The Cesarean Epidemic

Cesarean surgery is the most common operating room procedure in U.S. hospitals \(^{(1, 11)}\)

The percentage of births delivered by cesarean (C-section) in the United States has increased substantially in recent years, climbing 50 percent over the last decade from 20.7 percent of all births in 1996 to a new record high of 31.1 percent in 2006 \(^{(1, 12)}\). These statistics are featured in a report released in December 2007 by U.S. Centers for Disease Control and Prevention (CDC) National Center for Health Statistics, and are based on data from over 99 percent of all births for the United States in 2006. Consistent with the rise in the national rate, Florida’s 2006 C-section delivery rate was 36.0% of all deliveries, up from 22.6% in 1997. In a 2006 report from the Agency for Health Care Administration (AHCA) Center for Health Statistics, South Florida had the highest cesarean rate of any region in Florida in 2004. Of the ten facilities statewide with the highest cesarean rate six were located in Miami-Dade County \(^{(9)}\). In 2006, the C-section rate for Miami-Dade was a staggering 44.8% of all 33,739 births. While many experts contend that there is no “ideal” cesarean rate, the World Health Organization (WHO) maintains that in a developed country, the proportion of cesareans should not exceed 15%. Beyond that, the maternal injury and death consequent to major abdominal surgery begins to eclipse the lives and health saved \(^{(3)}\). More women suffer from infection, hemorrhage and death, and babies are more likely to be born prematurely or die \(^{(6, 23, 24)}\).

There is little evidence that a vast, growing segment of the female population wants or needs major abdominal surgery to give birth \(^{(5)}\). Until the 1940’s, cesarean delivery was rare and only utilized as a last resort to save the baby, many times at the cost of the mother’s life; one in 16 women died. Advances in surgery, antibiotics, transfusions and anesthesia have made an operation that was nearly always fatal as recently as the mid-19th century routine 150 years later. Despite these advances, serious consideration should be given to the risks involved in cesarean surgery. Recent mortality figures from a large study of over 150,000 elective cesarean operations in Britain show that mothers run nearly three times the risk of dying from a Cesarean section than from a natural delivery. Additionally, a woman having a repeat C-section is twice as likely to die during delivery and twice as many women require re-hospitalization after a C-section than after a vaginal birth \(^{(6, 18)}\).

For more information about the Healthy Start Coalition of Miami-Dade’s programs and services, please visit our website at www.hscmd.org or contact us at (305) 541-0210.
Cesarean surgery does not only impact the mother’s health, but also that of her infant. Infant mortality in the United States for total cesarean deliveries has consistently been about 1½ times that of vaginal delivery since vital statistics data on cesarean sections was first collected in 1989 (7). It had long been assumed that the difference was due to the higher risk profile of mothers who undergo the operation. Many have pointed to changes in the population of childbearing women, such as more older women with developed medical conditions and more women with multiple births. While there are some overall changes in this population, researchers have found that C-section rates are increasing for all groups of birthing women, regardless of age, the number of babies they are having, the extent of health problems, their race/ethnicity, or other breakdowns (7). A study of almost six million births published in 2006 found that the risk of death to newborns delivered by voluntary C-section is much higher than previously believed. This study is the first to examine the risk of cesarean delivery among low-risk mothers who have no known medical reason for the operation. The researchers used the Healthy People 2010 criteria for low-risk (women with a full-term, singleton infant in head down presentation) and included only women who had no reported risk factors or complications of labor and delivery identified on the birth certificate. (14) Among this group there was a 49% increase in odds of cesarean delivery from 1996 to 2001, after statistical adjustment for maternal age, race, education, birth weight and parity. Researchers found that the neonatal mortality rate for cesarean delivery among low-risk women was 1.77 deaths per 1,000 live births, while the rate for vaginal delivery was 0.62 deaths per 1,000. The risk in first Cesarean deliveries persisted even when deaths from congenital malformation were excluded from the calculation (7). In other words, there is a change in practice standards that reflects an increasing willingness on the part of professionals to follow the cesarean path under all conditions.

Despite these cautionary statistics, the rising trend of surgical birth persists. The overall increase in cesarean sections is due in large part to a notable rise in primary section rates, from 14.6 percent in 1996 to 29.0% in 2004. This increase is also partly attributable to the decline in Vaginal Birth After Cesarean (usually abbreviated VBAC) at an all-time low of 9.2 percent in 2004 (13). A woman who has a primary cesarean section has a greater than 90 percent chance of having a subsequent cesarean delivery. A policy statement published by The American College of Obstetricians and Gynecologists (ACOG) in 1998 recommended a surgical team and anesthesiologist must be available twenty-four hours a day in order for VBAC to be safe. Many hospitals who fall short of this criteria have been choosing not to allow women to attempt VBACs within their facilities because they cannot provide ‘immediate’ surgery if needed. A large number of physicians feel that the risk of uterine rupture (developing a tear in the wall of the uterus) that accompanies VBAC is too high and that an elective or scheduled C-section is the best option for a mother who had the surgery for a prior pregnancy. Cesarean delivery is associated with increased risks for adverse obstetric and perinatal outcomes in the subsequent birth including malpresentation, preterm birth and unexplained stillbirth. Some of these risks may be due to confounding factors related to the indication for the first cesarean (23). Among black mothers, a group with the highest cesarean delivery rate in the county, the risk for subsequent stillbirth is 40% higher than white mothers (22). Evidence is growing that scars in the uterus which accompany cesarean surgery can cause placental abnormalities that endanger both mother and baby in future pregnancies, and that the risk of these abnormalities increases dramatically with a subsequent cesarean (8). Cesareans are inherently riskier than normal vaginal birth, but repeat cesareans carry even higher risks. Women and clinicians must make informed choices, balancing the risks and benefits of cesarean delivery in the first and future births.

### Causes of High C-section Rate

- Lower tolerance for risk
- Fear of Malpractice suits
- Electronic Fetal Monitoring
- Advanced Maternal Age (moms over 35)
- Convenience (for both physician & patient)
- Better pay for C-Sections
- Less time
- Epidurals

### Other Causes

- Labor induction (elective)
- Obesity Epidemic
- Lack of labor support
- No ambulation (movement during labor)
- Lesser skills (for management of malpresentations)
- Pelvic Tissue injury
- Vacuum / Forceps injury

### Table: Percentage of Total Live Births

<table>
<thead>
<tr>
<th>Facility of Birth</th>
<th>% C-Sections of all births 1996</th>
<th>% C-Sections of all births 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jackson South Community Hospital</td>
<td>21.7</td>
<td>21.7</td>
</tr>
<tr>
<td>Jackson Memorial Hospital</td>
<td>14.1</td>
<td>44.5</td>
</tr>
<tr>
<td>Homestead Hospital</td>
<td>28.0</td>
<td>44.3</td>
</tr>
<tr>
<td>Baptist Hospital of Miami</td>
<td>30.2</td>
<td>46.2</td>
</tr>
<tr>
<td>Mercy Hospital</td>
<td>29</td>
<td>51.3</td>
</tr>
<tr>
<td>Hialeah Hospital</td>
<td>35.8</td>
<td>46.5</td>
</tr>
<tr>
<td>Mount Sinai Medical Center</td>
<td>31.6</td>
<td>47.2</td>
</tr>
<tr>
<td>North Shore Medical Center</td>
<td>23.3</td>
<td>27.3</td>
</tr>
<tr>
<td>South Miami Hospital</td>
<td>30.7</td>
<td>59.2</td>
</tr>
<tr>
<td>Palmetto General Hospital</td>
<td>30.0</td>
<td>46.5</td>
</tr>
<tr>
<td>Kendall Regional Medical Center</td>
<td>40.1</td>
<td>61.6</td>
</tr>
<tr>
<td>Jackson North Medical Center</td>
<td>20.7</td>
<td>34.7</td>
</tr>
<tr>
<td>Percentage of Total Live Births</td>
<td>24.7</td>
<td>44.8</td>
</tr>
</tbody>
</table>

Source: Agency for Health Care Administration 2006
informed choices, balancing the risks and benefits of cesarean delivery in the first and future births. Under the specter of lawsuits C-sections have gradually become more about caution and convenience than life or death. Many obstetricians contend that patients are driving this trend with their almost unreasonable aversion to even the smallest risk (4). The tragedy behind this phenomenon is that a cesarean is not a guarantee of a happy outcome. Some experts cite consumer demand as a contributing factor in the rising cesarean rate. Cesarean delivery on maternal request (CDMR) is defined as a primary cesarean delivery at the maternal request in the absence of any medical or obstetric indication (21). It remains unclear what contribution CDMR makes to the overall increase in cesarean delivery. As an ACOG Committee Opinion on the subject stated in 2007, “Cesarean delivery on maternal request is not a well-recognized clinical entity, and there are no accurate means of reporting it for research studies, coding, or reimbursement” (21). Much of the current knowledge is based on analyses comparing elective cesarean deliveries without labor (not CDMR) with the combination of vaginal deliveries and unplanned and emergency cesarean deliveries (instead of planned vaginal deliveries) or outcomes of actual modes of delivery (19). A New York Times article published in December 2007 noted that there was some evidence that a growing number of women were requesting cesareans (4). Findings from a large and well-designed national study, Listening to Mothers, reported that less than 1 percent of mothers (only 1 of 1,300 women surveyed) who had a first cesarean actually requested one. The survey conducted by the Childbirth Connection, a leading nonprofit organization that works to improve maternity care, noted that, in contrast, nearly 10 percent of those surveyed reported feeling pressured by a health professional to have a cesarean delivery, and 42 percent believed that fear of being sued leads physicians to perform unnecessary cesareans (9).

In the US, the profit motive may explain rising rates of cesarean. A 2000 study conducted by the U.S. Department of Health and Human Services Agency for Healthcare Research and Quality, the HealthCare Cost and Utilization Project (HCUP) determined that childbirth accounts for more than four million hospital stays annually and over $33 billion dollars in aggregate charges in 2003 alone (16). Many health professionals are feeling squeezed by tightened payments for services and increasing practice expenses. The flat “global fee” method of paying for childbirth does not provide any extra pay for providers who patiently support a longer vaginal birth. Some payment schedules pay more for cesarean than vaginal birth. A planned C-section section is an especially efficient way for professionals to organize hospital work, office work and personal life. Average hospital charges are much greater for cesarean than vaginal birth, and may offer hospitals greater scope for profit (11). In the private American healthcare system, doctors and hospitals find cesarean sections more profitable than natural births.

The increased rate of cesarean deliveries nationwide may be partly due to a lack of consumer knowledge. One primary influence in determining routine interventions regardless of their proven risks and benefits lies in the perception of birth as a dangerous and life threatening event. Most mothers are healthy and have good reason to anticipate uncomplicated childbirth. Cesarean section is major surgery and increases the likelihood of many short- and longer-term adverse effects for mothers and babies (1). Consumers must take a proactive approach to educating themselves about the physiological process of natural birth and the impact of interventions on a woman’s ability to birth normally (15). When a cesarean section is necessary, it can be truly life-saving, but birth is a safe and natural process that generally succeeds without intervention. Education and self-advocacy are central to preventing unnecessary cesareans and having a safe birth experience.
References

(3) WHO, Appropriate Technology for Birth; Jose Villar et al., Caesarean Delivery Rates and Problems associated with C-Sections
(7, 18, 25, 31, 32, 33) • Increased maternal death rate • Fetal injury during cesarean • Longer recovery period (6-8 weeks) • Short hospital stay (2-3 days) • Difficulty breastfeeding

Cesareans save lives when performed as an emergency intervention. Many cesareans are the clear result of medical necessity. Others occur in circumstances where there are options available including many which are medically appropriate. A great majority of C-sections are performed as a result of a labor that has gone on too long or at the first deviation from the norm, such as a “non-reassuring” fetal heart rate on a monitor. A rising number of women are being pushed into the operating room after failed inductions and fetal distress following augmentation. There is an overall lack of support for normal physiological birth evidenced by the declining number of women who labor without the assistance of induction or augmentation. The practice of “defensive” medicine, heightened by rising malpractice premiums has created a climate of fear which not only affects the care providers, but the clients they serve. The escalating C-section rate in the U.S. should be a major public health concern. It represents a complex and difficult problem whose solution demands strategies that are multifaceted and comprehensive. Although doctors, hospitals, and insurance companies (who often represent warring interests), do contribute to the high rate of cesareans, it is not only with them that blame should be placed. These facts point to a failure in the United States’ system of maternity care.

Cesarean (C-Section) Delivery

Incisions for Cesarean Section

- Incision through the skin
- Incision through the uterus

Incisions for Cesarean Section
- Incision through the skin
- Incision through the uterus

Vaginal Birth and Cesarean Birth: How Do the Risks Compare?

The information in this chart and in the companion booklet, What Every Pregnant Woman Needs to Know About Cesarean Section, is based on an extensive review of current research. These resources were developed to help women make informed decisions about cesarean section. This booklet can be downloaded at www.childbirthconnection.org/cesareanbooklet.

The review found that “spontaneous” vaginal birth (with neither vacuum extraction nor forceps) involves many fewer risks than either cesarean section or “assisted” vaginal birth (with vacuum extraction or forceps). Without a clear and compelling need for a cesarean or for assisted delivery, a spontaneous vaginal birth is likely to be the safest way to give birth. See key to information in tables at the end of the next page.

1. CONCERNS ABOUT HAVING A CESAREAN SECTION

Having a cesarean section rather than a vaginal birth increases risk for the problems listed below.

<table>
<thead>
<tr>
<th>RISKS FOR MOTHERS AROUND THE TIME OF BIRTH</th>
<th>RISKS FOR BABIES AROUND THE TIME OF BIRTH</th>
</tr>
</thead>
<tbody>
<tr>
<td>• maternal death LOW TO VERY LOW</td>
<td>• accidental surgical cuts HIGH</td>
</tr>
<tr>
<td>• emergency hysterectomy MODERATE</td>
<td>• respiratory problems HIGH to MODERATE</td>
</tr>
<tr>
<td>• blood clots and stroke LOW</td>
<td>• not breastfeeding VERY HIGH to HIGH</td>
</tr>
<tr>
<td>• injuries from surgery*</td>
<td></td>
</tr>
<tr>
<td>• longer time in hospital VERY HIGH</td>
<td></td>
</tr>
<tr>
<td>• going back into hospital MODERATE</td>
<td></td>
</tr>
<tr>
<td>• infection HIGH</td>
<td></td>
</tr>
<tr>
<td>• pain, overall and at site of wound VERY HIGH</td>
<td></td>
</tr>
<tr>
<td>• poor birth experience VERY HIGH to HIGH</td>
<td></td>
</tr>
<tr>
<td>• less early contact with baby VERY HIGH</td>
<td></td>
</tr>
<tr>
<td>• unfavorable reaction to baby*</td>
<td></td>
</tr>
<tr>
<td>• depression (difference found for some but not all studies)</td>
<td></td>
</tr>
<tr>
<td>• psychological trauma (difference found for unplanned cesarean) HIGH</td>
<td></td>
</tr>
<tr>
<td>• poor overall mental health and self-esteem*</td>
<td></td>
</tr>
<tr>
<td>• poor overall functioning*</td>
<td></td>
</tr>
</tbody>
</table>

ONGOING RISKS FOR MOTHERS

• pelvic pain*
• bowel obstruction MODERATE

FUTURE REPRODUCTIVE RISKS FOR MOTHERS

• infertility: want to become pregnant and cannot VERY HIGH to HIGH (not by choice)
• infertility: have less desire to be pregnant and choose to avoid HIGH (by choice)
• maternal death* (possibly VERY LOW for maternal death related to scar)
• ectopic pregnancy MODERATE
• placenta previa MODERATE after one cesarean, HIGH after more than one cesarean
• placenta accreta MODERATE
• placental abruption MODERATE
• rupture of the uterus MODERATE

ONGOING RISKS FOR BABIES

• asthma, in childhood and adulthood HIGH

RISKS FOR BABIES IN FUTURE PREGNANCIES

• stillbirth or death shortly after birth MODERATE
• low birth weight and preterm birth *
• malformation *
• central nervous system injury *
2. CONCERNS ABOUT HAVING AN ASSISTED VAGINAL BIRTH

Having a vaginal birth with either vacuum extraction or forceps rather than a “spontaneous” vaginal birth without these procedures increases risk for the problems listed below.

**RISKS FOR MOTHERS**
- tear in perineum going into or through anal muscle **VERY HIGH** to **HIGH** with vacuum extraction; **VERY HIGH** with forceps
- excessive bleeding and transfusion **HIGH** for excessive bleeding; **HIGH** to **MODERATE** for transfusion
- going back into the hospital **MODERATE**
- infection **VERY HIGH** to **HIGH** for infection of the perineum; **HIGH** for infection within the uterus
- painful vaginal area **VERY HIGH**
- poor birth experience **VERY HIGH**
- bowel problems **VERY HIGH** to **HIGH**
- urinary incontinence *
- anal incontinence **VERY HIGH** to **HIGH** for some leaking gas or stool in period after birth with forceps; * for vacuum extraction
- hemorrhoids **VERY HIGH** to **HIGH**
- sexual problems **VERY HIGH** to **HIGH** in weeks and months after birth
- psychological trauma **HIGH** for PTSD diagnosis
- poor overall functioning *

**RISKS FOR BABIES**
- brain injury **LOW**
- other birth injury **MODERATE** for injuries to the body and face

3. CONCERNS ABOUT HAVING A VAGINAL BIRTH

Having a vaginal birth rather than a cesarean increases risk for problems listed below. Differences tend to be greater for assisted delivery (with vacuum extraction or forceps) and less for spontaneous vaginal birth (without these procedures).

**RISKS FOR MOTHERS**
- painful vaginal area **VERY HIGH**
- urinary incontinence *
- anal incontinence *

In most instances, these problems are mild and resolve during the recovery period after birth. Many can be prevented with conservative use of some maternity practices (such as episiotomy). See booklet for more information about these matters (pages 7 and 26-27) and for tips to reduce risk (pages 13-18).

**RISKS FOR BABIES**
- brachial plexus birth injury **LOW**

In most instances, this injury resolves soon after or within weeks of birth. In a small proportion of babies with this problem, a weakness with lifting the arms persists.

What do the Capitalized Words in Pink Mean?

The capitalized words tell you the extra likelihood of experiencing a specific problem (such as infection or excessive bleeding) if you give birth with the care that involves more rather than less risk. In some cases marked *, there was not enough information to make this type of estimate. Additional research about these problems could lead to a different conclusion or identify new problems for the three lists. This system will allow you to estimate how a decision will affect your likelihood of experiencing a particular problem. You can focus on risks and problems that are especially important to you or on overall trends.

<table>
<thead>
<tr>
<th>Extra likelihood of having a specific problem</th>
<th>Compared with the safer form of care, the care with more risk may cause problems for an additional</th>
</tr>
</thead>
<tbody>
<tr>
<td>VERY HIGH</td>
<td>1,000 to 10,000 of every 10,000 mothers or babies</td>
</tr>
<tr>
<td>HIGH</td>
<td>100 to 999</td>
</tr>
<tr>
<td>MODERATE</td>
<td>10 to 99</td>
</tr>
<tr>
<td>LOW</td>
<td>1 to 9</td>
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<tr>
<td>VERY LOW</td>
<td>less than 1</td>
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</table>

* Studies examined did not include information to describe size of effect

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The material on pages 5 and 6 is for general information only and is not intended to provide specific advice or recommendations for any individual. Your caregivers should be consulted for advice with regard to your individual situation. ©2006 Childbirth Connection. Used with permission.
In 2007, the Legislature passed and Governor Charlie Crist signed House Bill 1269, creating the Black Infant Health Practice Initiative (BIHPI). The purpose of this legislation is to determine the medical and social factors contributing to the elevated rates of infant mortality among Black infants in Florida and to develop community-based strategies and recommend policy changes at the local and state level to address the disparity.

As a result of House Bill 1269, a statewide practice collaborative has been formed to implement this legislation and address the issue of racial disparity in infant deaths in Florida. Eight counties (Hillsborough, Gadsden, Palm Beach, Orange, Broward, Duval, Putnam and Miami-Dade) who have a non-white infant mortality rate of at least 1.75 times greater than the white infant mortality rate between 2003 and 2005 are included in the collaborative. Each county has received grant funds administered by the Department of Health to participate in BIHPI.

Regardless of the amount of care and prenatal education, some fetal and infant deaths are inevitable. However, some of these babies can be saved. In Miami-Dade County many Black babies die needlessly. Data from the Florida Department of Health shows that the number of Black babies dying in the first year of life increased from 10.7 deaths per 1,000 live births in 2001 to 11.5 deaths per 1,000 live births in 2006. A Black woman living in Miami-Dade County is two and a half times more likely than her white neighbor to see her baby die. Each county is charged with determining the social, economic, safety and health system factors that are associated with racial disparities in infant mortality in their community. Based on this community-based research, the communities will develop a series of interventions and policies that are designed to address the disparity factors associated with infant mortality.

If you are interested in becoming a member of the Miami-Dade Community Action Team (CAT) and taking an active role in addressing this critical issue in our community, email BIHPI@hscmd.org or visit www.hscmd.org/bihpi.asp.

**INFANT DEATHS PER 1,000 LIVE BIRTHS**

Comparison of Rates (*Whites and Blacks*)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Whites</strong></td>
<td>4.3</td>
<td>4.4</td>
<td>4.5</td>
<td>3.9</td>
<td>4.4</td>
<td>4</td>
<td>4.4</td>
<td>3.7</td>
<td>4.1</td>
<td>3.9</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Blacks</strong></td>
<td>10</td>
<td>9</td>
<td>8.8</td>
<td>8.3</td>
<td>9.2</td>
<td>10.2</td>
<td>10.7</td>
<td>12.6</td>
<td>8.5</td>
<td>9.6</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Healthy Start partners with “Fresh From Florida Kids”

The Florida Department of Agriculture and the Florida Association of Healthy Start Coalitions have partnered to pilot “Fresh From Florida Kids.” The Healthy Start Coalition of Miami-Dade (HSCMD) is one of five Coalitions in the state selected to pilot the program. The program is designed to increase consumption of fresh fruits and vegetables and to encourage healthy eating habits at a young age in order to reduce childhood obesity. It also teaches and gives parents the necessary tools to provide healthy foods for their families. The pilot is divided into three phases over 2 ½ years. Phase I targets children 6-12 months of age who are just beginning to eat solid foods. Phase II is designed for children 12-24 months of age who are starting to eat finger foods and learning how to eat on their own. Phase III focuses on children 24-36 months of age by reinforcing healthy eating choices for toddlers. During each phase, parents will receive a kit and education booklet that includes recipes and will fill out a short questionnaire describing their child’s and family’s eating habits.

Information collected through the surveys will be used to evaluate participants’ and the program’s success. In exchange for completed surveys, parents will receive the next phase along with retail coupons and other incentives to encourage continued participation. Currently, the pilot is in Phase I. HSCMD will recruit 600 participants. For more information, please contact us at 305-541-0210 or visit the Fresh From Florida Kids website at www.freshfromfloridakids.com.