTH 867, 872 (2006).

the result of lowering healthcare costs associated with unnecessary cesarean deliveries.

Health care providers are paid by insurance companies according to rates they negotiate with the hospital or medical group. The Centers for Medicare and Medicaid Services set the rates paid for their enrollees. Rates for services are divided into categories called diagnosis-related groups (DRGs).⁶⁷ In 2008 and 2009, the DRG system was updated to Medicare Severity-adjusted Diagnosis Related Groups (MS-DRGs).⁶⁸ This system is used to identify what services a patient receives, and how much Medicare, Medicaid, or a private insurance company will reimburse for that service. According to the Office of Statewide Planning and Development, in California in 2009 the average charge for a vaginal delivery without complication was \$12,356.⁶⁹ The average charge for a cesarean section without complications was \$22,016.⁷⁰ The greater reimbursement rate for the cesarean delivery may provide an incentive for a healthcare provider to favor the use of cesareans over vaginal birth.

Medicaid is a federal program providing health insurance for a group of qualified low-income people, including those with certain disabilities or conditions. It is administered on a state level, and jointly funded by state and federal government. In California, the Medicaid program is known as Medi-Cal, and is administered through the California Department of Health Care Services and the Centers for Medicare and Medicaid Services (CMS).⁷¹ Pregnancy qualifies a woman to receive Medi-Cal benefits if her household earns below 200% of the poverty level.⁷² In 1998, Medicaid covered 40% of births in California.⁷³ According to the California Department of Health Care Services, there were 1,415,740 women between

67. *Acute Care Hospital Inpatient Prospective Payment System*, DEP'T OF HEALTH AND HUMAN SERV.: CTR. FOR MEDICARE & MEDICAID SERV., 2 (Feb. 2012) <http://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/AcutePaymtSysfctshst.pdf>.

68. *Id.*

69. *Healthcare Information Division Benchmark DRGs*, OFFICE OF STATEWIDE HEALTH PLANNING & DEV., <http://www.oshpd.ca.gov/HID/Products/PatDischargeData/PivotTables/BenchmkDRG/default.asp> (last visited Jan. 30, 2013).

70. *Id.*

71. *Medi-Cal Frequently-Asked Questions*, DEP'T OF HEALTH CARE SERV., <http://www.dhcs.ca.gov/services/medi-cal/Pages/Medi-CalFAQs.aspx#whatismedi-cal> (last visited Jan. 30, 2013).

72. *Health Coverage for Pregnant Women*, CNTY. OF SANTA CLARA, <http://www.sccgov.org/sites/ssa/Pages/County-of-Santa-Clara-Social-Services-Agency.aspx> (in the left-hand menu, hover on "Department of Employment & Benefit Services"; then hover on "Health Coverage (Medi-Cal and more...)"; click on "Pregnant Women") (last visited Jan. 30, 2013).

73. Renee Schwalberg et al., *Medicaid Coverage of Perinatal Services: Results of a National Survey*, THE HENRY J. KAISER FAMILY FOUNDATION, 13, <http://www.kff.org/womenshealth/upload/Medicaid-Coverage-of-Perinatal-Services-Results-of-a-National-Survey-Report.pdf>.

the ages of sixteen and forty enrolled in Medi-Cal in July 2011.⁷⁴ While this statistic does not reveal the number of births paid for by Medi-Cal, it suggests that altering Medi-Cal reimbursement policy could have an impact on a substantial number of deliveries.

In order to change the reimbursement policies for Medi-Cal, the plan must be reviewed by CMS to ensure compliance with the Social Security Act, which requires that states make payments that are “consistent with efficiency, economy and quality of care and are sufficient to enlist enough providers.”⁷⁵ The California Department of Health Care Services would be required to submit a state plan amendment for approval, and issue a public notice of the proposed change. These regulatory hurdles are likely not to prove overly burdensome, because a similar change has already been implemented in Washington and Maryland.

There is research to suggest that cost has an impact on decisions about medical care. California Watch, a group funded by the nonpartisan Center for Investigative Reporting, reviewed California birth records to find that for-profit hospitals were more likely to perform cesareans than not-for-profit centers, even in low-risk pregnancies.⁷⁶ According to their analysis, a woman is at least 17% more likely to have a cesarean delivery at a for-profit hospital.⁷⁷ In for-profit hospitals, where revenue is of a greater concern than in not-for-profit hospitals, providers have a greater incentive to perform the costlier procedure and performing a cesarean delivery in lieu of a vaginal birth can increase revenue by 82%.⁷⁸

While closing the reimbursement gap between cesarean and vaginal birth will lessen the financial incentive to perform more cesarean deliveries, it will also have an impact on other factors affecting method of childbirth. Gene Declercq, a professor of community health sciences at Boston University School of Public Health who is widely published in the field of maternal health and childbirth, is quoted in the California Watch analysis of cesarean deliveries in California. He notes that hospitals are incentivized to increase efficiency by performing cesarean deliveries, which are easier to schedule.⁷⁹ Vaginal birth lasts many hours, and it is difficult to predict the speed of progress,⁸⁰ making it difficult for hospitals to allocate resources and for physicians to allocate their time in the most

74. *Population Distribution by Age/Gender, July 2011*, CA DEPT. HEALTH CARE SERVS. (July 2012), http://www.dhcs.ca.gov/dataandstats/statistics/Documents/3_1_Population_Distribution_Age_Gender.pdf.

75. *Medicaid Reimbursement & Finance Overview*, CTR. FOR MEDICARE & MEDICAID SERV., <https://www.cms.gov/medicaidrf/> (last visited Jan. 30, 2013).

76. Nathanael Johnson, *For-profit Hospitals Performing More C-sections*, CALIFORNIA WATCH (Sept. 11, 2010), <http://californiawatch.org/health-and-welfare/profit-hospitals-performing-more-c-sections-4069>.

77. *Id.*

78. *Id.*

79. *Id.*

80. *Id.*

efficient manner. Hospitals certainly are motivated to maximize efficiency and save time: the “efficiency” of cesarean deliveries, defined in one study as percent of cesarean deliveries for “failure to progress” in which the surgery took place less than thirty minutes following the decision to perform it, has increased from 33% in 2004 to 54% in 2006.⁸¹ Cesarean deliveries not only provide a larger payment to hospitals, but also saves physicians time by shortening labor. Reconsidering physician and hospital incentives may have an effect on the rate of cesarean deliveries.

A 2001 study by the Kaiser Family Foundation collected information about perinatal care in Medicaid. Researchers surveyed state Medicaid administrators and asked what percentage of Medicaid-eligible pregnant women are enrolled in capitated managed care arrangements.⁸² “Managed care” refers to a system of integrating payment and delivery of health care, often the insurer will contract with a service provider “network” and the insured will only receive coverage within that network.⁸³ In a “capitated” managed care plan, the healthcare providers are paid a fixed amount for each patient, regardless of the actual cost of care for that patient.⁸⁴ In California, fewer than 25% of pregnant Medi-Cal enrollees participated in the capitated managed care plan.⁸⁵ Due to the reimbursement practices of managed care plans, increasing the number of Medi-Cal enrollees in managed care plans may decrease the rate of cesareans performed. A mandatory managed care program was successfully implemented in Maryland.

In 1997, Maryland implemented a mandatory managed care system called HealthChoice.⁸⁶ Enrollees receive their health services through one of several managed care organizations (MCOs).⁸⁷ The rates paid to the MCO for each patient depend on the individual enrollee’s medical condition and risk factors. A study published in the *Maternal and Child Health Journal* found that the implementation of the managed care program HealthChoice limited the increase in cesarean births for Medicaid enrollees, relative to privately insured women.⁸⁸ The researchers concluded that “Medicaid managed care enrollees were less likely to undergo cesarean section deliveries relative to privately insured

81. Roberta Haynes de Regt et al., *Time from Decision to Incision for Cesarean Deliveries at a Community Hospital*, 113 *OBSTETRICS & GYNECOLOGY* 625, 625 (2009).

82. Schwalberg et al., *supra* note 73.

83. *Managed Care*, U. WASH. SCH. MED., <http://depts.washington.edu/bioethx/topics/manag.html> (last visited Dec. 12, 2011).

84. *Id.*

85. Schwalberg et al., *supra* note 73, at 29.

86. Arpit Misra, *Impact of the HealthChoice Program on Cesarean Section and Vaginal Birth After C-Section Deliveries: A Retrospective Analysis*, 12 *MATERNAL & CHILD HEALTH J.* 266, 266 (2008).

87. *Id.* at 266–67.

88. *Id.* at 268.

beneficiaries.”⁸⁹ By limiting the reimbursement available for a given enrollee, physicians are incentivized to provide the most cost-effective care possible. In the case of childbirth, the less expensive option, vaginal delivery, is the medically preferred and safer procedure for most women.⁹⁰ Since the rates paid to the MCO are risk-adjusted, and are based on an assessment of an individual’s health status, the MCO managing a high-risk pregnancy would receive a higher rate of payment to offset the cost of care.⁹¹ This would allow for increased rates of compensation where the risk justifies more expensive procedures like cesarean delivery, but discourages the use of cesarean deliveries when they are not medically justified by the health status of the mother. While the prospective payment healthcare providers receive may not adequately compensate them for medically necessary cesareans, the reduction in unnecessary procedures is an important goal to strive towards.

The Washington State Department of Social and Health Services (DSHS) spearheaded a program aimed at reducing Medicaid costs.⁹² Steering committees proposed a number of new strategies, including an effort to reduce cesarean rates for Medicaid births by lowering the rates paid for a nonemergent cesarean to equal the rate paid for a vaginal delivery.⁹³ The DSHS cited cost as one concern that drives the need to de-incentivize primary cesarean deliveries, but also cited concerns about the unexplained variation in cesarean rates among different hospitals, the concerns about patient safety with cesarean births, and the hesitation among physicians to perform VBAC procedures.⁹⁴ The Washington Legislature acted upon the recommendation of the DSHS steering committee and passed a measure to change reimbursement for childbirth under Medicaid.⁹⁵ The state-administered Medicaid program, which pays for almost half of all births in Washington,⁹⁶ will now pay hospitals the same amount for an uncomplicated cesarean delivery as it pays for a complicated vaginal delivery.⁹⁷ Under the new payment structure, Medicaid will reimburse around \$1000 for an uncomplicated cesarean

89. Misra, *supra* note 86, at 270.

90. Joesch, *supra* note 3, at 1.

91. Misra, *supra* note 86, at 267.

92. 2009 *Fact Sheet: Hospital Cost Controls*, WASH. ST. DEP’T SOC. & HEALTH SERV. (2009), http://www.hca.wa.gov/medicaid/News/Documents/fact_009007hospitalpurchasingratescsections040809.pdf [hereinafter *Hospital Cost Controls*].

93. *Id.*

94. *Id.*

95. 2009 *Fact Sheet: Controlling C-section Growth*, WASH. ST. DEP’T SOC. & HEALTH SERV. (2009), http://www.hca.wa.gov/medicaid/News/Documents/fact_009016controllingcsectiongrowth061509.pdf [hereinafter *Controlling C-section Growth*].

96. 2008 *Fact Sheet: Washington State Medicaid*, WASH. ST. DEP’T SOC. & HEALTH SERV. (2008), http://www.hca.wa.gov/medicaid/News/Documents/fact_008009washingtonmedicaid.pdf.

97. *Hospital Cost Controls*, *supra* note 92.

delivery, down from \$3600.⁹⁸ Removing the financial incentive to perform a cesarean will encourage physicians to only perform cesareans when they are truly medically necessary, and the program provides incentives to allow vaginal delivery whenever possible. The state is working with hospitals to assist them in improving quality outcomes, 88% of hospitals surveyed by the DSHS expressed interest in working with the steering committee to improve maternal outcomes.⁹⁹ Furthermore, the American Congress of Obstetricians and Gynecologists are supportive of Washington's efforts to limit cesarean deliveries.¹⁰⁰ The new program went into effect in July 2009.¹⁰¹ As more data become available over time, more research is needed to determine whether the reimbursement rate change had a significant effect on deliveries.

While the government has no authority to control the re-imbusement rates of private insurance companies, the example of Medicaid policy can have an impact on the practices of private insurers. While private insurers cannot pay the same low reimbursement rates as Medicaid—hospitals and healthcare providers take a loss on services rendered to Medicaid enrollees—the private companies may take note if a new pricing system lowers the occurrence of an expensive medical procedure.

California CMS should reform Medi-Cal to incorporate the valuable lessons of Washington and Maryland. Whether to use Washington's cost equalization model or Maryland's mandatory managed care model depends on various factors, and determining the best solution requires additional research. Fundamentally, Medicaid seeks to maximize quality and access to care and to minimize cost.¹⁰² Each of these three elements should be studied to determine the best reforms for California. A capitated managed care program will incentivize providers to do all they can to keep costs down. There must be research to determine the risk-adjusted rates to be set in order to keep quality high and to prevent frugality from having a negative effect on outcomes.

Another important factor to consider is the availability of healthcare. Medi-Cal enrollees should have reasonable access to providers close to their homes and communities. Lowering the reimbursement paid for cesarean deliveries may drive some providers to discontinue accepting

98. Carolyn McConnell, *Take Away the Incentives for Too Many C-Sections*, CROSSCUT.COM (Aug. 6, 2009), <http://crosscut.com/2009/08/06/health-medicine/19144/Take-away-the-incentives-for-too-many-c-sections/>.

99. *Controlling C-section Growth*, *supra* note 95.

100. JaneAnn S. Dimer, *Improving Maternity Outcomes and Cutting Costs in Washington State*, ACOG DISTRICT VIII GAZETTE, (Dec. 2010), http://www.acog.org/departments/dept_notice.cfm?bulletin=5430&recno=51.

101. *Controlling C-section Growth*, *supra* note 95.

102. *Quality of Care*, MEDICAID.GOV, <http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Quality-of-Care/Quality-of-Care.html> (last visited Feb. 18, 2013).

Medi-Cal patients at all.¹⁰³ Implementing a mandatory managed care system in California may leave women without an “in-network” provider in their region. Prior to adopting the Washington or Maryland programs, Medi-Cal healthcare providers should be surveyed in order to determine the best method to ensure access while implementing reform.

Finally, the cost-savings resulting from both of these reform options should be compared. While it is likely that both methods of reform will lower costs significantly, the projected savings need to be balanced with possible drawbacks and the effect on quality and access, as described above.

Prior to adopting Washington’s or Maryland’s program in California, work must be done to estimate the effects of such changes and to weigh the advantages and disadvantages. A lower rate of cesareans should have a positive impact on women’s and children’s health in California, however, many questions need to be answered before any change can be made to Medi-Cal reimbursement policies, so that the women seeking care are not negatively impacted.

IV. AVAILABILITY OF PRENATAL CARE

As discussed above, ensuring healthcare is available for Medicaid enrollees is a critical part of designing the system. Providing access to quality prenatal care is an important factor. Researchers posit that providing quality prenatal care, information, and assistance with decision-making can improve maternal health outcomes.¹⁰⁴ The Centers for Medicare and Medicaid Services should heed these findings, and implement improvements to the provision of prenatal care for Medicaid enrollees.

California policymakers may again look to Washington for an example of Medicaid reforms. Washington state lawmakers, concerned about the negative health impact and financial burden of the high cesarean rate, have sought to enhance patient safety, decrease costs, and promote evidence-based practice through various changes to Medicaid.¹⁰⁵ One prong of their approach, reducing the difference in cost between a cesarean and a vaginal birth, was described above. But lawmakers did not stop with altering the financial incentives. Legislation was passed to prompt the creation of patient decision-aids to help educate patients and providers about the risks and benefits of cesarean delivery.¹⁰⁶ According to the Washington Department of Social and Health Services, “[t]his educational approach will help expectant mothers make informed choices with their care

103. Doug Trapp, *Medicaid Panel To Study Access to Care, Quality*, AMERICAN MEDICAL NEWS (Oct. 4, 2010), <http://www.ama-assn.org/amednews/2010/10/04/gvsa1004.htm>.

104. Debby Amis, *Pressure From Above*, 18 J. PERINATAL EDUC. 2, 9 (2009).

105. Dimer, *supra* note 100.

106. *Controlling C-section Growth*, *supra* note 95.

providers about the mode of delivery, improve patient safety, lower provider liability and reduce costs.”¹⁰⁷

The development of similar information sources and decision-aids may have a beneficial effect for California's Medicaid population as well. A more informed patient would have the ability to better assess the risks of surgery, and would make meaningful informed consent possible.¹⁰⁸ An informed patient might also take preventive action to lessen the risk of needing a cesarean delivery, such as refusing epidural analgesia,¹⁰⁹ taking care to prevent gestational diabetes, and controlling weight-gain during pregnancy.¹¹⁰ Informing patients will empower them to ask for low-intervention, evidence-based care.

Providing expectant mothers with decision-aids can reduce anxiety and would allow the woman to make informed decisions about her care and execute on those decisions. Decision-aids encourage a woman to make choices about childbirth, anticipate complications, and forecast courses of action to resolve problems. Greater use of decision-aids could reduce the rate of cesareans and the associated negative health outcomes. A randomized controlled trial was performed to evaluate the effectiveness of decision-aids among women with previous cesarean section.¹¹¹ The mothers were given a computer program which guided them through the various outcomes for the mother and baby: planned vaginal birth, elective cesarean, and emergency cesarean.¹¹² The program provided the participants with descriptions and probabilities of the various options. The program helped the expectant mother perform a decision analysis, recommending a method of delivery based upon inputs made by the woman, clinical probabilities, and risk factors.¹¹³ The women who used the computer decision-aid reported being less conflicted about making decisions about their delivery and had a higher rate of vaginal birth than the women who received the standard care.¹¹⁴ It is reasonable to believe that similar effects would hold among women who have not had a previous cesarean delivery. The risks of cesarean delivery would still apply to both groups, and furthermore, for women without previous cesarean deliveries,

107. *Controlling C-section Growth*, *supra* note 95.

108. *Informed Consent*, AMERICAN MEDICAL ASSOCIATION (Mar. 3, 2013, 11:59PM), <http://www.ama-assn.org/ama/pub/physician-resources/legal-topics/patient-physician-relationship-topics/informed-consent.page>.

109. Nguyen et al., *supra* note 61, at 709.

110. Hugh M. Ehrenberg et al., *The Influence of Obesity and Diabetes on the Risk of Cesarean Delivery*, 191 AM. J. OBSTETRICS & GYNECOLOGY 969, 971 (2004).

111. Alan A. Montgomery et al., *Two Decision Aids for Mode of Delivery Among Women with Previous Cesarean Section: Randomized Controlled Trial*, 334 BRITISH MED. J. 1305, 1306 (2007).

112. *Id.* at 1308.

113. *Id.*

114. *Id.* at 1310.

vaginal birth is even safer than for women with previous cesareans.¹¹⁵ The study about the use of decision-aids among women with a previous cesarean is an excellent proxy to project the effectiveness of similar decision aids in nulliparous women. After the Washington decision-aid program has collected enough data, researchers may be able to determine if the same effect is observed among women who have not had previous cesarean deliveries.

To encourage physicians to discuss risks of cesarean delivery with their patients, to inform expectant mothers of the methods to reduce their relative risk of cesarean delivery, and to assist women with creating a decision tree or birth plan, Medicaid should compensate physicians for having these discussions. Allowing physicians to be compensated for the time they spend helping women become informed about their choices would encourage practitioners to engage in the useful practice.

Implementing in California a system similar to the Maryland Medicaid program discussed above may have the effect of encouraging physicians to spend time guiding their patients through the decision-making process, and informing them about risks and options. The capitated managed care system encourages physicians to take all necessary steps to reduce the cost of providing care, because the reimbursement amount for one patient is capped.¹¹⁶ Doctors are therefore incentivized to reduce the instance of costly cesareans through various measures, including providing guidance and information to patients about the risks of the procedure, and their options to mitigate risk.

Incentivizing healthcare providers to give women the information and tools they need to lower their risk of cesarean delivery can be achieved through reforming the payment structure of Medicaid, either by permitting physicians to be reimbursed for this service, or by creating a capitated managed care system. Or, like in Washington, the state legislature may choose to fund the development of decision-aids to be used by Medicaid enrollees. No matter the method, improving prenatal care and information provided to expectant mothers is likely to have some effect in reducing the cesarean delivery rate. For example, one study showed that vitamin D deficiency increases the risk that a woman will require a cesarean delivery.¹¹⁷ This risk factor could easily be mitigated through simple, inexpensive prenatal care.

115. *Ob Gyns Issue Less Restrictive VBAC Guidelines*, THE AMERICAN COLLEGE OF OBSTETRICIANS & GYNECOLOGISTS (Jul. 21, 2010), <http://www.acog.org/About%20ACOG/News%20Room/News%20Releases/2010/Ob%20Gyns%20Issue%20Less%20Restrictive%20VBAC%20Guidelines.aspx>.

116. Haynes, *supra* note 81.

117. Anne Merewood et al., *Association Between Vitamin D Deficiency and Primary Cesarean Section*, 94 J. CLINICAL ENDOCRINOLOGY METABOLISM 940, 942 (2008).

Medicaid would do well to encourage providers to utilize evidence-based standards because these validated protocols are associated with better health outcomes. Collecting more information about procedures and outcomes is an important component to improving healthcare. Medi-Cal is in a position to encourage the standardization of data gathering about pregnancy and labor. The National Quality Forum recently released Perinatal Standards intended to collect valuable information that will be of use in improving care during pregnancy, labor, and delivery to reduce complications, and avoid lengthy hospital stays.¹¹⁸ Standards such as these improve quality of care by standardizing measurements and encouraging accountability and reporting of data.¹¹⁹ Medi-Cal should encourage these efforts by using the National Quality Forum standards to collect data for future use in improving maternal health and reducing healthcare expenditures.

V. CONCLUSION

The high cesarean rate has troubling implications for maternal and child health. While cesarean deliveries are sometimes necessary, at this high rate the risks likely outweigh the benefits of the procedure. The causes for the high rate of cesarean are complex and multidimensional: It is likely that defensive medicine, incentives in reimbursement policies, and availability and quality of prenatal care all play a role. As such, a multi-prong approach to reducing the cesarean rate is recommended.

Reforming the legal process of medical malpractice standard-of-care determinations may allow physicians to more freely practice evidence-based medicine without making themselves vulnerable to litigation. Modifying the typical practice for establishing standard-of-care by allowing evidence-based research to bear on the determination, would encourage the use of effective practices that have been found to improve health outcomes. Physicians would be held to a more appropriate standard—one that reflects best practices instead of common practices.

As healthcare costs continue to grow, reformers in Sacramento should target those areas in healthcare where lower cost medicine is also better medicine, and lowering the cesarean rate is an ideal illustration of a situation where a less expensive procedure, vaginal birth, is also the safer procedure. State government-led reforms of Medi-Cal reimbursement policies and Medi-Cal practices would impact a significant number of expectant mothers in California. State authorities should look to models in Washington and Maryland in determining the best reforms for California to

118. *National Quality Forum Endorses National Consensus Standards for Perinatal Care*, NAT'L QUALITY FORUM, (Oct 27, 2008), http://www.qualityforum.org/News_And_Resources/Press_Releases/2008/National_Quality_Forum_Endorses_National_Consensus_Standards_for_Perinatal_Care.aspx.

119. Debby Amis, *Pressure From Above*, 18 J. PERINATAL EDUC. 9, 9 (2009).

improve health outcomes, lower spending, and preserve access to care. Due to Medi-Cal's size and reach, reforms spearheaded by the program may serve as an example to private insurers, who are equally motivated to improve health outcomes and reduce spending. And, as Medi-Cal enrollees make up a high percentage of California's pregnant women, Medi-Cal efforts to improve prenatal care could result in more well-informed patients and fewer cesarean deliveries.

The complexity and importance of this issue requires cooperation between the medical, legal, and governmental spheres. A multidisciplinary effort to lower the cesarean rates will perhaps have a positive impact on maternal and children's health.
