# POSITION PAPER

## LOVING BIRTH COMMITTEE

## THE FOUNDATION FOR LIVING MEDICINE

**2022**

**Prepared by Susan Highsmith, PhD**
**Chairperson**

ACKNOWLEDGEMENTS

We are grateful to former Task Force members, particularly to chairperson Alyce-Anne Meadows, Joni Chanko who designed our logo and cover page, and Dr. Janet Teodori who contributed the section on the microbiome. We gratefully acknowledge Wendy Mc Cord, PhD, who coined the term "Womb Health = World Health" and whose early work inspired the creation of this Committee. We are most appreciative for the encouragement of the Foundation for Living Medicine Board of Directors and Executive Director Rose Winters, as well as the leadership of Dr. Gladys McGarey who has demonstrated her trust in the Loving Birth Committee to revise the 2016 Position Paper espousing the principles and values encompassed in the concept of *Loving Birth*. We have faith in the vision of childbirth within our holistic paradigm of love and respect for all mothers, babies, and families.

**TABLE OF CONTENTS**

## WELCOME FROM DR. GLADYS

It is a pleasure for me, in my 101st year, to see in this Position Paper many of the principles that I have supported to bring about a paradigm shift in the realm of childbirth. This paper clearly states the vision and mission of the "Loving Birth Committee" of the Foundation for Living Medicine. My life has been dedicated to the premise that medicine should advocate for Life in ways that use language that is not "killing," or "anti" disease or "anti-aging," but promotes health in ways that empower individuals to recognize their inner physician and to speak with love and compassion about any conditions they wish to improve.

Childbirth is a beginning. We learn who we are and what to believe by how we are treated—how others in our families speak to us. The way we think about ourselves is shaped by what others thought. If our conception, the time in our mother's womb, or birth were filled with tension or trauma, my own experience tells me that love heals. A loving attitude can help a baby feel wanted, overcome anxieties, and learn to love him or herself. Most people's self-talk reflects the way they were talked to. You might notice that if you are critical of yourself it sounds just like a critical parent ! Yet, our parents did the best they could, often parenting in the same way they were parented. Generations of people could have been treated better. It is time to acknowledge that everyone has done the best they could with the knowledge and experience they have. If they could have done better, they would have.

Looking back on our life histories can be helpful in healing our own physical, mental, emotional and spiritual lives. Reflecting on my own birth has helped me to see, no matter how traumatic circumstances surrounding birth may appear, love can set things right. When I read my mother's diary, which she kept daily throughout her life, I find that I could have concluded that I was destined for a tumultuous life. Born in India in the early 20th century, separated from my mother who became seriously ill after giving birth, and fed with water buffalo milk from a metal tea pot, I can only admire those who so lovingly cared for me. As a centenarian who has led a purposeful and rewarding life, I know that early trauma can be overcome by love, especially by a community of loving caregivers.

I look forward to the hearing how this Position Paper is utilized to promote improved ways in which women and their precious babies are cared for before, during and after birth. We can do better—the vision of an ideal helps. The regard which we hold for all those for whom the ideal is not accomplished, including ourselves, is equally important. Life does not always happen as we would like. And yet, adversity can strengthen and inspire us to Love more.

## A LETTER OF WELCOME FROM THE CHIEF EXECUTIVE OFFICER

### Rose Winters

We are delighted to provide this Position Paper regarding "Loving Birth," a concept that is fundamental to the mission of the Foundation for Living Medicine. We trust that readers find it as informative, uplifting and inspiring as the members of the Board of Directors intend. We feel it can be a beacon of light that focuses attention on the sacredness of birth and reverence for life. For too long we have seen the reverence for birth give way to technological, surgical and pharmacological interventions which can diminish the miracle that bringing new life into this world truly is.

We see this Paper as encouragement for those who may not realize the Ideal that is described within its pages. This Paper provides a roadmap for the achievement of an Ideal experience; nonetheless, life sometimes presents an ordeal—unanticipated and certainly not expected. When life presents unforeseen outcomes such as miscarriages or other tragic losses related to childbirth, we view these as opportunities to express our support and compassion in a society that often assigns blame or shame. It may be these times that call for more Love, not judgment or criticism. Loving Birth, no matter what the circumstances, suggests falling in love with a newborn and with oneself as a bringer of life. It might also be an expression of admiration and consideration for the courage of those who are grieving.

We salute Mothers everywhere and their new babies who have come to Bless us. We wrap Mothers in compassion everywhere who have lost a child, regardless of the reason. We don't ask any woman to forget the pain of so great a loss, and say as lovingly as we can, LOVE, with time, will soothe the deep loss.

# WOMB HEALTH = WORLD HEALTH

## Foundation for Living Medicine Position Paper
## 2022

Prepared by the Loving Birth Committee of the Board of Directors,
Susan Highsmith, Chairperson

## INTRODUCTION & EXECUTIVE SUMMARY

The Loving Birth Committee, a division of the Foundation for Living Medicine Board of Directors, is dedicated to changing the paradigm of childbirth. The state of birth around the world, in the United States and Arizona, is one that can be improved to increase the health and safety of mothers and babies. The choices that women are making today are influenced by insurance companies, allopathic medical institutions, and pharmacological conglomerates which all have vested interests in promoting the financial benefits to their organizations. It is said that childbirth is "big business." Statistics reveal that infant and maternal mortality rates in the United States are higher than most other industrialized countries while the costs of childbirth are the highest in the world. These shocking figures have prompted us to explore the course of events and issues that women face from preconception and conception, through gestation, labor, birth and the postpartum period, while remaining focused on the optimum health and wellbeing of mothers, babies, and families. We propose holistic childbirth educational opportunities and encourage women to investigate their options to retain or regain their own voices in making informed choices and having those choices respected. By "loving birth" we honor the inherent capacity of women to give birth, trusting their bodies to perform as Nature designed, to bond with their babies, and to have the wisdom to make childbirth decisions without fear, but with confidence and love.

The Loving Birth Committee was initially formed as a Task Force of birth and holistic health practitioners working together on behalf of the Gladys T. McGarey Medical Foundation. Dr. Gladys is known as the *Mother of Holistic Medicine*, and as the physician responsible for obtaining policy changes that allowed fathers into labor and delivery rooms in Arizona. Fifteen years ago Alyce-Anne Meadows, M.Ed., convened a group of childbirth and healthcare professionals including doctors, nurses, midwives, birthing practitioners and educators at the Maricopa County Health Department and named the group the "Childbirth Think Tank." Subsequently, the Think Tank left the Health Department and resumed its mission as the Loving Birth Task Force under the auspices of Dr. Gladys' Medical Foundation. This organization evolved into the Foundation for Living Medicine and the mission of the Loving Birth Task Force, so named by Dr. Gladys herself, focused on the philosophy of Living Medicine within the realm of childbirth. Susan Highsmith was a member of the original Childbirth Think Tank while simultaneously earning her PhD in Prenatal and Perinatal (PPN) Psychology and is one of the two authors, along with Alyce-Anne Meadows, of the original 2016 Foundation Position Paper.

The intention of the Loving Birth Committee is to promote education in the realm of pre- and perinatal psychology; to raise awareness of the importance of changing the language, principles and practices of childbirth; to support the endeavors of the Foundation for Living Medicine to establish a Holistic Healthcare *Virtual Village;* and to develop a college curriculum in this vital field. Indeed, this paper will serve as a template from which that curriculum can be created. There is currently no community college or university curriculum specifically addressing prenatal and perinatal psychology at either an undergraduate or graduate level. The public needs to be aware of the long-term mental, emotional, and behavioral effects of pregnancy and birth on mothers, babies, and entire families. Certainly the physical health of the mother is important and well known, particularly in terms of dietary requirements and the avoidance of alcohol, drugs, smoking, and exposure to environmental toxins. A new curriculum intended for reproductive-age individuals would include these admonitions. Combined with research in psychology, as well as in birthing practices and policies, college-level classes would be able to be cross-listed with those primarily in Nursing, as well as Anatomy and Physiology, Psychology, Women's Studies, Social Work, Counseling and Guidance, and/or other related fields.

We begin with our vision and mission to improve the birthing experiences of women and babies by providing education that contributes to better birth outcomes. The concept of *Why Birth Matters*, especially due to its little known psychological consequences, is our opening statement. We follow this with our commitment to adhere to a *Code of Ethics* observed among holistic birthing professionals.

*The State of Birth* provides worldwide, national, and Arizona state facts and trends regarding numbers of pregnancies and births, the rates of infant and maternal mortality, and the venues in which births occur. Preterm birth and the March of Dimes Report Card grading childbirth outcomes within each state, and the issues of abortion and teen pregnancy are discussed, supported by associated charts depicting related statistics. *Costs of Giving Birth* specifically deals with the exorbitant expenses which childbearing women and their families typically incur in this country. The costs of hospital versus midwifery care are compared and contrasted.

*Prenatal and Perinatal (PPN) Psychology* is defined as it is the field most relevant to the prevention and treatment of mental, emotional, and behavioral disorders that arise from the earliest periods of life. *Childbirth Education*, which includes PPN psychology, is expanded by including and encouraging holistic, spiritual and evidence-based practices.

*Childbirth Education* also considers "changing the language of childbirth." It describes the principles of evidence-based maternity care and looks at the difference between routine and evidence-based practices.

*Preconception Health* looks at unintended pregnancies and the longitudinal research that points out how being unwanted negatively impacts lifelong attitudes and behaviors. It is estimated that half of the pregnancies in the United States are unintended, although not necessarily unwanted. It is an objective of the Loving Birth Committee to raise awareness

of the importance of intention, which is becoming known as conscious conception, in bringing children into the world. Healthy practices are outlined for those considering becoming pregnant. *Prenatal Opportunities & Challenges* considers optimum health during pregnancies and urges caution when considering practices and procedures that can potentially be detrimental to the development of a baby in utero including ultrasound imaging and amniocentesis.

*Labor & Birth* explores birthing venues, the benefits of vaginal (physiological) birth, and the hormones associated with giving birth. *The Sacred Hour* and skin-to-skin contact are discussed in depth as honoring this crucial time and the physical closeness of mother and child during the hour immediately after birth has proven to enhance the bond between them and to promote the child's life-long secure attachment. Bonding and the Foundations of Secure Attachment are explained more fully, as are the benefits of Delayed Cord Clamping and Supported Attachment, i.e. latching on. Relaxation, Meditation, and Self Hypnosis for Labor and Birth are elucidated as excellent techniques for pregnant and birthing mothers. The option of Placental Encapsulation is described, and the establishment of a child's Microbiome is examined. A discussion of vaginal birth, water birth and vaginal birth after Cesarean section (VBAC) concludes *Labor & Birth*.

*Birth Interventions* includes the many ways in which natural labor and birth can be interrupted. Friedman's Curve is shown to be obsolete and "failure to progress" to be a pejorative term. The lithotomy position is shown to be a position that restricts the movements of a laboring woman to her detriment for the convenience of staff. Electronic fetal monitoring (EFM), labor induction, and epidural analgesia are all questioned as they contribute to the infamous "cascade of interventions." The policy promoting episiotomies is refuted, and the high numbers of Cesarean sections are revealed to be cause for alarm worldwide. The use of forceps and vacuum extraction are examined, as is aspirating (suctioning) on the perineum and the administration of eye drops and vitamin K to newborns. Parents are urged to thoroughly consider the advisability of circumcising their newborn sons.

The section on *Midwives* and *Doulas* endorses both midwifery and doula support. *Postpartum & Newborn Care* are addressed, including a discussion of Paid Parental Leave and the stress that new mothers can experience due to lack of financial support. Stress experienced by a pregnant mother is simultaneously experienced by her unborn child, so this issue is of great concern. Of course, *Breastfeeding* is recommended. Co-sleeping is discussed Our *Beliefs* and *Recommendations* are enumerated and a short essay on "Love versus Fear" completes our treatise. The 2022 Position Paper concludes with *Helpful Definitions* and a comprehensive list of *References & Resources*.

## WHY BIRTH MATTERS

*Preconception health, pregnancy and childbirth have lasting, lifelong physical, psychological, emotional and financial implications for each individual, each family, and society as a whole.*

**Vision:** All women and their unborn babies receive respectful, competent, comprehensive evidence-based healthcare and maternity services that incorporate each woman's preferences, choices, culture and family values.

**Mission:** Our mission is to promote education that includes information that helps young men and women make informed and timely choices. We support advocacy and public policy for childbearing practices that are inclusive, respectful, comprehensive, competent and mother/baby friendly. This includes understanding the roles of preconception, prenatal and postnatal care, informed and conscious choice of procedures, birthing options, community-based quality healthcare and culturally sensitive services.

Research in a variety of fields is showing that our earliest experiences leave imprints that continue to govern our actions throughout our lives. These experiences begin even before birth. The new field of epigenetics has revealed that genes do not control our destiny; the environment influences the expression of genes, thus, an individual's earliest environment, matters. These environmental influences include the thoughts, feelings, actions and beliefs of mothers, fathers, grandparents and other ancestors. Prenatal psychologists and childbirth educators are teaching these concepts, helping not just those considering conceiving a child, but also helping adults heal old patterns of thought, feeling and behavior that sabotage their success in relationships, careers, and life in general.

The Foundation for Living Medicine is dedicated to holistic health practices, especially those that promote natural physiological childbirth and foster new relationships between pregnant women and their healthcare team that provides individualized care. We view pregnant women as inherently healthy, and are, therefore, committed to encouraging women to heed what Dr. McGarey would call *their own life force within* to experience the healthiest and most natural pregnancy and birth possible. We encourage self-responsibility and an awareness of detrimental self-sabotaging patterns that can be changed for the better. The Loving Birth Committee, as an extension of the Foundation for Living Medicine, respects the innate wisdom of mothers and babies to lead in the birthing process as it was designed by Nature. In accordance with the overall goals of The Foundation for Living Medicine, the Loving Birth Committee promotes *a paradigm shift* in the realm of childbirth that changes the focus in medicine from treatment of pregnancy as a disorder and pregnant women as patients in need of pharmaceutical and surgical interventions to one that honors women's abilities to *give birth* rather than have their babies *delivered*. The Loving Birth Committee promotes holistic health options for women of childbearing age who plan to get pregnant, are currently pregnant, have given birth, or are parenting and desire to learn more about holistic, natural practices that can benefit them, their children and their families.

## CODE OF ETHICS

Darcia Narvaez (2014), author of *Neurobiology and the Development of Human Morality*, has coined a phrase, "an ethic of love" (p.119). This ethic is learned and begins to be developed even before birth, again emphasizing "why birth matters."

> Capacities for an ethic of love emerge easily from companionship care where the environment signals "all the way down" to cells that the child is welcome. Through presence, reverence, and synchrony, loving attitudes and behavior provide the optimal developmental niche. Parents unconditionally love the child and the child loves them back. Through loving experience the child builds emotion systems that form her values; she learns the value of relationships and community, empathy and compassion. (p. 120)

In concert with the ideal of *an ethic of love*, members of the Birth Committee representing the Foundation for Living Medicine adhere to the values, principles and ethical responsibilities derived from the Code of Ethics for Lamaze Certified Educators (Lamaze International, 2006).

- Our primary responsibility is to promote the wellbeing of childbearing women.
- We respect and promote the right of childbearing women to make informed decisions and assist childbearing women in their efforts to identify and clarify their goals.
- We are committed to providing full, accurate, up-to-date information upon which childbearing women are able to make informed decisions, whether it be informed consent or informed refusal.
- We endorse evidence based maternity care as the best available research on the safety and effectiveness of specific practices to help guide maternity care decisions and to facilitate optimal outcomes in mothers and newborns (childbirthconnection.org).
- We believe that evidence based maternity care gives priority to care paths and practices that are effective and least invasive, with limited or no known harm whenever possible, and promote this type of care (childbirthconnection.org).
- We promote "companionship care" (Narvaez, 2014, p. 86), defined by Narvaez as a quality developed by parent-child interactions early in life and become a moral and ethical manner of interacting with and caring for others.
- Although we subscribe to the ethical standards and guidelines of all professions that support childbearing women, their babies and families, we encourage each individual to develop an internal locus of control with regard to ethics so that each person's internal "motivations and values as therapists and caregivers—is the source of what we do and say" (Taylor, 1995, p.7).

## THE STATE OF BIRTH: Facts & Trends

*Maternity Care in the United States: We can—and must—do better.* This is the title of the February 2020 *Issue Brief* published online by the National Partnership for Women and Families (NPWF). Author Carol Sakala explains:

> *Too often, maternity care in the United States fails women and families – in not being accessible, safe, equitable, woman-centered, evidence-based or affordable. Further, maternity services often fail to mobilize housing, transportation and other non-medical factors that strongly affect birth outcomes. Poor – and for many key indicators, worsening – maternal and newborn health outcomes signal that major improvements are overdue. Getting maternity care right is urgent for this and future generations.*

This *Issue Brief* (February 2020) emphatically states that "quality maternity care is a foundation of our nation's health."

> *Maternity care provided from pregnancy through birth and the postpartum/newborn period affects every one of us. No other part of our health care system has a greater effect on the health of our population.*
>
> Reliably delivering better care is an under-recognized way to affect a new baby's health and wellness for a lifetime. Studies of the "developmental origins of health and disease" (including knowledge of epigenetics, the human microbiome, life course health development and hormonal physiology of childbearing) increasingly point to long-term, even lifelong positive and negative effects of care during this sensitive period of development.
>
> The quality of prenatal, labor and birth and postpartum care also affects shorter-and longer-term health of women who give birth one or more times. (https://www.nationalpartnership.org/our-work/resources/health-care/maternity-care-in-the-united.pdf)

### Numbers of Pregnancies & Births

When the first Foundation for Living Medicine Position Paper was prepared in 2016 there were approximately 4 million births occurring in the United States each year. Since that time the number of births have been decreasing, a trend that actually began in 1990 when the figure was 4.16 million. In 2019 the number of births was 3.75 million, down from 2018 when it was 3.79 million, from 2017 when it was 3.86 million, and from 2016 when it was 3.95 million (Osterman et al., *Births: Final Data for 2020*, NCHS). "The birth rate in the U.S. has decreased over recent decades, in part due to young adults postponing having children and the use of contraception," according to Statista, an online service that describes itself as "a leading provider of market and consumer data." According to Elflein, the Statista researcher, factors such as longer life expectancies, financial concerns, and an increased focus on careers have been influencing people to delay starting a family.

The Center for Disease Control and Prevention (CDC) website revealed that 40% of births in the United States in 2020 were to unmarried women, a disturbing statistic because these mothers are typically unsupported by partners during their pregnancies, labors, and births, and are raising their children without financial or social support. The absence of fathers can have immediate and long range consequences for these women and most particularly for their children (https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-17.pdf).

Other relevant U. S. birth statistics published on the cdc.gov website include:

- The number of births declined in 2020, the lowest number since 1980;
- Home births increased from 1.03% to 1.26% in 2020—a 22% increase;
- Home births in Arizona increased from 667 in 2018, to 706 in 2019, and to 931 in 2020;
- The cesarean delivery rate increased to 31.8% in 2020 from 31.7% in 2019;
- Low-risk cesarean delivery rate rose from 25.6% in 2019 to 25.9% in 2020;
- Preterm birth (those less than 37 weeks gestation) declined from 10.23% in 2019 to 10.09% of all births in 2020.

**Arizona State Statistics & Trends**

*Statista* researcher Frederic Michas (May 28, 2021) reported the number of births in Arizona, as well as the preterm birth and cesarean delivery percentage in 2020:

> In 2020, the number of births in Arizona amounted to 76,923 births, from which over one quarter were delivered by cesarean. Indeed, the cesarean delivery rate in Arizona stood at 28.4 percent. In this U. S. state, nearly one out of ten babies were delivered preterm in 2020.

The Arizona Department of Health Services has published the *Arizona Health Status and Vital Statistics 2019.* Distilled from that data, 79,183 births were reported in 2019, a decrease of 1.7% from the previous year.

Among women who gave birth in Arizona in 2019:

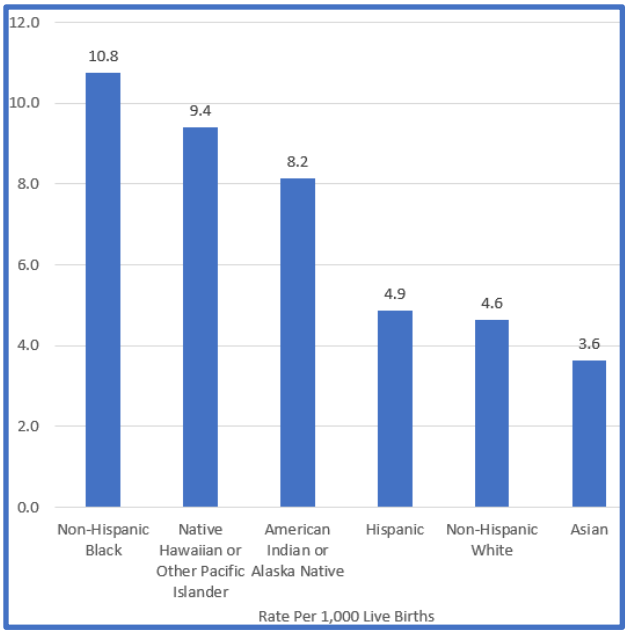
- 38,691 (48.9 percent) were paid for by the Arizona Health Care Cost Containment System (AHCCCS).
- 35,610 (45 percent) of births were to unmarried mothers, which may signify absence of emotional, social, and financial resources.
- 23,589 (29.8 percent) of births were to women who experienced complications during labor and/or delivery.
- 21,798 (27.6 percent) of births occurred to women who received late or no prenatal care.
- 20,197 (25.5 percent) of births were to women who had a serious medical condition such as hypertension, diabetes, or sexually transmissible diseases.
- 4,323 (5.5 percent) of births were to teenagers 19 years old or younger.
- 3,426 (4.3 percent) of births were to women who smoked during pregnancy. (https://pub.azdhs.gov/health-stats/report/ahs/ahs2019/pdf/introduction19.pdf)

## Infant Mortality

Both maternal and infant mortality rates are accepted as key indicators of a nation's health and reflect the ability of women to secure maternal and other health care services. According to the *World Population Review* and reported in 2021:

> Infant mortality is the death of children under the age of one year. The infant mortality rate is the number of infant deaths per 1,000 live births. Overall, infant mortality rates have significantly decreased all over the world. Infant mortality in the United States is mostly caused by congenital disabilities, preterm birth and low birth weight, maternal pregnancy complications, Sudden Infant Death Syndrome, and injuries (such as suffocation). Around the world, the top causes for infant mortality are neonatal encephalopathy (problems with brain function due to lack of oxygen during birth), infections, complications of preterm birth, lower respiratory infections, and diarrheal diseases. Causes differ for infants that are only a few days old and for older infants. The mortality rate in the United States is 5.8. This rate is significantly higher than other comparable developed countries, but the reason is more complicated than raw statistics. Infant mortality is defined differently in different countries. For example, some countries don't include stillborn babies born or use a different definition of an infant.

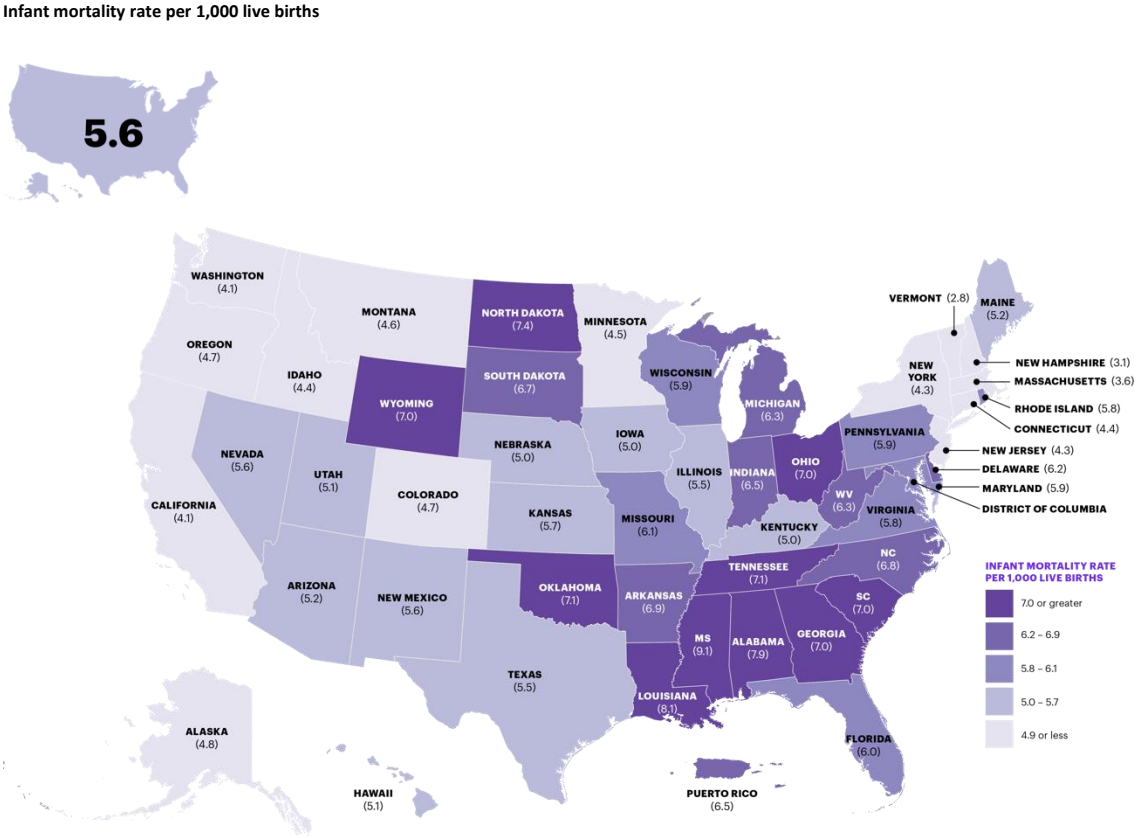
The *CIA World Factbook* estimates the United States Infant Mortality Rate (IMR) for 2021 to be 5.2% (deaths per 1000 live births). The mortality rate for males is somewhat higher at 5.61% than the rate for females which is 4.81%. Although 5.2% is lower than the 5.87 rate reported in the *CIA World Factbook* in 2015, it is still substantially higher than most industrialized countries. The chart below reflects the disparity by race in the U.S. IMR.



The *2021 Annual Report of America's Health Rankings* "goes beyond measures of clinical care and health behaviors by considering social, economic and physical environment measures to reflect the growing understanding of the impact of social determinants on health." This report displayed the results of a comparison of the United States' infant mortality rate with those of 38 member countries of the Organization for Economic Cooperation and Development (OECD) in 2019. The United States ranked 33 out of 38 with an IMR of 5.7, well below other industrialized nations like Iceland which has only 1.1 infant deaths per 1,000 live births.

(https://assets.americashealthrankings.org/app/uploads/americashealthrankings-2021annualreport.pdf)

## INFANT MORTALITY BY STATE




The above map prepared by the March of Dimes shows the infant mortality rate by state in 2021. The overall rate for the United States is 5.6; the rate for Arizona is 5.2.

(https://www.marchofdimes.org/materials/March_of_Dimes_US_2021_Report_Card_111_52021.pdf)

The *Arizona Health Status and Vital Statistics 2019* reports the 2019 IMR to be 5.4%. However, on a table titled *Fetal and Perinatal Deaths and Rates by Year, Arizona, 2009-2019*, the "number of all reported fetal deaths" for 2019 is listed as 640 or 5.7%. These deaths include

> spontaneous and induced terminations of pregnancy at 20 or more weeks of gestation (or if gestational age unknown, the deaths of fetuses of at least 350 grams or more) and some stillbirths prior to 20 weeks and of any weight. (https://pub.azdhs.gov/health-stats/report/ahs/ahs2019/pdf/1c3.pdf)

The Center for Disease Control and Prevention (CDC) report last reviewed March 17, 2021 listed Key Indicators related to the health of the residents of Arizona:

| Key Health Indicators | |
|---|---|
| key health indicators | |
| Fertility Rate | 56.8 (births per 1,000 women 15-44 years of age) |
| Teen Birth Rate | 18.5 (births per 1,000 females 15-19 years of age) |
| Infant Mortality Rate | 5.2 (infant deaths per 1,000 live births) |
| Life Expectancy (at Birth) | 78.7 years (2018) |
| Marriage Rate | 5.3 (marriages per 1,000) |
| Divorce Rate | 2.9 (divorces per 1,000) |
| Leading Cause of Death | Heart Disease |
| Drug Overdose Death Rate | 26.8 (per 100,000)[1] |
| Firearm Injury Death Rate | 15.1 (per 100,000)[1] |
| Homicide Rate | 5.9 (per 100,000)[1] |
| COVID-19 Death Rate (Q1, 2021) | 229.5 (per 100,000)[2] |

(https://www.cdc.gov/nchs/pressroom/states/arizona/az.htm)

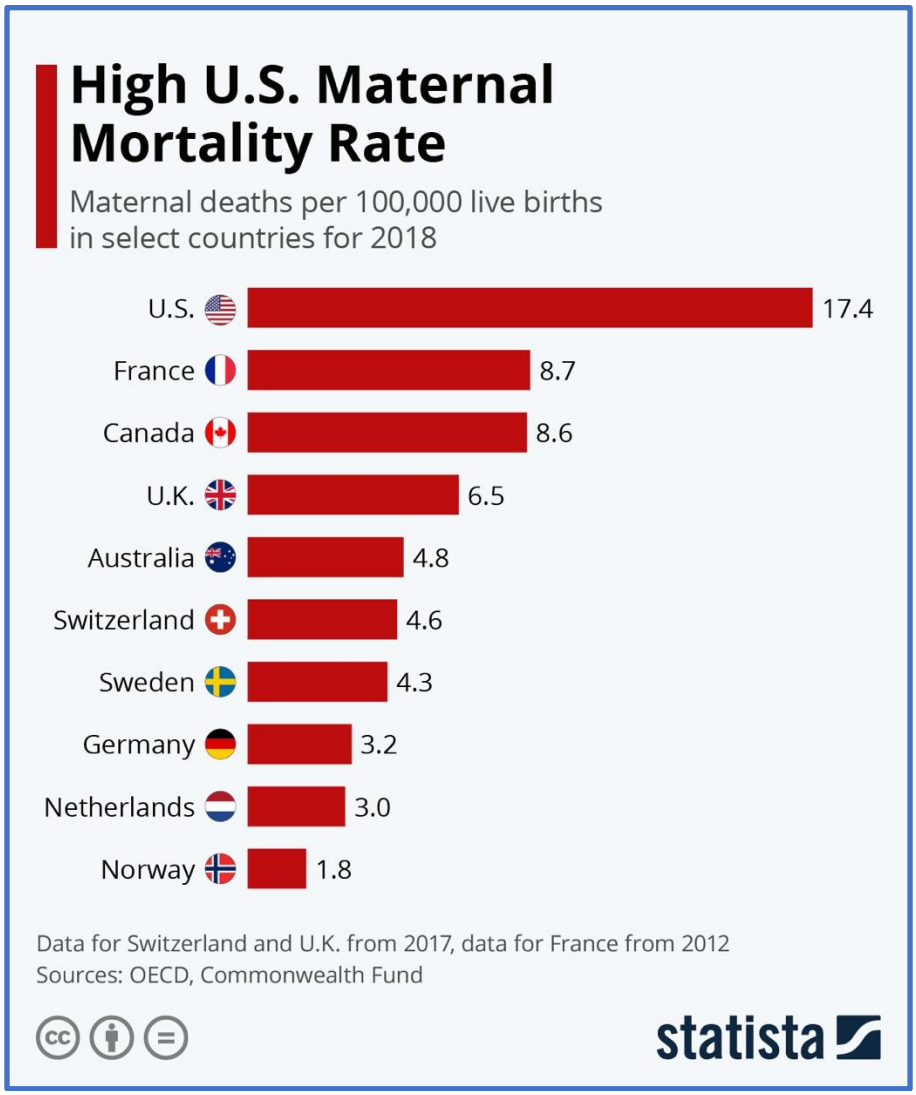
Other (CDC) Birth Data for Arizona 2019 reported:

- 45.1% of births were to unmarried women; AZ. ranked 12th among the 50 states.
- The Cesarean Delivery Rate was 27.8%; AZ. ranked 38th.
- Preterm Birth Rate was 27.8%; AZ. ranked 39th.
- The Low Birthweight Rate was 7.4; AZ. ranked 38th.

The 2019 *Arizona Health Assessment* reported that "Only **1** in **5** women received advice about ways to prepare for a healthy pregnancy" (p. 22). This statewide big picture assessment is conducted every five years by the Arizona Department of Health Services and other affiliates "to consider key trends and health issues throughout the lifespan, as well as the health and safety of the communities in which we live." This 2019 assessment reported statistics from 2017, which have changed over the last five years, especially due to the influence of the pandemic. (https://www.azdhs.gov/documents/operations/managing-excellence/2019-state-health-assessment.pdf).

**Maternal Mortality**

Statistics provided by the National Center for Health Statistics (NCHS) and published in April 2021 indicate a maternal mortality rate (MMR) in the United States during 2021 of 20.1 deaths per 100,000 live births. The NCHS report states: "In 2019, the maternal mortality rate for non-Hispanic black women was 44.0 deaths per 100,000 live births, 2.5 times the rate for non-Hispanic white women (17.9) and 3.5 times the rate for Hispanic women (12.6)." Rates of maternal death revealed not only a disparity among races but also among women of various ages: there is a significant increase in maternal mortality "with maternal age, with rates in 2019 of 12.6 deaths per 100,000 live births for women under age 25, 19.9 for those aged 25-39, and 75.5 for those age 40 and over." (Hoyert, NCHS Health E-Stats, April 2021).




The graph (*Statista*, 2018) above shows the United States' maternal mortality rate for 2018. It dramatically shows how the United States compares with other western industrialized countries. The rate is effectively twice the rate in France and Canada and more than eight times higher than the maternal mortality rate in Norway.

In December 2020 the Arizona Department of Health Services (ADHS) published a report titled *Maternal Mortalities and Severe Maternal Morbidity in Arizona.* The intended audience for this report is emphasized:

> This is a technical report on the analysis of the incidence and causes of Maternal Mortality and Severe Maternal Morbidity in Arizona. This report is aimed primarily at those actively involved in the care of and improvements to maternal health, including healthcare providers, community service providers, researchers, policymakers, and other stakeholders. While publicly available, the intended audience of this report is not the general public, and extra care in the use or interpretation of this report should be taken by those with limited background or subject-matter expertise in the areas of maternal health and complications of labor and delivery.

The Foundation for Living Medicine is an organization dedicated to the wellbeing of mothers and babies. Many of its Board members and volunteers are "actively engaged in the care and improvement to maternal health" and are "healthcare providers, community service providers, researchers, policymakers, and other stakeholders." Members and associates of the Foundation agree with the ADHS that the term "maternal mortality" can be used interchangeably with "pregnancy-associated deaths."

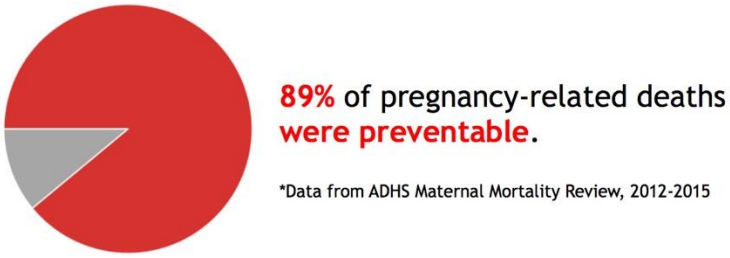
The Executive Summary of *Maternal Mortalities and Severe Morbidity in Arizona* states:

> Each year in Arizona, approximately 70 women die within 365 days of pregnancy of which 15-20 deaths are pregnancy-related cases (i.e., would not have died if she had not been pregnant). Additionally, approximately 900 women experience a severe maternal morbidity (SMM) during labor and delivery in an Arizona hospital (i.e., a severe or unexpected complication). While this report is considered a baseline report for maternal mortality (MM) and SMM outcomes occurring in Arizona, national rates of MM and SMM have steadily increased over the last decade, indicating a need for national, state, and local efforts to improve health care outcomes for women before, during, and after pregnancy. These outcomes can be attributed to a range of factors, including access to affordable, high quality, and coordinated maternal health care, social determinants of health such as financial security, housing, education, and food security, among others.
> (https://www.azdhs.gov/documents/director/agency-reports/sb-1040-report-on-mmm-in-az.pdf)

What is particularly relevant to state in this Position Paper is the following quote from the *Maternal Mortalities and Severe Morbidity in Arizona* report:

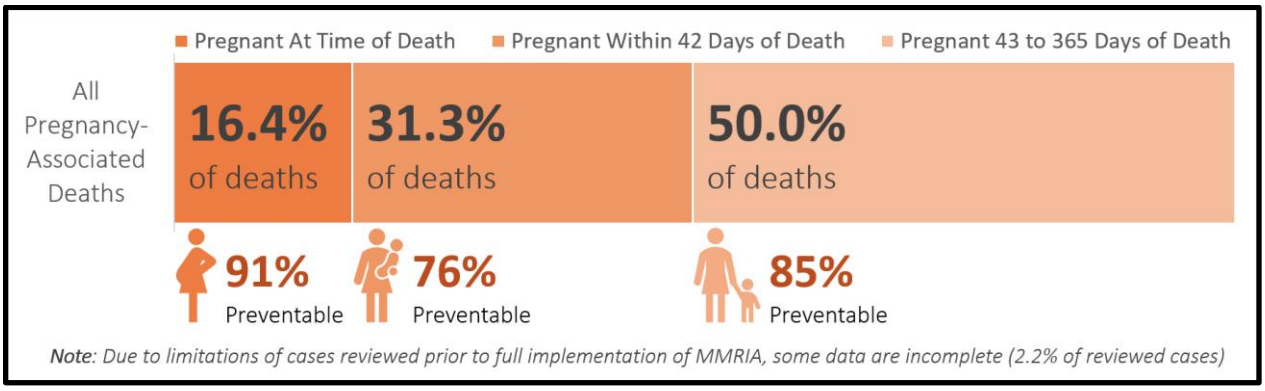
> ***Arizona's diverse demographic characteristics indicate the need for innovative targeted strategies that address MM and SMM via biomedical and socio-cultural approaches [emphasis added].***

The Foundation for Living Medicine and its Loving Birth Committee are on the threshold of an emerging paradigm shift in the realm of prenatal and perinatal health for women, babies and families. The Foundation is dedicated to promoting a positive change in maternal and infant health through coalitions with other organizations to educate the public regarding the need for and new approaches to the improvement of maternal and infant health.




Most pregnancy-related deaths are considered preventable, a point made graphically on the above image published on the internet by *The Arizona Pulse* (azpulse.org). The 2020 *Maternal Mortalities and Severe Maternal Morbidity in Arizona* report states that among the 134 pregnancy-associated deaths reviewed of women 15-49 years old during 2016-2017, "83.6 percent of all pregnancy-associated deaths were preventable." The number of deaths considered preventable varies with the time at which the death occurred, a time-frame that is made clear in this report by the chart below.

*Among MMRC Reviewed Pregnancy-Associated Deaths in Arizona of Women 15-49 Years Old, 2016-2017 (n=134)*




The report estimates that obesity contributed to 15.7% of the deaths and mental health conditions contributed to another 28.4%. Low levels of education were found among those women who died of a pregnancy-related cause. Education is one highly regarded way to inform the public, raise awareness of the impact of both physical and mental health on pregnancies, introduce new concepts to healthcare providers, and potentially reduce preventable negative consequences in the realm of childbearing.

It is clear that the state of Arizona needs to and is addressing maternal and infant mortality. The Foundation for Living Medicine recognizes these efforts and is ready to help develop new curricula within academic institutions, develop mother/baby friendly birth centers, and

work cooperatively with other organizations to improve birthing experiences for both mothers and their babies. The Foundation for Living Medicine agrees with recommendations made the Arizona Maternal Review Committee to prevent maternal deaths including:

- Increase and streamline access to behavioral services statewide, including training and education for advanced practice nurses in behavioral health services.
- Educate providers on the availability of maternal postpartum resources such as home-visiting programs (https://azpulse.org/maternal-mortality-review-committee-a-step-towards-preventing-deaths-in-arizona/)

These recommendations are consistent with the goals and objectives of the Foundation.

**Place and Mode of Birth**

According to the National Institutes of Health (NIH) data for 2019, "the vast majority (98.4%) of women give birth in hospitals, with 0.99 percent giving birth at home and 0.52 percent giving birth in freestanding birth centers" (p. 32). The chairperson of the Committee on Assessing Health Outcomes by Birth Settings who prepared this extensive report stated:

> It is our expectation and our hope that childbirth in America can be both reframed and reformed to achieve the improved outcomes that we know are possible at less economic cost and at great gain for families and communities, as well as for our nation. (p. *viii*)

The report emphasized:

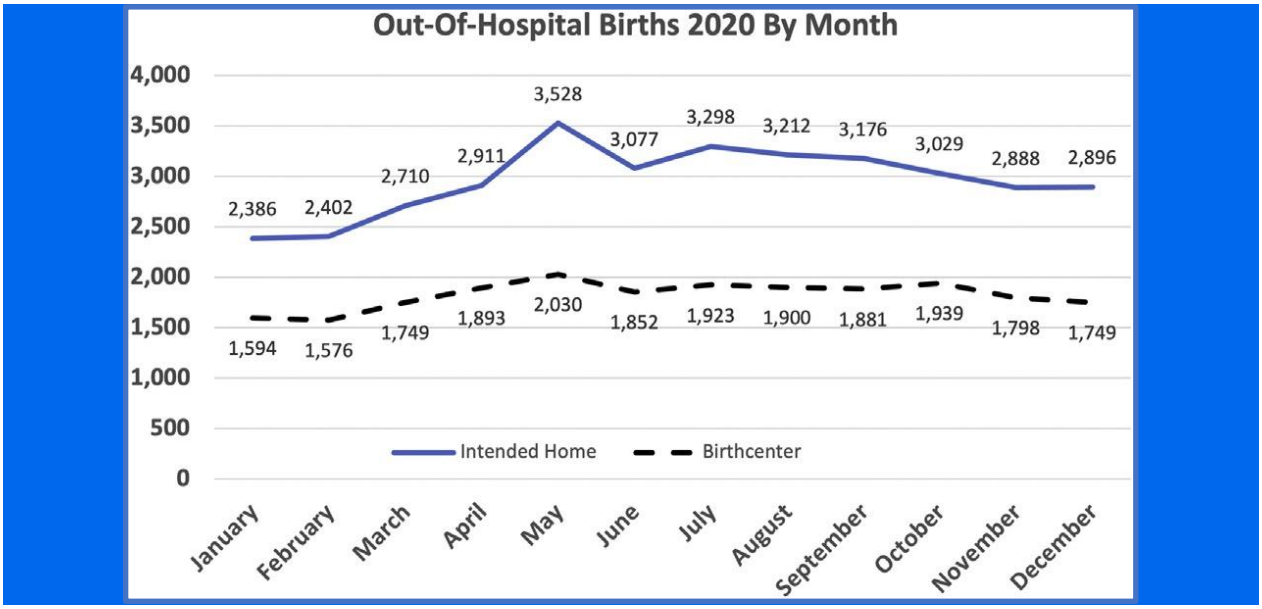
> Childbirth services play a critical role in the provision of U.S. health care. The current U.S. maternity care system, however, is fraught with inequities in access and quality and high costs, and there is growing recognition of the mismatch between the collective expectations of the care and support women deserve and what they actually receive. Moreover, the United States has among the highest rates of maternal and neonatal mortality and morbidity of any high-resource country, particularly among Black and Native American women. It is clear, then, that the systems supporting childbirth in the United States are in need of improvement. (p. 1)

Further:

> Pregnant people who give birth in the United States can have vastly different experiences depending on the setting in which they give birth, the providers who participate in their care, how the birth is financed, and the state in which they give birth. Hospitals, home births, and birth centers offer different resources, services, and care options. For example, hospitals offer more intensive interventions, such as induction and augmentation of labor, epidural pain relief, and cesarean birth, whereas birth centers and home births do not offer similar interventions and instead put more emphasis on supporting physiologic birth. Even among different hospitals,

the resources, providers, services, and outcomes can vary widely, depending on such factors as the level of care, geographic location, staffing, and culture. (p. 82)

Although most births have occurred in hospitals for the last 100 years, the *American Journal of Obstetrics and Gynecology* published a report saying, "community births increased during the COVID-19 pandemic, consistent with the belief that community births seem more appealing to some women who view being in a hospital as more dangerous." (Grunebaum et al., 2022). The article reported that **intended home births increased by 20.2%** during this period (see chart below). The American College of Obstetrics and Gynecology (ACOG) is not a proponent of out-of-hospital births and does not support this trend. ACOG concluded from their recent study of 3,747,540 births in 2019 and 3,613,647 births in 2020 that "neonatal morbidity and mortality and infection control were clinically superior in planned hospital births compared with out-of-hospital births" and, therefore, "all healthcare providers should discourage planned out-of-hospital births and should recommend planned hospital births."




*U. S. News* (March 4, 2021) reported that the pandemic propelled " interest in out-of-hospital births" (https://www.usnews.com/news/health-news/articles/2021-03-04/pandemic-propels-interest-in-home-out-of-hospital-births).

Hospitals during this period were limiting the number of people who could attend a birth and many women wanted support during their labors and births. A September 22, 2021 *U. S. News* article stated that out-of-hospital births increased in the state of California "from 0.68% in 2010 to 1.34% in 2020" according to a KHN analysis of provisional data from the California Department of Public Health. The proportion of births outside hospitals stayed relatively high – 1.28% – from January through July 2021." This percentage is "more than double the proportion seen in 2007" (Reese, 2021).

This *U. S. News* article also reported that midwives "said they've heard from far more women in recent years turning to home births to avoid epidurals, induced labor and other invasive procedures common in hospital delivery rooms" Further, a certified nurse midwife speculated that "people are looking to be more empowered in their birth and less 'just go along with whatever happens' (Reese, September 22, 2021).

November 27, 2021 *The Network for Public Health Law* questioned whether hospitals were "safe places to give birth." The article suggested:

> Hospital policies designed to prevent the spread of COVID-19 may ultimately have had a negative impact on newborns and their parents. Additionally, as a result of these policies and out of concern for safety, many families chose to give birth at home or at a birthing center. The increased demand for out-of-hospital deliveries quickly overwhelmed the limited number of birth centers and midwives providing home birth services in the U. S. – highlighting a gap in the country's healthcare system.

A study reported in the *Maternal and Child Health Journal* in an April 2021 News Brief concluded that "hospitals and policy-makers should institute measures to safeguard against a negative birth experience during the ongoing COVID-19 pandemic, particularly among birthing people of color" (Janevic et al., p. 860).

**Preterm Birth & the March of Dimes Report Card**

The March of Dimes Prematurity Campaign addresses the long-term effects of premature birth.

- Premature birth is birth that happens too soon, before 37 weeks of pregnancy.
- Babies born prematurely may have more health problems at birth and later in life than babies born later.
- Premature babies can have long-term intellectual and developmental disabilities and problems with their lungs, brain, eyes and other organs.
- Finding and treating health problems as early as possible can help premature babies lead, healthier lives.

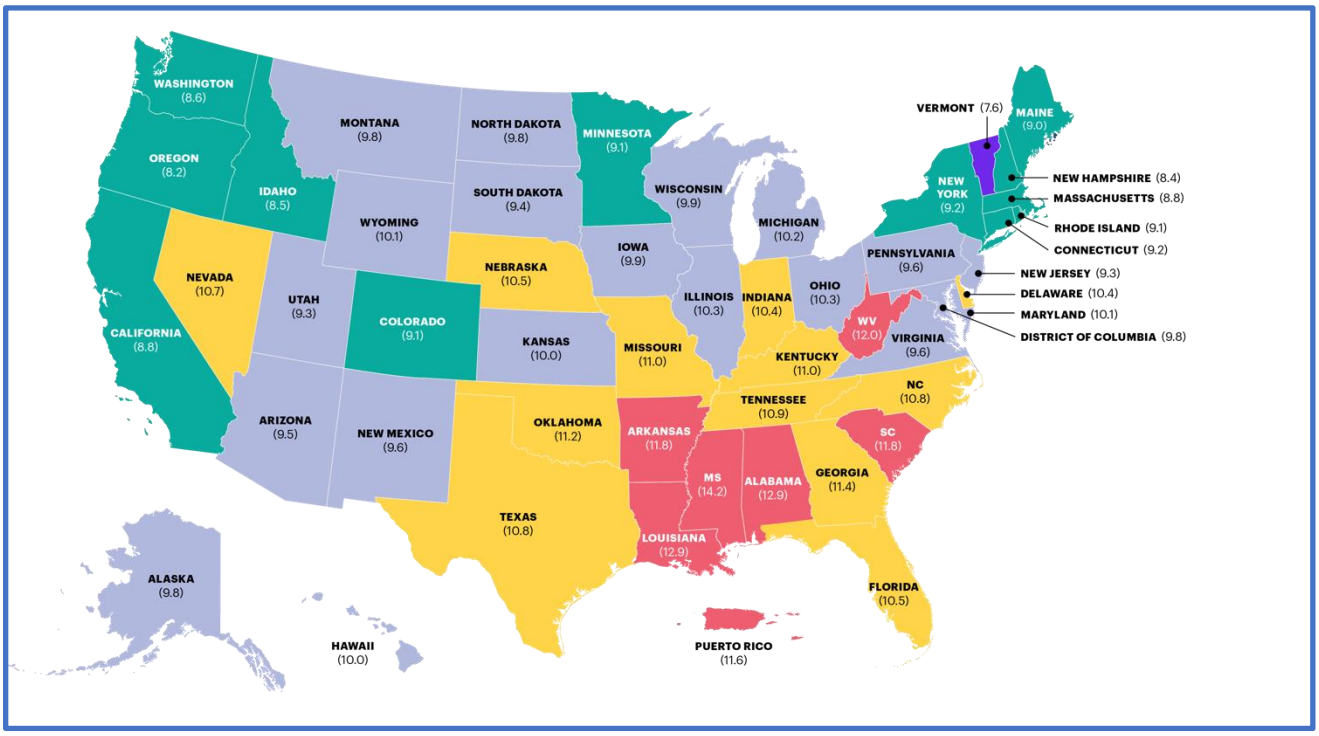
The March of Dimes website states unequivocally:

> Premature birth (birth before 37 weeks of pregnancy) and its complications are the #1 cause of death of babies in the United States. Babies who survive premature birth often have long-term health problems, including cerebral palsy, intellectual disabilities, chronic lung disease, blindness and hearing loss. In the United States, about 380,000 babies are born prematurely each year. The preterm birth rate (the percent of babies born before 37 weeks each year) is 9.8 in the United States. This means 1 in 10 babies is born too soon. The U. S. preterm rate is among the worst of high-resource nations. (marchofdimes.org)

March of Dimes has for 80 years promoted the health of all pregnant women and their babies. The March of Dimes website grades the performance of all fifty states on their Report Card, which "offers a comprehensive overview of the health of moms and babies across the U. S." (https://www.marchofdimes.org/mission/reportcard.aspx).

> The report grades the U. S. states, Puerto Rico and 100 cities on preterm birth rates, and includes other information such as infant death, social vulnerability, low-risk cesarean births, and state efforts on Medicaid expansion and extension, doula and midwives legislation/policies, among other factors and outlines important policy solutions that can make a difference.

Arizona earned a C+ in 2021, down from a B in 2015. The grade given to the United States as a whole is C-. The only state to earn an A was Vermont. The map below depicts the March of Dimes 2021 preterm birth rates for the United States which is based on National Center for Health Statistics, 2020 final natality data.




(https://www.marchofdimes.org/mission/reportcard.aspx)

A table defining the color-coding and grading displayed on the map above follows.

| | PRETERM BIRTH RATE RANGE<br><br>SCORING CRITERIA |
|---|---|
| A | Less than or equal to 7.7%. |
| A- | Preterm birth rate of 7.8 to 8.1%. |
| B+ | Preterm birth rate of 8.2 to 8.5%. |
| B | Preterm birth rate of 8.6 to 8.9%. |
| B- | Preterm birth rate of 9.0 to 9.2%. |
| C+ | Preterm birth rate of 9.3 to 9.6% |
| C | Preterm birth rate of 9.7 to 10.0% |
| C- | Preterm birth rate of 10.1 to 10.3% |
| D+ | Preterm birth rate of 10.4 to 10.7%. |
| D | Preterm birth rate of 10.8 to 11.1%. |
| D- | Preterm birth rate of 11.2 to 11.4%. |
| F | Preterm birth rate greater than or equal to 11.5%. |

The March of Dimes impact statement—*Our Mission, Your Impact Fall 2020*—reports that the organization is focusing on direct action to address and solve the issue of preterm delivery. The emphasis is

> "to educate NICU [Neonatal Intensive Care Unit] staff and empower, educate and support families"
>
> (https://www.marchofdimes.org/materials/MoD_Fall_2020_IR_FINAL.pdf).

The following list distills the data collected by the March of Dimes regarding the state of maternity care in the United States. The Arizona Department of Health is taking this information into consideration in planning to improve maternity care in the state.

## THE STATE OF OUR NATION

- **2.2 million women live in maternity care deserts–** areas with no hospital offering obstetric services and no OB providers.
- **150,000 babies are born each year in maternity care deserts.**
- **4.8 million women live in counties with limited access–**few OB providers, few hospitals with obstetric services and high percentage of women without health insurance.
- **311,000 babies are born each year in these counties–**yet less than 10 percent of obstetric providers are estimated to work in rural areas.
- **As of January, 2020, 120 rural health care facilities have closed.**

(https://www.marchofdimes.org/materials/MoD_Fall_2020_IR_FINAL.pdf)

The Foundation for Living Medicine is dedicated to improving maternal healthcare and collaborating with aligned organizations to provide relevant healthcare education for the public and healthcare providers. Maternity care deserts, a term coined by the March of Dimes, exist in Arizona and can be replaced with "maternity care rich zones" that better serve the needs of Arizona's mothers and babies.

**Abortion**

The Foundation for Living Medicine's Loving Birth Committee attempts to identify the best and most current data available on each topic it includes in its Position Paper.

> The Guttmacher Institute is a primary source for research and policy analysis on abortion in the United States. In many cases, Guttmacher's data are more comprehensive than state and federal government sources. The Institute's work examines the incidence of abortion, access to care and barriers to obtaining services, factors underlying women's decisions to terminate a pregnancy, characteristics of women who have abortions and the conditions under which women obtain them. Guttmacher also tracks abortion-related legislation and policies at the federal and state level, promoting access to abortion services and making an evidence-based case against restrictions that limit access.

Women's right to free choice, that is the right to have an abortion if desired, is threatened by the United States Supreme Court which may reverse Roe v. Wade, the constitutional right to obtain an abortion granted in 1973. The *State Facts About Abortion: Arizona*, available on the Guttmacher Institute website, reveals that approximately 862,320 abortions were performed in the United States in 2017, a rate of 13.5 abortions per 1000 women between the ages of 15 and 44. This was a decrease of 8% from the 14.6 rate in 2014.

> In 2017, 12,400 abortions were provided in Arizona, though not all abortions that occurred in Arizona were provided to state residents. . . . There was a 6% decline in abortion rate in Arizona between 2014 and 2017, from 9.8 to 9.2 abortions per 1,000 women of reproductive age. Abortions in Arizona represent 1.4% of all abortions in the United States. (guttmacher.org)

The Arizona Department of Health Services report *Abortions in Arizona: 2020 Abortion Report* dated September 21, 2021 stated that 13,097 abortions were performed in 2019. Among Arizona residents the rate of abortion was 9.4 per 1,000 women. Various demographics such as race, ethnicity, age, and education level are all implicated in abortion statistics. Interestingly, only 14.3% of the abortion recipients in 2019 were married while the remaining 85.7% were unmarried.

Arizona statues are changing, as are those across the nation. On August 8, 2017, a new Arizona reporting statute went into effect governing hospitals and facilities that provide abortions. Under this statute, facilities are required to provide the following additional information when reporting on abortions:

a) Declaration by the physician and all medical staff present during an abortion certifying under penalty of perjury that the aborted fetus/embryo was not delivered alive.

b) If the aborted fetus or embryo was delivered alive, the physician performing such abortion and additional physician(s) in attendance are required to document that all available means and medical skills were used to promote, preserve, and maintain the life of such fetus and embryo.

The Foundation for Living Medicine, specifically the Loving Birth Committee, can support both pro-choice and pro-life positions. Women should be educated to have high regard for their bodies and beliefs, to make excellent choices regarding their sexual encounters, and to be clear in their intentions to have children. When unforeseen circumstances occur, counseling should be available to help women make the best choices based on the resources available to them.

**Teen Pregnancy**

The Arizona Department of Health Services issued a *Teenage Pregnancy, Arizona, 2009-2019* report in February 2021. Key findings of this report included:

- In 2019, the pregnancy rate of 11.9 pregnancies per 1,000 females 19 years or younger was 57.5 percent lower than the rate of 28.0 per 1,000 in 2009. The teen pregnancy rate of 11.9 per 1,000 females 19 years or younger was the lowest teen pregnancy rate since at least 1983.
- It is only since 2009 that the reduction in the number of teen pregnancies was accompanied by an equally impressive decline in pregnancy rates.
- Historically, the declines in teenage pregnancy have been steeper for younger teenagers than for their older counterparts, but recently are becoming more closely aligned. The rate for teenagers 15-17 years dropped steeply by 64.2 percent from 28.5 per 1,000 in 2009 to 10.2 in 2019. The rate for older teenagers (aged 18-19 years) fell by 58.2 percent from 102.5 per 1,000 in 2009 to 42.8 per 1,000 in 2019.
- The 2019 teen pregnancy rate of 11.9 per 1,000 was based on 5,525 pregnancies occurring among 466,197 females aged 10-19 years. The number of 5,525 teen pregnancies in 2019 was 5.2 percent lower than 2018 and was the lowest number of teen pregnancies since 1984.
- From 2009 to 2019, the number of teen pregnancies declined most among American Indians (63.1 percent), followed by declines among White non-Hispanic teens (61.2 percent), and Hispanic or Latino teens (53.7 percent).

- In 2019, Hispanic or Latino females accounted for 57.7 percent of all pregnancies in this age group, followed by White non-Hispanics (24.3 percent).
- In each year from 2009 to 2019, the pregnancy rates of Hispanic or Latino females were consistently greater than the average rates for all females 19 years or younger in Arizona. In 2019, the Hispanic rate exceeded the average rate for all groups by 31.1 percent.
- If the 2019 "risk of pregnancy" for Asian teens (i.e., their pregnancy rate of 4.3 per 1,000), were to be applied to all Arizona females 19 years or younger, it would reduce the number of Arizona teen pregnancies from 5,525 to just 2,005 ((4.3 per 1,000) * 466,197).
- The first birth rate for childless teenagers has dropped 60.8 percent from 41.6 first-time births per 1,000 females 15-19 years old in 2009 to 16.3 per 1,000 in 2019.
- The repeat birth rates for teenagers who had already had a child decreased by 18.4 percent from 155.0 in 2009 to 126.4 per 1,000 females 15-19 years old in 2019, who had a previous birth.
- Unwed mothers have accounted for an increasing annual proportion of births throughout the 1990s and 2000s. In 2019, non-marital births accounted for 90.4 percent of births to mothers 19 years or younger.
- The total number of births to mothers 19 years or younger decreased by 60.5 percent from 10,952 in 2009 to 4,323 in 2019. Similarly, the proportional share of births paid for by the Arizona Health Care Cost Containment System (AHCCCS, the State's Medicaid program) decreased from 83.3 percent in 2009 to 81.4 percent in 2019. (https://pub.azdhs.gov/health-stats/report/tp/2019/teenpregnancy2019.pdf)

**It is a concern to the Loving Birth Committee members of the Foundation for Living Medicine that young adult women in Arizona (and elsewhere) are unintentionally becoming pregnant. The Loving Birth Committee is dedicated to educating young women about the consequences for themselves and their babies when an unintended pregnancy occurs. This includes programs to enhance self-esteem and raise the awareness and regard teenage girls – and all young women – have for themselves as they develop and become capable of reproduction and making all the**

**THE COST OF GIVING BIRTH**

Charlotte Cowles, writing for *The Cut* (April 23, 2021) states:

> *The cost of childbirth in the United States is significantly higher than in any other country in the world. Depending on where you live, average medical bills, with insurance, can range from about $4,500 to $11,200 for a vaginal delivery; for C-sections, it's $5,100 to $15,000. (Without insurance, costs can be much higher.) To make matters more infuriating, many parents won't know how much their delivery will cost until they get the bill afterward.*(https://www.thecut.com/2021/04/what-5-women-learned-about-the-cost-of-giving-birth.html)


Statistics provided by Statista for 2017 are displayed in the above Cost Comparison Chart. (https://www.statista.com/chart/20657/average-hospital-admission-cost-for-giving-birth/)

Another perspective is provided by Marisa Fernandez at Premier (Axios Visuals) contrasting the cost of vaginal and cesarean births with and without complicating conditions.

**Cost and length of stay for delivering a baby**

Analysis of 8.9 million U.S. maternal patients from 2008–18

| | VAGINAL | | CESAREAN | |
|---|---|---|---|---|
| DELIVERY TYPE | AVG. STAY IN DAYS | AVG. COST | AVG. STAY IN DAYS | AVG. COST |
| With severe maternal morbidity (SMM) | 3.9 | $10,720 | 5.6 | $17,927 |
| With complicating conditions | 2.9 | $6,691 | 4.2 | $10,852 |
| Without SMM or complicating conditions | 2.3 | $5,681 | 3.2 | $8,491 |

Reproduced from Premier; Chart: Axios Visuals

"Complications can nearly double the cost of delivering a baby, according an analysis from health care alliance company Premier." (https://www.axios.com/pregnant-women-hospital-bill-cost-complications-9e6f2f0e-8a0f-4506-9149-427834a2e8ef.html)

**This Is How Much It Costs to Be a New Mom in Your State**

Julia Campbell reported May 6, 2019 for the website move.org:

> The average cost for childbirth and childcare is a staggering $17,433 in the first year alone. (And by the way, the US is the most expensive country to give birth in.)" Statista reported January 30, 2020 that: "estimates of the average cost of childbirth in the U.S. vary greatly with advocacy group Childbirth Connection claiming hospitals charge just over $32,000 for a standard delivery and more than $51,000 for a c-section."

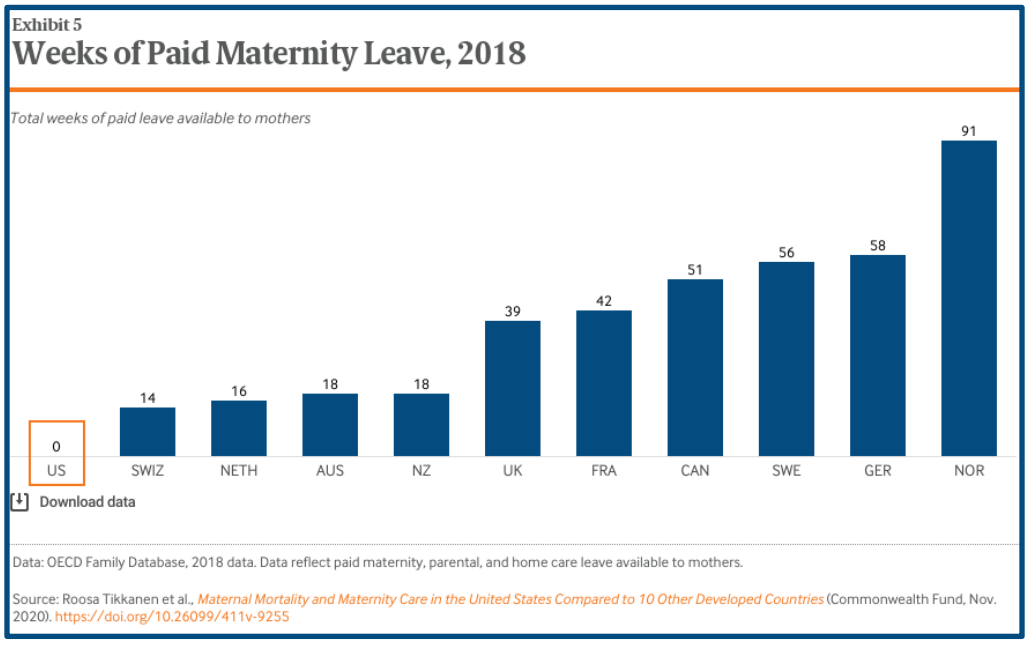
The costs in Arizona, according to Campbell, are approximately $7,416 for medical expenses to which she adds the cost of daycare for the first year of $9,437. These total $17,153 to be a first time mom. Arizona is 24th among the 50 states in this cost comparison. (https://www.move.org/cost-to-be-a-new-mom-by-state/)

**The Impact of Economics on Childbearing**

Even if insurance companies cover a significant amount of the cost, many families are left with large bills. The researcher for Statista continues:

> As well as having to cope with bills that can run to thousands of dollars, Americans live in one of the most dangerous developed nations for childbirth with around 700 mothers dying annually while infant mortality is also higher than in other developed countries. Even when things go well and the bill is low, mothers and fathers are not covered by a national paid leave policy, though several states have taken steps to address that. The harsh reality today is that a quarter of American women return to work just two weeks after giving birth.

The graph below shows the disparity the United States (0) and other developed countries in providing paid weeks of maternal leave for its new mothers.



The key findings and conclusion of the report that provided the above chart were

- Key Findings: The U.S. has the highest maternal mortality rate among developed countries. Obstetrician-gynecologists (ob-gyns) are overrepresented in its maternity care workforce relative to midwives, and there is an overall shortage of maternity care providers (both ob-gyns and midwives) relative to births. In most other countries, midwives outnumber ob-gyns by severalfold, and primary care plays a central role in the health system. Although a large share of its maternal deaths occur postbirth, the U.S. is the only country not to guarantee access to provider home visits or paid parental leave in the postpartum period.

- Conclusion: The U.S. has a relative undersupply of maternity care providers, especially midwives, and lacks comprehensive postpartum supports. (Tikkanen et al., November 18, 2020, p. 2)

Not only has the global pandemic affected women's decisions concerning whether or not to have children, so too have economics. Women may decide to limit the number of children they bear due to the demands of their careers. If their jobs created a lay-off or a loss of insurance, women may have to postpone childbearing for economic reasons. The expense of gaining an education and paying back student loans can cause many young adults to delay having children. A struggling economy itself deters marriage and childbearing.

Childbirth education, preconception healthcare, birth by Nature's design without unnecessary medical interventions and reinforced by continuous labor support followed by breastfeeding infants could save U. S. taxpayers $354.3 billion a year!

**The Loving Birth Committee of the Foundation for Living Medicine is dedicated to developing childbirth educational programs that include consideration of economic factors involved in childbearing as well as the mental and emotional stresses associated with giving birth and raising children. The Foundation is committed to helping create a paradigm shift that will not just reduce the costs of childbearing but will demonstrate an enhanced respect for pregnant women, their babies and entire families**.

## PRENATAL & PERINATAL PSYCHOLOGY

Prenatal and perinatal psychology has been a little known field of psychology. Prenatal means before birth; perinatal means around the time of birth; and psychology has become the study of what we think (mental processes), feel (emotional responses), and do (behavior/actions). "Prenatal psychology at its very core is the simple extension of commonly held and accepted developmental psychological principles into the period of birth" (Maret, 2009, p. 9).

Ann Diamond Weinstein (2016), in her book *Prenatal Development and Parents' Lived Experiences: How Early Events Shape Our Psychophysiology and Relationships*, states "the field of prenatal and perinatal psychology is the interdisciplinary study of the earliest periods in human development, including conception, time in the womb, experiences during and after birth, and experiences with caregivers and the family system through the first year following birth" (p. 5).

Pioneers in this field have shown over decades that individuals are left with imprints made much earlier in life than had been thought. In 1923 Otto Rank, a colleague of Freud, published *The Trauma of Birth* in which he stated his idea that "the normal individual never completely overcomes the birth trauma" (Rank, 1993). Rank was followed by others including Nandor Fodor who wrote *The Search for the Beloved: A Clinical Investigation of the Trauma of Birth and Prenatal Conditioning* (1949) and whose work has been acknowledged as marking "the beginning of the modern 'prenatal psychology' movement" (Maret, 2009, p. 16). Fodor observed the dependence of the unborn child upon its mother, noting that the mother provided nutrients and oxygen and processed waste products but could contribute both undesirable as well as desirable elements to the baby's development. A few years earlier Sadger (1941) wrote, "there exists certainly a memory, although an unconscious one, of embryonic days, which persists throughout life and may continuously determine an action" (p. 333). These were very progressive ideas in the 1940s, ones that are being substantiated by research conducted in the 21st century.

In 2006 researchers Massaro, Rothbaum, and Aly reported in the *Journal of Pediatric Neurology* their review of literature spanning 25 years. The investigation suggested that fetal brain development can be either positively or negatively impacted by maternal behaviors during pregnancy. The researchers reviewed articles focusing on "early neurological development and a selection of various maternal exposures and behaviors that may impact the fetal brain during this critical developmental period" (p. 1).

Prenatal and perinatal psychologists contend, "the prenatal period may be the most important and influential period of time in our lives" (Maret, 2009, p. 18). Today, research is showing that parents and even grandparents leave an indelible mark on the biology and psychology of future generations. Epigenetics (literally *above or beyond the gene*)

> is the study of the molecular mechanism by which the environment regulates gene activity. Epigenetics teaches us that life experiences not only change us but that these

> changes may be passed on to our children and grandchildren down through many generations. This process is called *trans-generational inheritance*, and has become a hotly debated area of research. (Verny, 2021, p. 1)

Epigenetics reveals that lifestyles, the environment, and behavioral choices affect gene expression. Doctor Thomas Verny, author of the 1981 classic *The Secret Life of the Unborn Child* in which he acknowledged the consciousness of babies in utero, and, most recently, *The Embodied Mind* (2021), states:

> In the last decade, genetic research has established that the DNA blueprint passed down through genes are not set in stone at birth. **Genes are not destiny.** Environmental influences, including nutrition, stress, and emotions, can modify the expression (whether they are turned on or off) of those genes without changing the genes themselves. (p. 2)

Dr. Verny continues saying:

> Epigenetic changes represent a biological response to one or more environmental factors. These factors may be positive and life affirming or negative and life threatening. Epigenetic changes serve a very important function during pregnancy by biologically preparing offspring for the environment into which they will be born. (p. 6)

Environmental influences are being exerted during prenatal development when "250,000 neurons are created every minute" (Verny, 2021, p. 29). Verny states that "the most active period of neuron proliferation takes place during the middle of the second trimester," (p. 29) when a baby's brain is growing at an accelerated pace and building the architecture that will form the basis of an individual's cognitive ability for the rest of his or her life. Impacts on fetal development can be derived from "physical environmental factors such as pollution, toxins, too much or too little food" (p. 2) and also from psycho-social factors "such as stress, anxiety, or the impact of abusive and neglectful caregiving and parental adversity" (p. 2).

Prenatal and perinatal psychology is a field of growing importance, primarily because it has previously been thought that the time spent in the womb is of little consequence. Nothing could be further from the truth. Entire lives are shaped by the experiences of conception, gestation, labor, and birth. Patterns of behavior are fashioned on the template laid down in utero. As adults discover the underlying pre- and perinatal causes of their dysfunctional beliefs, thoughts, feelings, and behaviors, change for the better—healing—can occur. It is the realm of prevention that more can be done as well. Both prevention *and* treatment of prenatal and perinatal wounds are possible as society awakens to this vitally important time of life (Highsmith, 2014).

In 1994, psychologist and co-founder of the Association of Prenatal and Perinatal Psychology and Health (APPPAH), David Chamberlain wrote an article titled *How Pre- and Perinatal Psychology Can Transform the World.* In it he addressed three major ways "to show how specific changes in 1) parenthood, 2) birthing practices, and 3) how we view ourselves (psychology) could transform the world" (p. 187). Chamberlain explains each of these in excepts from the Journal article.

> CHANGING PARETNHOOD: If parents knew what we know in prenatal psychology, it would surely change parenthood; if parenthood changed, the world would change. . . . Parents need to be aware that babies are learning all kinds of things in utero—both helpful and harmful. We must be sure the world hears this message: the womb is a school, and all babies attend. . . . Thanks to researchers in pre- and perinatal psychology, today's parents have a variety of resources to help them relate positively to their babies in the womb. . . . Parenting—which begins with prenatal life—is a thoroughly social process and plays the dominant role in each child's development. A change in the birth parents' attitudes and practices can change a child's life.
>
> CHANGING BIRTH: If all parents, midwives, nurses, and obstetricians understood that babies are fully aware and intelligent both before and during their births, it could transform the way babies are welcomed into the world. . . . Psychologists are constantly reminded by suffering patients that birth puts its stamp upon each of us, patterns are created, words imprinted, and emotions run deep. . . . As the place of birth shifted from home to hospital, and as there was a shift from women helpers to men helpers, and from natural processes to technological management, there was a change in the psychological dynamics and meanings of birth. During a hospital birth, women are often deprived of control, lose confidence, and are distracted from intuitive birthing. Too often they feel disempowered, disillusioned, and depressed during a unique experience that in previous eras led to feeling of achievement, expansiveness, and triumph. . . . When one in four [now three] births ends in surgery, it is impossible to escape the thought that women can no longer give birth.
>
> CHANGING PSYCHOLOGY: If all psychologists understood pre- and perinatal consciousness, it would change their view of human nature, mind, and memory: this would, in turn, change the way they treat everyone, including babies. Babies are teaching us who we are. Discovering them draws us into a new understanding of ourselves. The findings about them are so surprising, so unpredicted, so far beyond any previous norms, that we are forced to create a whole new paradigm to do them justice. . . . The transformation we seek is not from the top down but from the bottom up: primal change, changed foundations. We are discovering in modern times how difficult it is to change after the fact: change through government intervention, military intervention, police intervention, medical intervention, educational remediation, social rehabilitation, and psychotherapy for primal trauma—all are

> enormously expensive. A microgram of prevention could be worth a ton of cure. (Chamberlain, 1994, pp. 187-199)

Through pre- and perinatal education for parents, caregivers, and birthing professionals—transformation to healthier children and families--and a more humane culture—could be accomplished.

**The Loving Birth Committee of the Foundation for Living Medicine acknowledges prenatal and perinatal psychology policies, practices and research that clearly demonstrate that the maternal environment—the unborn child's only environment—is vital in determining a child's brain development, indeed, entire physical, mental, and emotional development. Therefore, healthcare, including psychological healthcare, for women throughout their lives, particularly during childbearing years, is endorsed and promoted. In addition, parenting education programs, natural birthing practices, and shifts in attitudes among parents and professional caregivers to promote awareness of Prenatal and Perinatal Psychology are all endorsed as ways to positively change to world of childbearing.**

## CHILDBIRTH EDUCATION

### Changing the Language of Childbirth

Childbirth education is not just for pregnant women; childbearing and reproductive health are subjects that every member of society needs to fully comprehend. One way to begin is to consider the language we use when talking about conception, pregnancy and birth. Casual conversation often refers to pregnancy as a nine month period of time, a misunderstanding about the length of an ideal pregnancy. The March of Dimes is raising awareness regarding the ideal gestation period for a baby: 280 days or 10 months! This is lunar time—women's time—10 cycles of 28 days each. Women are on lunar time from puberty until menopause. This time should be acclaimed rather than disparaged.

*Delivery* language is disempowering to women, suggesting that a woman cannot give birth but requires a doctor to bring her baby into the world (Highsmith, 2014). Suggesting that pregnancies are nine months instead of ten months diminishes the significance of women's cycles as well as the awareness that conception, gestation and birth take place within Nature's feminine rhythms. Nine months, or the equivalent of 36 weeks (9 x 4 weeks), suggests to the Little Ones growing in their mothers' wombs that they should exit early, before they may be fully developed. In taking our language for granted, we perpetuate old paradigms, tacitly agreeing with them.

**The Loving Birth Committee strongly advocates changing the language of childbirth by substituting *birthing* or *giving birth* for the word delivery, in honor of the gift women give when bringing firth new life. We acknowledge the *ten lunar months* it takes to fully develop a healthy baby, and support all efforts to prevent premature births.**

There are many childbirth education organizations available locally, regionally, nationally, and internationally. The International Childbirth Education Association (ICEA) "supports educators and health care professionals who believe in freedom to make decisions based on knowledge of alternatives in family-oriented maternity and newborn care." Lamaze Childbirth Educator Seminars are designed to assist childbirth educators increase women's self-confidence and ability to give birth. This organization promotes "the childbearing experience as a natural, safe and healthy process which profoundly affects women and their families." Like the La Leche League, it is known to promote breastfeeding as "a biological norm."

"Founded in 1918 as the Maternity Center Association, Childbirth Connection is now a core program of the National Partnership for Women and Families." This organization states:

> For nearly 100 years, we have helped develop and advance many forms of care that are now critical components of the nation's maternity care system. More recently, we

> launched a long-term program to promote evidence-based maternity care through policy and quality initiatives.

The Childbirth and Post-Partum Professional Association (CAPPA) "is an international certification organization for Doulas, Childbirth Educators and Lactation Educators."

The Association of Prenatal and Perinatal Psychology and Health (APPPAH) is

> a community of birth educators, practitioners and researchers. We offer a certificate program for prenatal and perinatal educators (the PPNE Certificate Program), along with educational programs, a peer-reviewed journal, and weekly lectures [APPPAH Live] from global experts in the field of birth psychology.

APPPAH defines Birth Psychology:

> ***Birth Psychology*** *is a field of study that explores the lifelong impact of our earliest conscious awareness beginning in the womb. Our pregnancy, birth and attachment experiences have an ongoing and cascading effect on shaping our adult lives. These foundational relationships, in turn, impact our world in a profound way.*

All these organizations, among others, provide essential childbirth educational services worldwide.

The United States government also supports maternal, infant, and child health. "Healthy People 2030 focuses on preventing pregnancy complications and maternal deaths and helping women stay healthy before, during, and after pregnancy" (https://health.gov/). Goals include reducing fetal and maternal deaths; reducing preterm deaths; reducing cesarean births among low-risk women with no prior births; increasing the proportion of pregnant women who receive early and adequate prenatal care; and increasing the proportion of women who get screened for postpartum depression.

**November 19, 2021, CNBC reported that the House passed a "bill including paid family leave. Advocates call it a 'once-in-a-generation change.'" Although the bill faces challenges from the Senate, this bill constitutes recognition of the maternity crisis, here addressing economic considerations of birthing children.**

> Improving the well-being of mothers, infants, and children is an important public health goal for the United States. Their well-being determines the health of the next generation and can help predict future health challenges for families, communities, and the health care system. . . . Pregnancy can provide an opportunity to identify existing health risks in women and to prevent future health problems for women and their children. (www.healthypeople.gov)

**Incorporating the Principles of Evidence Based Maternity Care**

*Improving Birth*, "a for-purpose organization whose mission is to inform, support, engage, and empower consumers, community leaders, and providers with the tools to improve birth," envisions "a world where birth is safe for all. That all pregnant people feel supported and receive evidence based, respectful, humane care during childbirth."

The organization's website has this statement on its first page: "**When 34% of women surveyed describe their births as traumatic, *it's time to make a change*"** (improvingbirth.org).

The site notes four major conditions that exist in maternity care today:

1. One out of three women has major abdominal surgery during birth. In spite of spending the most money on maternity care, the U.S. has the highest maternal death and injury rate in the developed world.
2. It is estimated that more than 40% of hospitals have mandatory surgery policies for women with prior cesareans contrary to national health policy and current guidelines.
3. 70% of labors are induced or sped up – often for non-medical indications, not resulting in improved infant outcomes.
4. Black women and their babies are 4X more likely to die than white women no matter their socioeconomic status.

Improving Birth lists core beliefs that determine the organizations policies and procedures:

- Currently care practices are not determined by consumers, but driven by provider preference, financial concerns, liability concerns, and deeply embedded (yet outdated) practice patterns.
- We believe that birth can be better and that it matters. It matters for the lifelong mental health and well-being of the entire family. A healthy happy mom is a healthy happy family.
- We believe that women are the ultimate decisions makers in childbirth, and they have the right to be treated with dignity and compassion.
- We believe that the U. S. maternity care system is decades behind what we know is best for mothers and babies and that there is no real motivation for the system to change.
- But most importantly, we believe that when people have the tools to inspire change, they will take action.

Thus, Improving Birth publishes an *Accountability Toolkit: A Guide to Filing a Formal Grievance after a Difficult Childbirth.* The invitation to download this handbook states:

> Suffering from a difficult or traumatic birth can be devastating, especially if you feel that it may have been unnecessary. Filing a formal complaint is a crucial step that can empower you, help in the healing process and create change for other families.

The accountability *Guide* declares:

> Mistreatment in childbirth can take many forms, from rude staff to full-blown physical assault, but they all have one thing in common: a lack of respect for the person giving birth. Some of these forms of mistreatment fall under violations of legal rights (like, being touched without your permission; having a procedure done without your knowledge or consent; being forced to do anything) and some fall under violations of ethical, professional, or human rights standards (being told you must use a bedpan or may not have food and drink; being spoken down to or ignored; being separated from your support team against your wishes).

Encouraging women to speak up, the Improving Birth website states unequivocally:

> Simply put, there is no reason for anything to change unless people are putting pressure the system to change. Our collective silence is what allows that trauma to happen again to someone else. It's time to break the silence and break the cycle.

Improving Birth also offers a downloadable guide, *Pathways to Healing: A Guide to Emotional Healing After a Difficult Childbirth.* This organization confronts birth trauma saying:

> Birth trauma is defined as an event occurring during the labor and delivery process that involves actual or threatened serious injury or death to the mother or her infant. The birthing woman experiences intense fear, helplessness, loss of control and horror. In some cases she feels stripped of her dignity and autonomy. While there are amazing, wonderful and compassionate care providers who give women accurate information so they can make informed choices and who support women in those choices, there are providers who don't. We frequently hear from people who report that their care providers gave them inaccurate information and were unsupportive of their decisions. Many also report being bullied, coerced, and abused. Many share feelings of numbness, grief, shame, guilt, or sadness, and experience nightmares or flashbacks after giving birth. The well-intentioned cheer "at least you have a healthy baby" can feel dismissive and even cruel if you are feeling shattered by your birth. We often tell ourselves, "Why am I complaining, the baby is great, who cares how it all happened." But deep down, you are hurting and it's time to change that.

Defining evidence based care:

> Evidence-based care means care that is first based on the highest-quality, most current scientific evidence, and is tailored to the individual needs of the patient. As simple a concept as that may be, most people are surprised to find that this model is not in practice in much of American childbirth. Research shows that some of the most common practices in U. S. hospitals are contrary to what evidence shows is best—and most women experience care that actually increases the chances that they or their babies will be injured or develop complications. (www.improvingbirth.org)

Rebecca Dekker, PhD, RN has developed a website, *Evidence Based Birth* which "publishes accurate, accessible and inclusive research that *empowers communities*" (evidencebasedbirth.com). According to Doctor Dekker,

> Evidence based care is a combination of best research evidence with clinical experience and patient values. In other words, evidence-based care means receiving full, accurate, and evidence-based information to help you [a pregnant woman] make decisions, being attended by an experienced care provider who pays attention to the evidence (including both research evidence and clinical experience), and having care that is tailored to your preferences and values.
> (www.evidencebasedbirth.com)

Note that the above quote is designed to bring evidence-based care into hospitals, where laboring women are referred to as a "patients." Within holistic healthcare systems, laboring women are viewed as healthy, not infirm, and are treated as capable of giving birth, therefore, requiring the quality of "patience," which abounds in birth center and home birth settings.

> *Evidence-based maternity care gives priority to care paths and practices that are effective and least invasive, with limited or no known harms whenever possible*. This framework is in the tradition enjoining practitioners to 'first, do no harm' and consider undesirable consequences of good intentions. (Sakala & Correy, 2008)

Evidence-based care is associated with the lowest rate of maternal and infant mortality, is protective of the mother's pelvic floor, has the best psychological outcomes, and highest rate of breastfed babies. Dependence on physiological principles results in the fewest number of medical interventions: the lowest rates of anesthetic use, obstetrical complications, episiotomies, instrumental deliveries, cesarean surgeries, post-operative complications, and delayed or downstream complications in future pregnancies.

**The Loving Birth Committee of the Foundation for Living Medicine endorses evidence based care and is dedicated to incorporating its principles in education programs as well into holistic birthing policies and practices.**

The Loving Birth Committee of the Foundation for Living Medicine is dedicated to providing childbirth education to the local residents of central Arizona, while embracing those from other areas who seek both childbirth education and healthcare within the Foundation for Living Medicine's Holistic Healthcare model. Education is based on the principles espoused by the ICEA, Lamaze International, the National Partnership for Women and Families, the March of Dimes, APPPAH, CAPPA, the La Leche League, and other sister organizations with whom the Foundation is aligned or co-partnered. An evidence based education and healthcare model could serve as a prototype for childbirth education programs across the nation and would be in concert with the goals and objectives of *Healthy People 2030*. The

following chart points out the numerous interventions used routinely in modern maternity care contrasted with those supported by research and are, therefore, evidence-based. These shocking statistics lend credence to what the various organizations dedicated to changing the paradigm in childbirth are doing and why.

EVIDENCE BASED Birth®

## State of Maternity Care in the U.S. (2018)

| Labor and Delivery Procedures | U.S Care | Evidence Based Care |
|---|---|---|
| Cesarean | 32.0% total[1]<br>26.5% of people full-term with a single, head-down baby and no prior Cesarean[2] | Regional Cesarean rates >10% do not prevent deaths[3]<br>< 23.9% target rate set for people full-term with a single, head-down (vertex) baby and no prior Cesarean[2]<br>Cesarean rates for planned home[4] and birth center[5] births are 5.2% and 6%, respectively |
| Vaginal Birth after Cesarean (VBAC) | 9.2% of people full-term with a single, head-down baby[2] | >18.3% target rate set for people full-term with a single, head-down baby[2]<br>Trial of labor after Cesarean delivery (TOLAC) is appropriate for many people; 60-80% will achieve VBAC[6] |
| Artificial induction of labor | 42.9% of first-time mothers,[7] for whom this may double the risk of Cesarean if the mother's cervix is unfavorable[8] | Induction should only be used for true medical indications;[9] suspected big baby is not a valid medical indication[10] |
| Augmentation with Pitocin® | 31%[11] | Routine use, without a medical indication, is not supported by evidence[12] |
| Artificial breaking of the waters | 36%[11] | Routine use, without a medical indication, is not supported by evidence[13, 14, 15] |
| Electronic fetal monitoring | 89%[11] | Routine use, without a medical indication, is not supported by evidence[13, 16] |
| Intravenous fluids | 62%[11] | When laboring people are free to drink fluids, the use of routine intravenous fluids is not supported by evidence[13, 17] |
| Fasting once labor has begun | 60% of laboring people do not drink fluids and 80% do not eat[11] | Not supported by evidence[13, 18] |
| Staying in bed once admitted to the hospital and contractions are regular | 57%[11] | Not supported by evidence[13, 19] |
| Back-lying positions during pushing and birth | 68%[11] | Laboring people should choose whatever position is most comfortable for them[13, 20, 21] |
| Water immersion during first-stage labor | 8% of laboring people used a tub and 10% used a shower[11] | This pain management strategy has many benefits and no adverse effects[13, 22] |
| Continuous labor support from a doula | 6%[11] | The use of doulas is supported by evidence[13, 23] |
| Episiotomy, among vaginal births | 17%[11] | Not supported by evidence[24] |

(https://improvingbirth.org/2012/11/state-of-maternity-care/)

## PRECONCEPTION HEALTH

It has been thought that all the eggs a woman carries develop during her gestation period in her own mother's womb, but "a new study suggests that women's ovaries continue to form new eggs throughout life" (*Contemporary OB/GYN*, 2012). Animal studies are now questioning whether or not more eggs (oocytes) may be generated during her lifetime (Johnson, Canning, Kaneko, Pru, & Tilly, 2004; Woods et al., 2012). Certainly the million or more eggs that it is estimated a woman has in her ovaries when she is born—and are possibly generated after she is born—are susceptible to the same health considerations as the rest of her anatomy. The health of a woman's reproductive life should be considered prenatally, through infancy and puberty, and into mature adulthood.

### Unintended Pregnancy

> An unintended pregnancy is either unwanted (occurring when no children are desired) or mistimed (occurring at a different time than desired). Unintended pregnancies may pose health risks to mother and baby, resulting from delayed or lack of prenatal care. Birth resulting from unintended pregnancies are associated with adverse health outcomes for mother and baby including:

- Low birthweight.
- Shorter duration of breastfeeding.
- Increased risk of postpartum depression and parental stress.
- Physical or psychological abuse.

> Public insurance programs such as Medicaid pay for 68% of unplanned births, compared with 38% of planned births. In 2010, expenditures on unintended pregnancies by Medicaid and other public programs were estimated to be $21 billion. (Americas' Health Rankings, 2021).

Although it is estimated that unintended pregnancies have declined in recent years, they still represent about 45 percent of all pregnancies in the United States (Sawhill & Guyot, 2019). It is especially important for women to maintain their health throughout their childbearing years. Preconception and prenatal health are important because many of a baby's organs develop prior to a woman becoming aware that she is pregnant and before she knows she needs prenatal care, a time when she should pay particular attention to her nutrition and lifestyle choices. For example, the human heart is the first organ to form and begins to beat just three weeks after conception (Nilsson, 2009) when many women have not yet realized they are pregnant.

According to America's Health Rankings (2021):

> nearly half of all pregnancies in the United States are unintended. The prevalence of unintended pregnancy is higher among:

- Non-Hispanic Black women, who have a prevalence more than twice that of non-Hispanic white women.
- Women with incomes less than 200% of the federal poverty level compared with women with higher incomes.
- Women without a high school education compared with women with a higher educational attainment.
- Unmarried and cohabiting women, who have a prevalence more than four times higher than married women.

Among adolescent women, those aged 19 years and younger, the rate of unintended pregnancy is particularly high. The teen pregnancy rate in Arizona was greater than 30 per 1,000 as reported by the CDC in 2018, among the highest in the nation. These young women, and their babies, are particularly vulnerable, making it even more important for adolescent women to make prudent choices regarding their health.

There are psychological consequences for children who were unwanted as well. Longitudinal studies conducted in Europe have found that children who are born as the result of unwanted pregnancies are at risk "for poor mental health in adulthood" (David, 2003). Researchers found that:

> UP [unwanted-pregnancy] young adults between the ages of 21 and 23 reported significantly less job satisfaction, more conflict with coworkers and supervisors, fewer and less satisfying relations with friends and more disappointments in love. More were dissatisfied with their mental well-being and actively sought or were in treatment. Twice as many UP participants as AP [accepted-pregnancy] had been sentenced to prison terms. (p. 227)

In the fourth and fifth waves of this longitudinal study, when participants were age 30 and 35 respectively, the "study lends support to the hypothesis that being born from an unwanted pregnancy entails an increased risk for negative psychosocial development and mental well-being" (David, 2003, p. 228).

Researchers in the Unintended Pregnancy Working Group reviewed unintended pregnancy for the Division of Reproductive Health at the CDC and findings were published in 2003 by the Guttmacher Institute. These investigators explain:

> The concept of unintended pregnancy has been essential to demographers in seeking to understand fertility, to public health practitioners in preventing unwanted childbearing and both groups in promoting a woman's ability to determine whether to have children. . . .Pregnancy intentions are increasingly viewed as encompassing affective, cognitive, cultural and contextual dimensions. Developing a more complete understanding of pregnancy intentions should advance efforts to increase contraception use, to prevent unintended pregnancies and to improve the health of women and their children. (Santelli et al., 2003)

The United States government has established family planning goals in *Healthy People 2030* designed to "prevent pregnancy complications and maternal deaths and improve women's health before, during, and after pregnancy"(https://health.gov).

Objectives of this extensive policy include:

- to reduce the proportion of unintended pregnancies
- to reduce the rate of fetal deaths at 20 or more weeks gestation
- to increase the proportion of women who get screened for postpartum depression
- to increase the proportion of pregnant women who receive early and adequate prenatal care
- to reduce preterm births
- to increase the proportion of women who had a healthy weight before pregnancy
- to reduce pregnancies in adolescents
- to reduce cesarean births among low-risk women with no prior births
- to reduce maternal deaths
- to improve pregnancy planning and prevent unintended pregnancy. (https://health.gov/healthypeople/objectives-and-data/browse-objectives/family-planning)

All this information and more is available to members of the public at the health.gov website. Under the objective of reducing unintended pregnancies, this government health plan states:

> Women who have unintended pregnancies are more likely to delay prenatal care, experience violence, and have mental health problems. In addition, children of women who have unintended pregnancies are at increased risk for mental and physical health problems — and they're more likely to struggle in school. Rates of unintended pregnancies are decreasing overall, but disparities by race/ethnicity, age, income, and education level remain. Interventions to increase the use of birth control are critical for preventing unintended pregnancies.

Change is possible when awareness of the need for change is acknowledged at all levels—personally, especially among women of reproductive age, among parents raising children, among healthcare providers, and within a government dedicated to serving its citizens in ways that promote greater health and wellbeing.

A recent program, designed and carried out in Colorado, was reported in *The New York Times* (July 5, 2015) as "a startling success." This six-year real-life experiment offered young women "free intrauterine devices and implants that prevent pregnancy for years" (Tavernise, 2015). From 2009 to 2013 the state's birthrate for teenagers "plunged by 40 percent," and the abortion rate fell by 42 percent. This effort demonstrates that when provided with birth control, young women will use long term methods to prevent unwanted, unintended pregnancies.

Encouraging the use of birth control is a preventative measure that has long-term personal consequences for young women. For those children born as the result of unintended pregnancies or those who experienced adverse circumstances during their gestation period, there are long-term psychological, as well as economic consequences, that lie dormant and may not make themselves known for years.

**Educating Fathers**

Including their partners in the process of helping mothers would then educate young men to use birth control themselves and can help prevent unintended pregnancies. Since those who are sexually active contribute to the high rate of unintended pregnancies, young men should be aware of their health and lifestyle choices as well. More research is showing that the health of the father also impacts the health of their babies. Lack of necessary vitamins, especially Vitamin C, or exposure to drugs, alcohol, or nicotine may decrease sperm function, damage the sperm, or create birth defects or cancers in their offspring. Optimal health is encouraged at least 100 days prior to conception for the sperm and the oocyte to produce a healthy zygote. The American Pregnancy Association, a non-profit "national health organization committed to promoting reproductive and pregnancy wellness through education, support, advocacy, and community awareness," provides excellent preconception health guidelines for men on their website (*Preconception Health for Men*, 2022).

*Web*MD reporter Steven Reinberg asked "Could Dad-to-Be's Health Affect Baby's Health?" This online article stated:

> The health of both mom *and* dad are key to a healthy **pregnancy** and birth, new research finds. In the study of nearly 786,000 births, researchers found that dads who weren't in the best of health were more likely to have preterm and low birth weight infants who spent time in the neonatal intensive care unit (NICU).

More than ten years ago, *The Maternal and Child Health Journal* (2011) reported:

> Efforts to reduce infant mortality in the United States have failed to incorporate paternal involvement. Research suggests that paternal involvement, which has been recognized as contributing to child development and health for many decades, is likely to affect infant mortality through the mother's well-being, primarily her access to resources and support. In spite of that, systemic barriers facing the father and the influence on his involvement in the pregnancy have received little attention. The Commission on Paternal Involvement in Pregnancy Outcomes (CPIPO) has identified the most important social barriers to paternal involvement during pregnancy and outlined a set of key policy priorities aimed at fostering paternal involvement . . . including equitable paternity leave, elimination of marriage as a tax and public assistance penalty, integration of fatherhood initiatives in MCH [Mother and Child Health] programs, support of low-income fathers through employment training,

> father inclusion in family planning services, and expansion of birth data collection to include father information. (Alio, Bond, Padilla, Heidelbaugh, Lu, & Parker, 2011)

In 2021 Kasman and associates reported in the journal *Human Reproduction*:

> To our knowledge, this is the first study to suggest that pregnancies sired by men with increasing numbers of comorbidities are at higher risk of ending in losses (i.e. ectopic pregnancy, spontaneous abortion or still- birth). When a man had increasing components of metabolic syndrome, increasing CCI or multiple chronic diseases, there was increased risk of ectopic pregnancy, miscarriage and stillbirth.

**In accordance with current research and organizations like the American Pregnancy Association, The Loving Birth Committee of The Foundation for Living Medicine is committed to integrating father initiatives into its maternal and child healthcare programs and including fathers in family planning and education services.**

**Maternalism**

In 2013 Miranda Waggoner of Princeton University published an article in the *Journal of Health Politics, Policy and Law* titled "Motherhood Preconceived: The Emergence of the Preconception Health and Health Care Initiative." Waggoner noted the paradigm shift taking place in maternal and child healthcare (MCH):

> Since the 1980s, maternal and child health experts have sought to redefine maternity care to include the period prior to pregnancy, essentially by expanding the concept of prenatal care to encompass the time before conception. In 2004, the Centers for Disease Control and Prevention endorsed and promoted this new definition when it launched the Preconception Health and Health Care Initiative. In arguing that prenatal care was often too little too late, a group of maternal and child health experts in the United States attempted to spur improvements in population health and address systemic problems in health care access and health disparities. By changing the terms of pregnancy risk and by using maternalism as a social policy strategy, the preconception health and health care paradigm promoted an ethic of anticipatory motherhood and conflated women's health with maternal health, sparking public debate about the potential social and clinical consequences of preconception care.

*Maternalism* suggests that women themselves need to be included in the dialogue addressing their preconception health. In an effort to find out what women know and believe, 499 women were asked what they knew about preconception health care and results were reported in 2006. Researchers found that 98.6 percent of the women:

> realized the importance of optimizing their health prior to a pregnancy, and realized the best time to receive information about preconception health is before conception. The vast majority of patients surveyed (95.3%) preferred to receive information about preconception health from their primary care physician. Only 39% of women could recall their physician ever discussing this topic. The population studied revealed some significant knowledge deficiencies about factors that may threaten the health of mother or fetus. (Frey & Files, 2006)

Researchers Frey and Files (2006) concluded from their study: "a majority of women do understand the importance of optimizing their health prior to conception, and look to their Primary care physician as their preferred source for such information." Nonetheless, the women surveyed were not aware of many of the risk factors associated with maternal or fetal health, which indicated that many physicians are missing the opportunity to educate women regarding preconception healthcare during their regular healthcare visits.

Waggoner, an advocate for preconception healthcare, published *The Zero Trimester* in 2017. University of California Press describes this book:

> In the United States, a healthy pregnancy is now defined well before pregnancy begins. Public health messages encourage women of reproductive age to anticipate motherhood and prepare their bodies for healthy reproduction—even when pregnancy is not on the horizon. Some experts believe that this pre-pregnancy care model will reduce risk and ensure better birth outcomes than the prenatal care model. Others believe it represents yet another attempt to control women's bodies.
>
> *The Zero Trimester* explores why the task of perfecting pregnancies now takes up a woman's entire reproductive life, from menarche to menopause. Miranda R. Waggoner shows how the zero trimester arose alongside shifts in medical and public health priorities, contentious reproductive politics, and changing realities of women's lives in the twenty-first century. Waggoner argues that the emergence of the zero trimester is not simply related to medical and health concerns; it also reflects the power of culture and social ideologies to shape both population health imperatives and women's bodily experiences. (ucpress.edu)

Highsmith (2014) has also promoted awareness of the reproductive life of women ranging from puberty to menopause, stating that women are on lunar time for their entire reproductive lives. Noting that pregnancies occur during these 28 day lunar cycles, each pregnancy should be calculated on calendars that honor these cycles. Even the March of Dimes considers 280 days—or ten months of 28 days each—to be the ideal duration of a pregnancy.

**The Loving Birth Committee endorses the recommendations of the CDC advising all women of reproductive age to adopt healthy behaviors prior to becoming pregnant including:**

- **Taking folic acid.**
- **Maintaining a healthy diet and weight.**
- **Being physically active regularly.**
- **Quitting tobacco use.**
- **Abstaining from alcohol and drugs.**
- **Talking to their health care provider about screening and proper management of chronic diseases.**
- **Visiting their health care provider at the recommended scheduled time periods for their age and discussing if or when they are considering becoming pregnant.**
- **Using effective contraception correctly and consistently if they are sexually active but wish to delay or avoid pregnancy.**

## GMOs and Birth Defects

In addition to the above guidelines, awareness is growing regarding the impact genetic modification and the use of toxins in the production of crops. These practices have consequences on the health of the population in the United States. There are admonitions to avoid genetically modified organisms (GMOs) and genetically engineered (GE) foods, which contain glyphosate, an herbicide (Roundup). This chemical is sprayed on engineered plants to resist infestation, aid in growth, promote longevity, restrict weed growth, and facilitate harvesting. Animal studies are revealing the abnormalities that result from exposure to this chemical. A high incidence of human birth defects including "spina bifida (spinal cord protrusion in the lower back), microtia (abnormal ear), cleft lip and palate, polycystic kidney, postaxial polydactyly (extra fingers or toes) and Down's Syndrome" (Ritterman, 2014) were found in regions of Argentina where aerial spraying of glyphosates occurred.

A headline posted on *The Free Thought* website declares, "Hawaii sees 10-fold increase in birth defects after becoming a GM corn testing grounds" (Syrmopoulos, 2015). The investigative journalist and author of the article, Jay Syrmopoulos, reports that severe heart defects have been observed by a pediatrician on the island of Kauai over the last five years. Residents of the area in close proximity to the fields sprayed with pesticides (which have been banned in Europe) complain of "headaches, vomiting and stinging eyes." Children say they feel "dizzy and nauseous." Syrmopoulos cites the World Health Organization (WHO) as stating that "glyphosate, sold as Roundup, the most common of the non-restricted herbicides, is 'probably carcinogenic to humans.'" Indeed, a 2015 report of over 600 pages issued by the Food and Agriculture Organization of the United Nations and the WHO Core

Assessment Group on Pesticide Residues expresses international concern for the safety of pesticide residues in food consumed by the population at large.

According to an article that appeared on the *Sustainable Pulse* website (2014): "Celiac disease, gluten intolerance and irritable bowel syndrome are on the rise worldwide, and that rise has taken place in parallel with the increased use of glyphosate (Roundup) herbicide."

The Celiac Disease Awareness Campaign of the National Institutes of Health (2014) reports: "Research suggests an association between untreated celiac disease and reproductive problems, including menstrual disorders, unexplained infertility, recurrent spontaneous abortion, intrauterine growth retardation, and low birth-weight babies." The rate of celiac disease among women who have unexplained fertility problems is higher than those who experience normal fertility. In addition,

> several studies have reported miscarriage rates to be substantially higher among women with untreated celiac disease than among healthy women, with one study finding the rate of spontaneous abortion to be nearly nine times higher. The incidence of low birth-weight babies is reportedly almost six times higher in women with untreated celiac disease. The risk of intrauterine growth retardation may be increased three-fold. Women aren't the only ones to suffer reproductive ills. A study of men with celiac disease found nearly half of them to have hypogonadism, sexual dysfunction, or poor semen quality, resulting in increased infertility. (*Celiac Disease and Reproductive Problems*, 2014).

Obstetrician and gynecologist Kay Stout at the Virginia Women's Center in Kilmarnock adamantly encourages celiac screening for those women with unexplained infertility, according to the government website cited above.

The *Examiner* (2013) reports reproductive problems including "infertility, miscarriage, birth defects, and sexual development" on their website. Glyphosates disrupt gene expression and can, therefore, adversely affect the development of fetuses, infants, and children. A major concern has been voiced by physician Jeff Ritterman (2014), cited above, who notes studies around the world that demonstrate the negative effects of exposure to glyphosates and urges policy changes to protect the public:

> The science is clear. There is only one rational response. No family should have to tolerate the risk of significant birth defects - in the United States, or in any part of the world. Roundup and other glyphosate formulations should be banned. Thus far, the voices of public health advocates in this country have been drowned out by those promoting biotechnology and its profits, regardless of the health consequences. We can't let this continue. Our health, the health of our children and the health of our environment must come first. It is the responsibility of our governmental institutions to protect humanity, not corporate profit.

Columbia University economist Douglas Almond (2011) speaks eloquently about the fetal origins hypothesis, suggesting that the months "*in utero* are one of the most critical periods in a person's life, shaping future abilities and health trajectories—and thereby the likely path of earnings" (p. 153). Almond brings to light long-term health issues that arise from in utero exposure to poor nutrition, environmental toxins, maternal exposure to infectious diseases, and more. Pointing out the vulnerability of the fetus, he suggests preventive programs that "can best help children (throughout their life course) by helping their mothers" (p. 167).

Current studies cited on the Sustainable Pulse website reveal that in 2022 Roundup and the chemical glyphosate are unmistakably linked to cancer. What is relevant to preconception and pregnancy health is that the research shows that these substances alter DNA. Each egg and sperm contain the genetic material—the DNA—that creates an embryo. Altered DNA within a mother or father will be transmitted to any child they conceive.

**The Loving Birth Committee is committed to providing preconception healthcare education that includes:**

- **Improving awareness of the influence that preconception and prenatal periods have on pregnancy outcomes and the lifelong health of children;**
- **Educating women *and* men on the importance of achieving optimal health before conceiving a child;**
- **Encouraging and educating women and men on how to plan for their reproductive lives—to decide when and if they will have children and are ready to assume the responsibilities of becoming parents;**
- **Advocating that prospective parents be supported in a wholesome, nurturing environment with appropriate educational opportunities, shelter, nutrition, healthcare, and financial security;**
- **Supporting legislation for medical coverage so women and men can receive pre-pregnancy preparation services (wellness visits) which include medical visits, counseling, and education; and**
- **Supporting policy changes that prohibit the contamination of food supplies with chemicals that are suspected or known to cause birth defects or other adverse consequences.**

## PRENATAL OPPORTUNITIES & CHALLENGES

### The Three Stages of Prenatal Development

It is during the prenatal period of time that the most accelerated development in a person's life takes place. This period is divided into three stages known as the germinal, embryonic, and fetal stages. The germinal stage begins with conception when an egg and sperm unite to form a zygote. This stage will continue for about two weeks while the fertilized egg travels down the fallopian tube to the uterus. The single cell divides and multiplies in exponential fashion forming a blastocyst and implanting in the uterine wall.

At approximately the third week, the embryonic stage of prenatal development commences. The neural tube forms and embraces a tiny heart which begins to beat at 18 to 22 days following conception. Until about eight weeks gestational age (ga), the cluster of cells is called an embryo. The cells are differentiating as they start to perform different functions. The placenta forms and the embryo develops three layers: ectoderm (outer), mesoderm (middle), and endoderm (inner). The ectoderm develops into skin and hair as well as brain and nervous system; the mesoderm forms bones and muscles; and the endoderm forms the digestive and respiratory systems. By the end of this period identifiable eyes, ears, nose, and mouth appear. Arm and leg buds emerge. The tiny embryo is now about an inch long and weighs one gram.

When most cell differentiation has taken place, the embryo has changed enough that it becomes known as a fetus, and from the ninth week will be developing into a baby that can survive outside mother's body. The ideal timeframe for this development is 280 days or 40 weeks. Sexual differential occurs during the fetal stage, which lasts the longest while systems develop and size increases. Fingernails, toenails, eyelashes, and hair all grow and babies born prematurely can actually survive, even when born at 28 weeks or less. Of course, the best place for baby to develop is in mother's womb.

Lisa Roundy, in an online course, *Prenatal States and Development: Germinal, Embryonic & Fetal Period*, describes the prenatal period as the time in which the baby is first conceived and looks for a place to live (the germinal period), begins to organize her space (embryonic period), and then puts on the finishing touches in preparation for birth (fetal period).

### Prenatal Considerations

This is a vulnerable time for the unborn baby, and therefore, a time when mothers are advised to take care of themselves, pay attention to diet and exercise, and avoid teratogens, "the broad range of conditions and substances that can increase the risk of prenatal problems and abnormalities" (Cherry, 2015). Some women, however, may feel that they are not ready for motherhood and choose to terminate their pregnancy. There appears to be consciousness in the developing baby, and some may feel that undergoing such a procedure would contradict religious or moral beliefs. The members of the Loving Birth Committee do not wish to judge any woman's choice.

Indeed, Dr. Gladys McGarey relates stories about female patients who have communicated with the baby growing within them. There are times when this communication—as the mother explains that the time is not right for this child to be born—leads to a spontaneous miscarriage. Dr. Gladys, learning from experiences with this phenomenon, stresses the need for honest conscious communication with the baby. The pregnant woman can explain to the baby why the timing is not right; that they are loved but cannot, under the circumstances, have the life they deserve; that demands on time, energy, and resources make it impossible for the woman to dedicate herself to raising a child. Dr. Gladys (2001) says,

> If there is communication, if there is prayer, if there is sought understanding of life's purpose – or at least the direction toward a life purpose – and if there is the awareness of the continuity of life and the reality of choices each person can make that are either constructive or destructive, then, when the choice is made, it will be right for that time and place. Those who have fulfilled prerequisites like these may indeed have thrown new light on abortions. (McGarey, p. 59-60)

Dr. Gladys tells of stories she has heard from women who have experienced abortions. Typically, a woman would say that the baby who had been aborted returned to her at a later time when circumstances had changed so she could give birth to another child. How does a woman know it is the same child? Sometimes there is an innate sense of connection with the child; sometimes the child literally tells her about the abortion and the return in a different body to the intended mother and family.

**Ultrasound Imaging**

Ultrasound imaging (also known as sonography) is frequently performed during pregnancies in the United States. It is estimated that at least half of all pregnant women receive one or more ultrasound scans. Although there are no studies proving that ultrasounds are either safe or cause harm to mothers or fetuses, the procedure uses high frequency sound waves, inaudible to the adult human ear. Kevin Helliker (2015), writing for the *Wall Street Journal*, states that "women in America are getting more ultrasound scans per pregnancy, on average, than experts in fetal medicine recommend."

Ultrasound imaging was originally recommended only for pregnancies which were medically at risk. However, they have now been accepted by most women as normal, if not essential. The images are considered a good way for women to connect with their unborn babies. The wisdom of the ages is inherent within all women and the ability to bond with a child in the womb seems to be a lost art with the advent of technology.

The March of Dimes website (2019) says that "ultrasounds can help your health care provider see how your baby is growing and developing," and that it "can be a special part of pregnancy—it's the first time you get to 'see' your baby!"

If a pregnant woman decides in favor of having an ultrasound scan, Helliker (2015) recommends five things that pregnant women should ask their doctors:

1. How many scans do you intend to administer throughout my pregnancy?
2. Will you pay attention to the Output Display Standard?
3. Is the operator certified to perform the anatomy scan?
4. Do you plan to use pulsed Doppler ultrasound?
5. Can I see and take home an image of my baby?

Asking how many ultrasounds may influence the doctor to reduce the number of scans to be ordered.

The Output Display Standard is an index required by federal regulators to be displayed. It shows two safety indexes, thermal and mechanical, which indicate the potential for rising temperatures and mechanical effects that could pose a risk to developing tissue and cells. A certified operator of the equipment is not required but should be requested to insure competence in performing the procedure. Doppler ultrasound, also used by midwives, is a high intensity ultrasound that the American Institute of Ultrasound noted, "requires considerable skill, and subjects the fetus to extended periods of relatively high ultrasound exposure levels" (Helliker, 2015). Finally, although snapshots of the baby in utero seem to psychologically enhance the connection between a mother and her developing baby, women can *tune in* to their babies in more natural ways that enrich the bond forming prenatally.

Dr. Manual Cassanova, psychiatrist, Professor of Anatomical Sciences and Neurobiology at the University of Louisville, and special contributor to the *Fearless Parent* website, has proclaimed:

> *Excessive, non-indicated use of ultrasound is dangerous and may be tied to the ever increasing prevalence of some neurodevelopmental conditions. Urgent government regulation is needed. Selling equipment through Amazon or eBay to non-health professionals should be prohibited. The use of ultrasound for keepsake images and other non-medical purposes should be banned.*

A website dedicated to investigating the connection between ultrasound and autism states:

> The burden of proof should fall onto those who claim prenatal ultrasound is safe rather than those who say it is unsafe. This website has no references to studies showing prenatal ultrasound to be safe for the fetus because prenatal ultrasound has never been proved safe. No such studies exist. Although most children appear to have had no adverse reactions to typical prenatal ultrasound exposure, it is possible that some fetuses are affected by factors such as genetic predisposition, operator error and machine inaccuracy. (www.ultrasound-autism.com)

Jennifer Margulis (2013), author of *The Business of Baby*, asks online "Are Ultrasounds Causing Autism in Unborn Babies?" She states, "Scientists are uncovering disturbing evidence that those sneak peeks at baby could damage a developing brain."

Dr. Sarah J. Buckley (2002), author of *Gentle Birth, Gentle Mothering*, calls ultrasounds "cause for concern." She urges women to carefully consider having routine ultrasounds, and, if choosing this procedure, to make sure the operator is skilled and the exposure to high-frequency sound waves be the shortest possible.

Dr. Chris Kresser (2011) notes:

> the new trend of non-medical fetal ultrasound (also known as 'keepsake' ultrasound), which is defined as using ultrasound to view, take a picture, or determine the sex of a fetus without a medical indication. This practice involves long exposures using 3-D and 4-D ultrasound techniques, which have not been studied adequately, and do not provide the patient with medically appropriate data. For this reason, major organizations like the American College of Obstetricians and Gynecologists, AIUM and the FDA do not support keepsake ultrasound.

Marsden Wagner (1999) proclaimed:

> Using the anti-precautionary approach and assuming the safety of any obstetric intervention is dangerous. In the 1930s, taking x-rays of pregnant women seemed harmless. A report in 1956 made a connection between fetal X-rays and later cancer in the child.

Jacques Abramowicz, writing about the *Benefits and Risks of Ultrasound in Pregnancy*, states:

> The general belief exists that diagnostic ultrasound (DUS) does not pose any risk to the pregnant patient nor to her fetus. Nonetheless, ultrasound is a form of energy and, as such, demonstrates effects in biological tissues it traverses (bioeffects).

**In agreement with doctors Cassanova, Buckley, Kresser, and Wagner, The Loving Birth Committee suggests that ultrasound scans only be performed when medically indicated. Scans should be avoided or limited until research fully establishes their safety. If the procedure is elected, it is recommended that both exposure time and intensity be minimized.**

## Amniocentesis

A diagnostic test performed together with sonography is amniocentesis. This test is done to obtain samples of the amniotic fluid which contains skin cells shed by the fetus to determine if there are abnormalities. A needle is inserted in the pregnant woman's abdomen, usually between 14 and 20 weeks gestation. David Chamberlain, psychologist and author of *Windows to the Womb*, relates instances found in the medical literature of babies twisting away from the needle or batting the needle away.

The American Pregnancy Association (APA) recognizes amniocentesis as a safe but invasive procedure although the primary risk associated with the test is miscarriage. The mother may experience pain during the procedure and the baby risks being pierced by the needle.

The APA states:

> Performing the tests and confirming the diagnosis provides you with certain opportunities:
> - Pursue potential interventions that may exist (i.e. fetal surgery for spina bifida)
> - Begin planning for a child with special needs
> - Start addressing anticipated lifestyle changes
> - Identify support groups and resources
>
> Some individuals or couples may elect not to pursue testing or additional testing for various reasons:
> - They are comfortable with the results no matter what the outcome is
> - Because of personal, moral, or religious reasons, making a decision about carrying the child to term is not an option
> - Some parents choose not to allow any testing that poses any risk of harming the developing baby

**The Loving Birth Committee concurs with the APA: It is important to discuss the risks and benefits of testing thoroughly with your healthcare provider who will help you evaluate if the benefits from the results could outweigh any risks from the procedure.**

## LABOR & BIRTH

### Birthing Venues

The majority of births (98.4 percent) in the United States today take place in hospitals. Out-of-hospital births accounted for only 1.9 percent of total births in 2020 (Osterman et al., NVSR, Final Data for 2020, 2022). Although the risk profile for out-of-hospital births is low, that is, those that take place in homes and birth centers, women tend to rely on hospitals and medical technology when giving birth.

The following chart comparing and contrasting home, birth center and hospital birthing venues is distilled from information on the *Keeper of the Home* website.

| **Features** | **Home** | **Birthing Center** | **Hospital** |
|---|---|---|---|
| Comforts of Home or Homelike | Yes | Yes | Sterile |
| Complete freedom for birthing Positions | Yes | Yes | No |
| Freedom of movement | Yes | Yes | Maybe |
| Ambiance of choice(candles, music, light) | Yes | Mostly | No |
| Restrictions on birth witnesses | No | May have some | Yes |
| Time restrictions for Labor | No | No | Yes |
| Privacy | Yes | Yes/modified | No |
| Known personnel | Yes | Yes | No |
| Personnel changes shifts | No | No | Yes |
| Can eat during labor | Yes | Yes | Usually No |
| Interventions | No | Some if needed | Yes |
| Procedure pressures | No | No | Often |
| Ultrasound | No | No | Yes |
| Fetal Monitor | No | Not usually | Yes |
| Pain management (epidural or other) | Not medical | Not medical | Yes |
| Possibility for C-section | Very low | Very Low | High (30%) |
| Showers | Maybe | Maybe | Maybe |
| Birthing Tub | Portable | Usually | Some Hospitals |
| Emergency plan for transport | Ask | Yes | Not necessary |
| Use of Midwife or CNM | Your Choice | Yes | Some Hospitals |
| Professionally Licensed Midwife | Your Choice | Possibly | No |

| | | | |
|---|---|---|---|
| May Use of Doula | Yes | Yes | Usually |
| Back-up Physician | Ask | Yes | On Floor |
| Hospital close by | Ask | Yes | |
| High chance of achieving natural birth | Yes | Yes | No |
| Skin to Skin immediately after birth | Yes | Yes | Maybe |
| Baby can stay with Mother | Yes | Yes | Maybe |
| Baby removed for tests & bathing | No | No | Yes |
| Medical help for baby when necessary (NICU) | Need transport | Need Transport | Yes |
| High risk pregnancy | No | No | Yes |
| Baby medical tests & procedures | Only required | Only required | Yes |
| Lactation support | Yes | Yes | Usually |
| Length of stay after birth | Unlimited | 6+ hours | 24+ hours |
| Cost | Least $3-5,000 | Moderate $4-7,000 | High $9-18,000+ |
| Insurance coverage | Maybe, Not usually | Maybe Private, Not Medicaid | Yes Also Medicaid |
| Out of pocket expense | Mostly | Some | Some |
| Best suited for Mothers who are | Low Risk | Low Risk | High Risk/Fearful |
| Prenatal Care & Education | Yes | Yes | By OB |
| Postpartum Follow up - physical | Yes at home | Yes | OB office |
| Postpartum Care & support | Yes | Yes | No |
| First Baby exam | Ped. Office | Ped. Office | In hospital |
| Birth Satisfaction | High | High | Questionable |

Chart prepared by Alyce-Anne Meadows, 2016.

The National Academies of Sciences, Engineering, and Medicine issued a News Release February 6, 2020 titled *No Hospital, Birth Center, or Home Birth Is Risk-Free — But Better Access to Care, Quality of Care, and Care System Integration Can Improve Safety for Women and Infants During Birth, Says Report*. The report was the result of a study conducted by the Committee on Assessing Health Outcomes by Birth Settings. "The report emphasizes that women have the right to informed choice of the setting in which they give birth, and to exercise that choice, they must have access to options." Online decision aids and risk assessment tools are recommended but, according to Maria Daly, osteopathic physician with extensive experience working in low income and minority communities, many of those women most in need of these services are unable to afford a computer to take advantage of online resources (personal communication). Birthing/pregnancy education opportunities

must be provided to all women regardless of ethnicity or economic status in venues they can access. This report states that "birthing facilities are also unevenly distributed, and many women do not have access to prenatal care, birthing, or postnatal care nearby."

## Benefits of Spontaneous Vaginal (Physiological) Birth

*The Journal of Perinatal Educatio*n (2013) included an article titled *Supporting Healthy and Normal Physiologic Childbirth: A Consensus Statement by ACNM, MANA, and NACPM* in which normal physiologic birth was succinctly defined:

> *A normal physiologic labor and birth is one that is powered by the innate human capacity of the woman and fetus.* This is more likely to be safe and healthy because there is no unnecessary intervention that disrupts normal physiologic processes. (p. 15)

The Consensus Statement further states:

> Normal physiologic childbirth
>
> - is characterized by spontaneous onset and progression of labor;
> - includes biological and psychological conditions that promote effective labor;
> - results in the vaginal birth of the infant and placenta;
> - results in physiological blood loss;
> - facilitates optimal newborn transition through skin-to-skin contact and keeping the mother and infant together during the postpartum period;
> - and supports early initiation of breastfeeding. (p. 15)

The following factors disrupt normal physiologic childbirth:

> - induction or augmentation of labor;
> - an unsupportive environment, i.e., bright lights, cold room, lack of privacy, multiple providers, lack of supportive companions, etc.;
> - time constraints, including those driven by institutional policy and/or staffing;
> - nutritional deprivation, e.g., food and drink; opiates, regional analgesia, or general anesthesia;
> - episiotomy;
> - operative vaginal (vacuum, forceps) or abdominal (cesarean) birth;
> - immediate cord clamping;
> - separation of mother and infant;
> - and/or any situation in which the mother feels threatened or unsupported. (p. 15)

**In accordance with the American College of Nurse-Midwives (ACNM), the Midwives Alliance of North America (MANA), and the National Association of Certified Professional Midwives (NACPM) Consensus Statement, The Loving Birth Committee is committed to providing the best setting and environment for women to give birth normally, i.e. physiologically, including:**

- **Access to midwifery care for each woman;**
- **Adequate time for shared decision making with freedom from coercion;**
- **No inductions or augmentations of labor without an evidence-based clinical indication;**
- **Encouragement of nourishment (food and drink) during labor as the woman desires;**
- **Freedom of movement in labor and the woman's choice of birth position;**
- **Intermittent auscultation of heart tones during labor unless continuous electronic monitoring is clinically indicated;**
- **Maternity care providers skilled in non-pharmacologic methods for coping with labor pain for all women;**
- **Care that supports each woman's comfort, dignity, and privacy; and respect for each woman's cultural needs.**

In an optimum physiological birth:

- The woman is fully informed of all birthing options and procedures prior to birth. She is the main decision-maker.
- The woman and family have continuity of care and continuous support during the birthing process.
- The woman is free to eat, drink, and move during labor. She is free to choose the position that will work best for her and is in an environment where she is comfortable.
- The woman feels empowered through the process to then become a parent.
- The mother and baby are enabled to be alert, thus promoting early bonding and attachment.
- The mother and baby are viewed as a pair/couple.

**The Loving Birth Committee promotes physiological birth as the optimum manner for women with low risk pregnancies to give birth.**

## The Hormones of Birth

Vaginal, i.e. normal, physiologic births have many benefits compared to medicalized births or cesarean surgeries. They are associated with a lower rate of morbidity, a decreased chance for post-partum infection, and a shorter hospital stay. In vaginal birth, hormones released within the birthing mother stimulate placental blood flow and prepare and protect the body. Hormones are especially important in triggering the protective and loving instinct (Buckley, 2005; Odent, 2001).

*Healthy Birth 101* (Discover Midwives and previously Our Moment of Truth) is an online program promoting midwifery and physiologic birth during which "labor starts and progresses on its own" (March 10, 2017) and emphasizes that hormones are released that help the birthing woman "labor effectively, navigate through discomfort" as well as bond with her baby.

Dr. Buckley (2015) observes in her Executive Summary of *Hormonal Physiology of Childbearing* published in the *Journal of Perinatal Education*:

> Core hormonal physiology principles reveal profound interconnections between mothers and babies, among hormone systems, and from pregnancy through to the postpartum and newborn periods. Overall, consistent and coherent evidence from physiologic understandings and human and animal studies finds that the innate hormonal physiology od childbearing has significant benefits for mothers and babies. Such hormonally-mediated benefits may extend into the future through optimizations of breastfeeding and maternal-infant attachment. A growing body of research finds that common maternity care interventions may disturb hormonal processes, reduce their benefits, and create new challenges. (Buckley, 2015, p. 145)

When not impeded by medical interventions, hormones secreted within the mother's body help the birthing process proceed at its own pace. In January 2015, Childbirth Connection, a program of the National Partnership for Women & Families, published *Hormonal Physiology of Childbearing: Evidence and Implications for Women, Babies, and Maternity Care*. The comprehensive and well researched report's preface states:

> there is an urgent need to incorporate the hormonal physiology of childbearing into important newer frameworks [of maternity care services] and understandings that recognize the perinatal period as a window of heightened sensitivity, with potential longer-term impacts from early life experiences. These frameworks include developmental origins of health and disease (DOHaD), lifecourse health development (LCHD), and epi- genetic models. (p . vii)

During late pregnancy and early labor there is a rise in both the hormones and receptor systems, which prepare mother and baby for efficient labor, birth, breastfeeding, and bonding. These steps lay the foundation for the newborn to develop a secure attachment style that will endure into adulthood. During active labor hormones stimulate contractions

and prevent hemorrhage. Mother's breasts are prepared to provide nourishment for her newborn. The physiologic birth process followed by skin-to-skin contact combine to release the hormones necessary for maternal-infant bonding and breastfeeding.

The major hormones released during the childbearing process are oxytocin, beta endorphins, epinephrine-norepinephrine (catecholamines), and prolactin. Each plays a vital role in the birthing process, creating a cascade of benefits to both the mother and newborn child. The sequential release of these hormones is interrupted when medical interventions such as Pitocin and epidurals are introduced. National Vital Statistics Reports determined that 61 percent of birthing mothers in 27 states received epidurals in the year 2008 (Osterman & Martin, 2011).

Subsequently, a Stanford study "examining national epidural rates . . . [found] "unexpectedly high rates of all pregnant women who get the spinal anesthesia to relieve pain during childbirth" (White, 2018). This study was designed to "provide more scientific evidence about epidurals to help obese women make the often difficult choice about whether an what type of anesthesia to use during birth," but the researchers were shocked to discover that "seventy-one percent of pregnant women get epidurals or other spinal anesthesia," a ten percent increase from 2008. This suggests that 71% of women giving birth are not receiving the benefits of naturally produced hormones during labor and birth—hormones that reduce pain, increase bonding, stimulate breastfeeding and calm fears.

**The Loving Birth Committee is dedicated to reducing the use of epidurals and other medications during childbirth and to promoting the natural processes of birth that allow the natural flow of hormones to ease birth, empower mothers, enhance bonding, and give newborns the most positive transition into the arms of their mothers.**

### The Sacred Hour and Skin-to-Skin Contact

The first hour after a baby is born is considered so important that is referred to as the "sacred hour" (Phillips, 2011), the golden hour" (Stoddard, 2013), and the magical hour (Healthy Children Project, 2011). Dr. Raylene Phillips (2013), neonatologist at Loma Linda University School of Medicine, states:

> The manner in which a new baby is welcomed into the world during the first hours after birth may have short- and long-term consequences. There is good evidence that normal, term newborns who are placed skin to skin with their mothers immediately after birth make the transition from fetal to newborn life with greater respiratory, temperature, and glucose stability and significantly less crying indicating decreased stress. Mothers who hold their newborns skin to skin afterbirth have increased maternal behaviors, show more confidence in caring for their babies and breastfeed for longer durations. Being skin to skin with mother protects the newborn from the

> well-documented negative effect of separation, supports optimal brain development and facilitates attachment, which promotes the infant's self-regulation over time. Normal babies are born with the instinctive skill and motivation to breastfeed and are able to find the breast and self-attach without assistance when skin-to-skin. When the newborn is placed skin to skin with the mother, nine observable behaviors can be seen that lead to the first breastfeeding, usually within the first hour after birth. Hospital protocols can be modified to support uninterrupted skin-to-skin contact immediately after birth for both vaginal and cesarean births. The first hour of life outside the womb is a special time when a baby meets his or her parents for the first time and a family is formed. This is a once-in-a-lifetime experience and should not be interrupted unless the baby or mother is unstable and requires medical resuscitation. It is a "sacred" time that should be honored, cherished and protected whenever possible.

Skin-to-skin contact, also known as Kangaroo Care, is an internationally recognized way to naturally care for a newborn infant, placing it on mother's body without clothing to separate them. Dr. Nils Bergman (2013) points out in his on-line article, *Skin-to-skin contact is key to perinatal neuroscience*, the neuroscience implications for babies who are held in such intimate contact with their mothers:

> The SKIN-TO-SKIN CONTACT is very specifically firing two key capacities in the newborn brain. The first is the emotional brain: the amygdala is the sorting station for all emotions, and will appropriately decide what situations are safe to approach, and what are better avoided. This is EMOTIONAL INTELLIGENCE. But if the approach pathway is not fired, the avoid orientation will predominate. Adults with predominant "avoid activity" are more at risk for depression, and have poorer resilience, both physiologically and psychologically. The second capacity is SOCIAL INTELLIGENCE. The amygdala (the emotional sorting station) has inputs from a "face coding" area (fusiform gyrus), and a "am I safe here" decision centre (peri aquiductal gray), and the subsequent capacity to choose wisely between approach and avoid is core to SOCIAL INTELLIGENCE. (In autism, the fusiform and the approach centre are the most commonly affected).

Dr. Bergman, the leading international expert and proponent of skin-to-skin care, recommends this method of care to mothers of premature babies, and expands the recommendation to all mothers and their newborn babies. He is also an advocate of co-sleeping (bed-sharing), a controversial practice, but lists recommendations on his website for safely engaging in co-sleeping with baby.

**The Loving Birth Committee concurs with proponents of the Sacred Hour, and advocates keeping mother and newborn together in the hour immediately following birth to enhance bonding and attachment, to boost babies' development of both emotional and social intelligence, and to contribute to the formation of a loving family with baby in arms.**

## Bonding and the Foundation for Secure Attachment

The Sacred Hour, known also as the magical and golden hour, promotes the establishment of the bond between a mother and her newborn child. It is in these moments that the eye-to-eye contact between them, called the maternal-infant gaze, stimulates the flow of oxytocin, the love hormone, to physiologically create a loving and lasting bond. Each reflects the love they see in each other's eyes. The baby evokes the gaze from mother—if mother falls in love with baby, she will provide the care so essential for a helpless human infant. This is part of Mother Nature's grand design (Highsmith, 2014).

Klaus, Kennell, and Klaus (1995), authorities on the subject of bonding, define a bond as the tie from the adult to the child while attachment refers to the tie from the child to the adult. This is an important distinction. Bonding is falling in love with baby, and bonds can endure. The attachment style(s) the child develops with each caregiver forms a template for all relationships that will develop throughout that child's life. Attachment can be secure, insecure, or disorganized. Security depends on the mother or primary caregiver providing responsive, appropriate care when the child needs it (Siegel, 1999). Only half of the population is estimated to be securely attached. Although insecure attachment is not a diagnosis, it is a pattern of behavior associated with security or insecurity within relationships. The patterns of ambivalence or avoidance are created early—in the womb, at birth, and during childhood years. Bonding and attachment—secure or insecure—begin in the womb.

A prenatal bonding program has been developed in Germany and is currently being taught internationally by psychiatrist and psychoanalyst Gerhard Schroth. More than three thousand women have experienced Prenatal Bonding since 1995. Among this population, there have been no cases of postpartum depression and the number of preterm births and Cesarean sections has been significantly reduced. Pregnant women appear to be able to gently resolve any trauma associated with past issues of sexual abuse during 20 weekly sessions. After birth, babies, too, appear to benefit as they demonstrate more curiosity, emotional stability, and social maturity (Schroth, 2009).

**The Loving Birth Committee encourages prenatal bonding and is dedicated to honoring the Sacred Hour, deterring the separation of mother and newborn during those first valuable moments following birth (unless life threatening emergencies dictate otherwise).**

## Delayed Cord Clamping

Immediate cord clamping is a practice that has been performed routinely for decades without evidence of benefit. Placental transfer of oxygenated blood, nutrients, and stem cells continues for several minutes after birth. Physiologic principles suggest that the optimal transition to life outside the womb depends on this transfer. Researchers have

found higher newborn iron levels at birth correlate with less likelihood of childhood anemia, a condition with long-term neurologic consequences. Bruckner, Katheria, and Schmolzer, writing for Seminars in Fetal and Neonatal Medicine (February 24, 2021), note that "delayed cord clamping lowers the incidence of anemia and iron deficiency and improves neurodevelopment" in healthy term infants.

Brazilian researchers recommend:

> Tackling anemia should involve creating policies aimed at reducing social inequalities, improving the quality of antenatal care, as well as implementing a criterion of delayed clamping of the umbilical cord within the guidelines of labor. (Oliveria et al., 2014)

Some pediatricians recommend iron supplementation for breastfed infants, but it may be that by providing the full complement of iron, delayed cord clamping is the only iron supplement healthy babies need. As an added bonus, delayed cord clamping can keep babies in their mother's arms, the ideal place to regulate their temperature and initiate bonding and breastfeeding. Delaying cord clamping may be an important reason to justify keeping mothers and babies together after birth.

Miranda Hester (March 24, 2022) reports that "evidence indicates that a delay in umbilical cord clamping leads to better outcomes for infants." Even more, she reports, "investigators concluded that in infants who were born very preterm that a delay of at least 60 seconds following delivery was tied to a risk reduction of death or major disability at age 2 years by 17%." The mother's placenta provides oxygenated blood and nutrients to her newborn. It would seem logical to delay the termination of this valuable connection to allow a newborn to receive the maximum value possible whether the baby is full term or preterm. Many midwives practice allowing the cord to stop pulsing before severing that precious connection.

Mary Jackson (March 14, 2016), nurse, licensed midwife and craniosacral therapist, recommends that the cord *and* placenta remain attached until babies have latched on to the breast and know where their next source of nourishment is. Jackson is a midwife with extensive experience and specializes in "supported attachment," a practice she and Ray Castellino developed to allow newborns to gently adjust to their new environment at birth. The process is one that encourages babies to tell their stories (express themselves) with their sounds and movements as they journey to the breast and latch on. Placed on mother's belly and then held in her arms the newborn can reap the benefits of skin-to-skin contact and immediate breastfeeding.

The American College of Obstetricians and Gynecologists (ACOG) answers the question "what is delayed cord clamping" on their website updated in 2022.

Delayed cord clamping is the practice of waiting a short time before cutting the umbilical cord after birth. This allows blood from the umbilical cord, along with extra iron, stem cells, and antibodies, to flow back into the baby.

Delayed cord clamping appears to be helpful for both full-term and preterm babies. For this reason, the American College of Obstetricians and Gynecologists (ACOG) recommends delayed cord clamping for at least 30 to 60 seconds after birth for most babies.

**Relaxation, Meditation, and Self-Hypnosis for Labor and Birth**

A number of birth education programs encourage meditation and relaxation during labor. For example, *Calm Birth: A New Method for Conscious Childbirth* (Newman, 2005) promotes meditation in place of medication in the realm of childbearing. *Calm Birth* methods, most importantly, preserve a birthing mother's awareness rather than suppressing it with drugs. According to Newman, "when pregnant women practice meditation an empowering sense of safety and wholeness is generated from the inside" (p. xxiii). Further, "new applications of meditation practices empower women to adhere to and advance the principles of natural childbirth" (p. 8).

*HypnoBirthing*, a program developed by Marie Mongan, helps "women reclaim their right to call upon their natural birthing instincts, and with the total involvement of their partners . . . [create] . . . one of the most memorable experiences of their lives" (Mongan, 2005, p. 18). The program teaches women to deeply relax during labor, promoting the natural flow of hormones that ease giving birth. It utilizes exercises including "positive thinking, relaxation, visualization, breathing, and physical preparation" (*HypnoBirthing*, back cover) to reduce fear, pain, and tension. It guides women to discover their inner resources to safely and gently give birth.

**The Loving Birth Committee encourages pregnant women to explore and enroll in educational programs like *Calm Birth* and *Hypnobirthing* to enhance their abilities to give birth naturally, bond with their babies during pregnancy and at birth, and increase their awareness throughout the miraculous process of childbearing.**

**Placental Encapsulation**

According to the American Pregnancy Association, "placental encapsulation is the practice of ingesting the placenta after it has been steamed, dehydrated, ground, and placed into pills. Traditionally, this is taken by the mother and is believed to impart numerous health benefits" (*Placenta Encapsulation*, americanpregnancy.org). Although there is limited scientific research supporting this practice, one study found that 48 women who were

lactating insufficiently increased milk production within four days when they took powdered placenta (Bensky, 1997).

The leading researcher in the field of placentophagia (ingesting afterbirth), Professor Emeritus Mark Kristal at the University at Buffalo, notes that this behavior is normal in nonhuman mammalian mothers. It has a number of benefits including increasing maternal caretaking behaviors and diminishing pain. Kristal and associates (2012) asks "Why don't humans engage in placentophagia as a biological imperative?" (p. 177). He concludes "the quest for medicinal or behavioral benefits of components of afterbirth is important, for the same reasons that the quest for plant-based medicinal substances is important" (p. 192). Indeed, if substances in the placenta and amniotic fluid are natural pain relievers and bonding enhancers, research should logically be conducted to determine if a woman's own biological system produces the very medicine both she and her baby need after birth as well as before.

**The Microbiome and the Fetus**
(This section was contributed by Dr. Janet Teodori, Pediatric Neurologist/Epileptologist)

Microbes, which include bacteria, viruses, and fungi, play a critical role in our health and, indeed, our survival. The microbiome is the term for the microbes which are alive and happily co-existing in and on our bodies. Our microbiome is vast – 100 trillion microbes – exceeding our cellular number by a factor of ten, and their genes exceed our genes by a factor of 30. Microbes perform many functions which we depend on, and an unhealthy microbiome has been linked to many somatic and neuropsychiatric conditions, such as asthma, inflammatory bowel disease, allergies, obesity, diabetes, autism, schizophrenia and depression.

The timing and method of development of the living microbiome in a person still appears to be in debate. Some believe this process is initiated in the womb where the gut and placenta particularly may be colonized by beneficial microbes. Others still argue that it in only during birth that the fetus first becomes exposed to living microbes (Shin et al., 2015). An article published in the *Journal of the Association of Prenatal and Perinatal Psychology and Health* (Teodori, 2016) summarized the research at the time. Key, at that time, was the research by Aagaard (2014) demonstrating microbes in fetal placental tissue and in the gut during newborn surgeries. These data and others were very convincing to many, including Francis Collins of the National Institutes of Health who proposed that the placenta was "not sterile after all," (Collins, 2014).

However, from 2016 to the present, these studies were criticized in many ways. The techniques, such as 16S r RNA gene amplicon sequencing used to demonstrate the presence of microbes by detecting microbial genetic material, were criticized over issues of potential artifact and contamination. Furthermore, the presence of microbial genetic fragments did not prove active microbial life, and active cultures were also criticized over contamination and other issues. With the data distrusted, the conclusions of womb non-sterility were discounted and the debate continued. A published debate between Rackaityte (2021) and de

Goffau (2021) centers on issues of how to determine the presence and viability of a fetal microbiome. The journal *Microbiome* (2021) has highlighted this debate, publishing articles and rebuttals from various research scientists, as well as a background summary and editorial of its own.

Dr. Dominguez-Bello (2019) continues to author articles in support of a sterile womb. She discusses the development of the immune system and recognizes the presence of DNA bacterial fragments present in fetal tissue, but disavows the claim that these suggest the presence of a living microbiome in the fetus, stating that rare "intruder bacteria" (Dominguez-Bello et al., 2019, p. 1109) cultured in experiments do not constitute a microbiome. She strongly argues that the first viable microbes in the fetus are contacted in the birth process, vaginal birth being far superior to cesarean section for acquiring a beneficial microbiome. She does, however, acknowledge that "little is known about mechanisms and functions of transplacental trafficking of free nucleic acids [i.e. DNA and RNA fragments] " (p. 1109). This leaves the door open for more research about the transmission of maternal microbiome information to the fetus.

The editorial article published in *Microbiome* (2020) asks the question: "Are we looking at the prenatal environment through the right lens?" Specifically, should we be looking at "host response" (p. 2) in assessing the presence of microbes in the fetus. "Host response" (p. 2) is a term that refers to the immune reaction to the microbe—the host knowing whether a microbe is friend or foe? Infants must know at birth which bacteria are friendly and needed to safely colonize the infant gut, for example, and which bacteria are adversarial (pathogenic) and need to be destroyed lest they infect the fetus. This would represent a fundamental advantage for microbial exposure prior to delivery. How would a newborn's immune system distinguish friendly versus pathogenic microbes if not first instructed by the mother's microbiome in the womb? Does it make sense for survival that a baby would be born into the world without its own immunologic defense system, and without knowledge of which bacteria will be helpful and which are dangerous? We may be asking the wrong question when we ask, "Is the womb sterile?" Perhaps *sterility* is not the key issue: *education of the host immune system* is. In proffering a philosophical perspective to this debate, Walter and Hornef (2021) state that their comments about sterility do not contradict "fetal exposure to microbial constituents and metabolites for which we think there is strong evidence" (p. 2).

How might the immune system be educated during fetal life? There are a number of interesting studies addressing this question, but, as Dominguez-Bello and her colleagues (2019) report, very little is definitively known. More recently we have learned through studies on CRISPR that the immune system may utilize fragments of RNA from invasive viruses to build a host immune response against that virus. Theoretically, this general mechanism of using gene fragments from microbes to teach the immune system to distinguish friend from foe may play a role in fetal development of the ability to preserve or fight microbes appropriately.

The debate over the fetal microbiome remains an ongoing issue of interest and study. Regardless of the final determination of timing and development, a healthy microbiome is vital to the life of the baby. Promoting a healthy microbiome is a key aspect of maternal

health before, during and after pregnancy. The microbes a mother carries are transmitted to her baby in a variety of ways, and they will have a life-long impact on the baby. We need to encourage women toward healthy eating and life-practices which support a beneficial microbial population for both themselves and their babies. These efforts need to begin before pregnancy to be of maximum benefit. Early access to expectant mothers and women anticipating pregnancy will crucial to accomplishing these objectives.

**The Loving Birth Committee encourage all women to become aware of the subject of microbiomes in order to promote their own healthy immune systems and to make choices that will help their unborn and newborn babies develop healthy immune systems as well.**

## Breech Birth

A baby that is not positioned head-down is considered to be in breech position, one that presents feet, knees, or buttocks (breech means buttocks) to the birth canal (Goer, 1999). According to Goer, this used to be considered a variation that could be encountered matter-of-factly by obstetricians, however, about 45 years ago when Cesarean sections were thought to solve all birthing problems, breech position became a mandate for surgical delivery.

Fifteen years ago a study of 2083 women in 121 centers in 26 countries determined that "planned caesarean section is better than planned vaginal birth for the term fetus in the breech presentation; serious maternal complications are similar between the groups" (Hannah et al., 2000). In a 2007 issue of *Birth*, Dr. Andrew Kotaska countered:

> In 2001 the term breech trial led the American and Royal Colleges of Obstetricians and Gynecologists (ACOG and RCOG) to issue black-and-white "cookbook" guidelines condemning vaginal breech birth. Since then, women have been coerced, both overtly and covertly, into having Cesarean sections. New evidence and a better understanding of the limitations of the term breech trial have led both the ACOG and RCOG to replace their 2001 guidelines with new ones that re-open the door for planned vaginal breech birth, acknowledge the evolving understanding of the nature of evidence, and emphasize the importance of external validity in the evaluation of complex phenomena. Parturient choice and clinical judgment are re-introduced.

The American College of Obstetricians and Gynecologists (ACOG) did modify their recommendations for breech births noting that the "mode of delivery should depend on the experience of the health care provider," although Cesarean sections would probably be preferred by most physicians because "of the diminishing expertise in vaginal breech delivery" (ACOG Committee on Obstetric Practice, 2006).

In *Optimal Care in Childbirth: The Case for a Physiologic Approach* (2012), researchers and authors Henci Goer and Amy Romano state, "the optimal arrangement for breech, VBAC, and twin births is almost certainly home-style midwifery care in a hospital setting with the active collaboration and immediate availability of physicians. This, however, is almost never an option" (p. 506).

The statement made in 2022 by the American College of Obstetricians and Gynecologists (ACOG) substantiates Goer and Romano's contention:

> Most fetuses that are breech are born by planned cesarean delivery. A planned vaginal birth of a single breech fetus may be considered in some situations. Both vaginal birth and cesarean birth carry certain risks when a fetus is breech. However, the risk of complications is higher with a planned vaginal delivery than with a planned cesarean delivery.

**Vaginal Birth after Cesarean Section (VBAC)**

Vaginal birth after Cesarean section (VBAC), in most areas of the country, is discouraged or disallowed. In fact, worldwide "the primary obstetric indication for Cesarean section is previous Cesarean section" (Kaplanoglu, 2014). Childbirth Connection, an advocacy group for women and families, reports that, while the C-section rate has modestly declined, the rate of VBAC has fallen as well, meaning fewer women are giving birth vaginally after having had a previous surgical delivery.

The Childbirth Connection website addresses *VBAC or Repeat C-Section* telling women:

> Unfortunately, a growing number of hospitals and doctors do not allow you to weigh the facts, consider your preferences and choose for yourself whether to plan a VBAC or repeat cesarean. They may refuse because they fear lawsuits, because they face restrictions from insurance companies, because they prefer the convenience of scheduled deliveries, or other reasons, but the effect is the same: if you wish to use their services, you must accept surgical delivery. Your best approach is to become informed and clarify your goals well in advance and then seek care that is in line with your preferences and birth plan.

A study of 100 women found that 85% of the cases were able to have successful vaginal births following previous Cesarean sections. Only 15% required an emergency C-section (Bangal et al., 2013). Nonetheless, the adage "once a C-section, always a C-section" has become reality for most women who have had surgical deliveries.

ACOG's 2022 website notes "A successful VBAC has the following benefits:

- No abdominal surgery
- Shorter recovery period

- Lower risk of infection
- Less blood loss

ACOG (2022) recommends:

> VBAC should take place in a hospital that can manage situations that threaten the life of the woman or her fetus. Some hospitals may not offer VBAC because hospital staff do not feel they can provide this type of emergency care. You and your ob-gyn or other health care professional should consider the resources available at the hospital you have chosen.

**The Loving Birth Committee suggests that women become informed of their options early and, particularly, to determine if options are available by care providers they expect to utilize. Procedures for dealing with breech positions and vaginal births after previous cesarean surgeries differ and the Committee endorses those that are the least invasive while providing the greatest safety for both mother and baby.**

## Waterbirth

Giving birth in water is a relatively recent procedure. Some women choose to labor in a tub of warm water but exit to give birth. It is thought that the water helps relieve the effects of gravity on the mother and provide a naturally wet environment for the baby who has been in amniotic for months. Water birth is considered by its advocates to be safe, soothing, and relaxing.

The benefits of water birth are enumerated on the American Pregnancy (2021) website:

Benefits for Mother:

- Warm water is soothing, comforting, relaxing.
- In the later stages of labor, the water has been shown to increase the woman's energy.
- The effect of buoyancy lessens a mother's body weight, allowing free movement and new positioning.
- Buoyancy promotes more efficient uterine contractions and improved blood circulation resulting in better oxygenation of the uterine muscles, less pain for the mother, and more oxygen for the baby.
- Immersion in water often helps lower high blood pressure caused by anxiety.
- The water seems to reduce stress-related hormones, allowing the mother's body to produce endorphins which serve as pain-inhibitors.
- Water causes the perineum to become more elastic and relaxed, reducing the incidence and severity of tearing and the need for an episiotomy and stitches.

- As the laboring woman relaxes physically, she is able to relax mentally with greater ability to focus on the birth process.
- Since the water provides a greater sense of privacy, it can reduce inhibitions, anxiety, and fears.

Benefits for Baby:

- Provides an environment similar to the amniotic sac.
- Eases the stress of birth, thus increasing reassurance and sense of security.

The risks of giving birth in water are speculative as the rates of perinatal mortality between waterbirths and conventional births are similar. Waterbirth activist Barbara Harper states:

> Research has verified many aspects of water labor and waterbirth: Water facilitates mobility and enables the mother to assume any position which is comfortable for labor and birth; speeds up labor; reduces blood pressure; gives mother more feelings of control; provides significant pain relief; promotes relaxation; conserves her energy; reduces the need for drugs and interventions; gives mother a private protected space; reduces perineal trauma and eliminates episiotomies; reduces cesarean section rates; is highly rated by mothers . . . [and] . . . experienced providers; encourages an easier birth for mother and a gentler welcome for baby. (waterbirth.org)

Harper further explains:

> When a woman in labor relaxes in a warm deep bath, free from gravity's pull on her body, with sensory stimulation reduced, her body is less likely to secrete stress-related hormones. This allows her body to produce the pain inhibitors-endorphins that complement labor. Noradrenaline and catecholamines, the hormones that are released during stress, actually raise the blood pressure and can inhibit or slow labor. A laboring woman who is able to relax physically, is able to relax mentally as well. Many women, midwives, and doctors acknowledge the analgesic effect of water. Thousands of these mothers state they would never be able to consider laboring without water again. (waterbirth.org)

**Although research is limited, the Loving Birth Committee can recommend laboring in water, however, careful consideration should be given to giving birth in the water. It is possible that the microbiome being established on the babies' skin could be washed off or weakened by birthing in water. Research is needed in this area. Tubs for labor and birth are available in birthing centers and portable tubs are carried by home birth midwives. Ultimately, the decision to give birth in water is one reached by a pregnant woman and her birthing healthcare provider.**

Women in America today have many choices when it comes to considering where and with whom they will give birth. Many are not aware of the array of choices available to them and could benefit from education in the realm of childbirth.

Master's candidate Jenae Franklin (2014), a student at Pitzer College, conducted research and produced a master's thesis titled *A Mother's Paradox: Choosing a Birthing Method in the 21st Century*. Noting the dominance of the medical model in society, Franklin concluded:

> Overall, with increased public awareness of the benefits of midwifery services, the philosophy of the holistic model, the consequences of rising cesarean rates, and the expansions of the Affordable Care Act, the United States is going to begin to see various changes in the practices of obstetric care moving toward the direction of midwives. Given that other countries have lower costs and better outcomes, it would be a positive thing for the U. S. to start changing their views.

**The Loving Birth Committee is dedicated to providing education that expands women's awareness and understanding of their childbirth choices.**

## BIRTH INTERVENTIONS

Interventions in the realm of childbearing refer to those practices that disturb a normal, physiologic birth. The following discussion describes many of those practices, most of which are thought to be unnecessary by holistic health practitioners, midwives, and doulas.

> Interventions have become commonplace if not routine. Used appropriately, they can be life-saving procedures. Routine use, without valid indications, can transform childbirth from a normal physiologic process and family life event into a medical or surgical procedure. Every intervention presents the possibility of untoward effects and additional risks that engender the need for more interventions with their own inherent risks. Unintended consequences to intrapartum interventions make it imperative that nurse educators work with other professionals to promote natural childbirth processes and advocate for policies that focus on ensuring informed consent and alternative choices. Interdisciplinary collaboration can ensure that intrapartum caregivers "first do no harm." (Jansen, Gibson, Bowles, & Leach, 2013, p. 83)

Other credible sources also question the use of routine birth interventions:

> Findings from a two-year review of the science behind maternity care indicate that the common and costly use of many routine birth interventions, such as continuous electronic fetal monitoring, labor induction for low-risk women, and cesarean surgery, fail to improve health outcomes for mothers and their babies and may cause harm. (*Care Supporting Normal Birth Is Best for Mothers and Babies*, CIMS, 2007)

**The Loving Birth Task Force supports the reduction in routine use of interventions during childbirth for low risk women and their healthy newborns.**

### Friedman's Curve

Sixty years ago Dr. Friedman of Columbia University published a study in which he produced a graph that purported to describe the average time it took laboring women to dilate each centimeter. Five hundred laboring women (first time moms) participated in the study. According to Rebecca Dekker of *Evidence Based Birth* (2021), Friedman's research was flawed by the fact that:

> Pitocin was used to induce or augment labor in 69 people (13.8%). "Twilight sleep" was common practice at the time, and so 117 of the women (23%) were lightly sedated, 210 (42%) were moderately sedated, and 154 (31%) were deeply sedated (sometimes "excessively" sedated) with Demerol and scopolamine—meaning that 481 (96%) of the women were sedated with drugs.

Some care providers are still using Friedman's Curve, thought of as "the gold standard for rates of cervical dilation and fetal descent during active labor" (Davis, 2003), and even considered an ideal. Unfortunately, the curve was based on sedated women in labor, therefore today, its use creates an artificial timeline in which birth should take place. The practice of utilizing Friedman's Curve has spawned the term "failure to progress" and has set a standard that encourages the use of interventions including medications and surgery to *deliver* babies when progress is deemed too slow. A study of detailed labor data gained from 1329 birthing women produced a rate of progress very different from Friedman's curve. Researchers Zhang, Troendle, and Yancey (2002) concluded "the pattern of labor progression in contemporary practice differs significantly from the Friedman's Curve. The diagnostic criteria for protraction and arrest disorders of labor may be too stringent in nulliparous women" (p. 824).

Chicago birth injury lawyer Robert Kreisman (June 21, 2016) has written an online article titled *American College of Obstetrics and Gynecology (ACOG) Replaces Friedman's Curve.* He states: "The ACOG changes lead to lower Cesarean rates." Although this attorney has a vested interest in litigating claims brought by women who feel they have been harmed by medical practices, Kreisman conveys the point of view taken by lawyers:

> Lawyers who specialize in birth trauma litigation have from the beginning always been challenged by new and different ACOG publications that in many instances have made it more dangerous for women in childbirth and for the unborn. Although these challenges remain daunting, lawyers in this field have tirelessly worked to overcome them successfully protecting the rights of clients and children injured by negligence of physicians before and during childbirth.

Sam McCulloch (2020), writing for the website bellybelly, suggests that the standard set in 1955 –Friedman's Curve—is still being widely used. She suggests:

> When choosing a care provider, find out how they base cervical dilation, and whether they are aware of the more recent research showing a slower rate of dilation up to 6cm [than the 3cm rate proposed by Friedman's Curve]. Choosing your care provider carefully will help avoid unnecessary interventions.

## Failure to Progress

*Failure to progress* is a term applied to a laboring woman whose labor is progressing too slowly according to medical staff; that is, her cervix is dilating at less than one centimeter an hour. "Labor progress is facilitated when a woman feels safe, respected, and cared for by the experts who are responsible for her clinical safety, when she can remain active and upright, and when her pain is adequately and safely managed" (Simpkin, 2005, p. 16). The derogatory label of *failure to progress* has precipitated many inductions and cesarean sections when the issue might be just failure to wait (www.pregnancy.org).

## Lithotomy Position

The lithotomy position is the position most frequently associated with childbirth, the one in which the laboring mother is lying on her back with her hips and knees flexed and spread apart. This allows attendants to view what is happening at the vaginal outlet, but causes women and their unborn babies to work against gravity. Those in favor of normal, physiologic birth recommend laboring women stand, walk, sit on birth balls, squat, or otherwise use gravity to facilitate giving birth. In a study by Stremler, Hodnett, Petryshen, Stevens, Weston, and Willan (2005), the researchers found women who used a hands-and knees position while laboring "had significant reductions in persistent back pain" (p. 243). Lawrence, Lewis, Hofmeyr, and Styles (2013) conducted a review of research and reported that "observational studies have suggested that if women lie on their backs during labour this may have adverse effects on uterine contractions and impede progress in labour." They recommend women choose the most comfortable position for laboring and giving birth.

Jansen and colleagues (2013) state:

> The first and most common intervention upon admission of a patient to labor is putting the woman to bed. Bed rest or the recumbent position can result in poor quality contractions, dystocia, slow dilatation and effacement, prolonged labor, and failure to descend. Laboring in the recumbent position can also result in maternal hypotension, vena cava syndrome, decreased uteroplacental blood flow, and late decelerations. The result can be an increased rate of cesarean surgeries because of fetal distress or failure to progress or descend. In addition, bed rest can cause more pain, necessitating additional analgesia and/or regional anesthesia (Zwelling, 2010).

Zwelling (2010), cited by Jansen and associates, wrote *Overcoming the Challenges: Maternal Movement and Positioning to Facilitate Labor Progress* published in the *American Journal of Maternal Child Nursing*. This article provided an historical overview of research addressing movement and positioning of laboring women. She found unrestricted movement decreased maternal pain, facilitated circulation in both mother and fetus, improved contractions, and helped the baby descend.

**The Loving Birth Committee concurs that Friedman's Curve is an obsolete measure of progress during labor. The Committee encourages allowing time for women to experience labor without interventions to artificially speed progress and that they be allowed to move around freely instead of having their movements restricted.**

## Electronic Fetal Monitoring (EFM)

The American College of Obstetricians and Gynecologists (ACOG) defines electronic fetal monitoring (EFM) as "a procedure in which instruments are used to continuously record the heartbeat of the fetus and the contractions of the mother's uterus during labor" (2022).

This is the most commonly performed obstetric procedure used today as it is estimated that EFM is used by around 90% of laboring women. This is most often done continuously which requires that the mother lie on her back connected to the monitor, reinforcing the lithotomy position as the predominant position imposed upon laboring women. Indeed, some states have laws mandating the use of EFM in addition to hospital policies, driven by fear of litigation, to continuously monitor the heart rate of babies in the womb. If the external device does not provide the data well enough, an electrode is inserted into the scalp of the birthing baby, accessed through the vaginal canal.

Dr. Rebecca Dekker (2012/2018) points out on the Evidence Based Birth website that "U.S. hospitals have invested over $700 million dollars in electronic fetal monitoring equipment that is NOT evidence-base and contributes to unnecessary Cesarean deliveries." Dekker recommends intermittent auscultation as a better way to monitor the baby's heart rate during labor describing this process as one in which "the care provider listens to the baby's heart rate for about 60 seconds using a fetal stethoscope (fetoscope or Pinard) or a hand-held Doppler ultrasound device." In addition to EFM increasing the administration of pain medication, Dekker points out that research is revealing that women who are continuously affixed to an EFM are more likely to receive cesarean sections and are slightly more likely to have instrumental (forceps or vacuum extraction) deliveries.

Dekker (2012) states, "The evidence against continuous electronic fetal monitoring is so clear that the U. S. Preventive Services Task Force issued a recommendation saying that continuous electronic fetal monitoring should NOT be used in low risk women." The American Congress of Obstetricians and Gynecologists (ACOG, 2009) has also refined its guidelines to reflect the greater than 99% "false positive rate of EFM for predicting cerebral palsy" although it continues to recommend that EFM be used with high-risk women. A review published by the Cochrane Collaboration found that EFM is associated with many known medical risks to women, without providing benefit to the fetus in low-risk pregnancies (Alfirevic, Devane, & Gyte, 2006).

**Labor Induction**

According to the Mayo Clinic (2022):

> Labor induction—also known as inducing labor—is a stimulation of uterine contractions during pregnancy before labor begins on its own to achieve a vaginal birth. A health care provider might recommend labor induction for various reasons, primarily when there's concern for a mother's health or a baby's health. One of the most important factors in predicting the likelihood of a successful labor is how soft and distended your cervix is (cervical ripening). The benefits of labor induction typically outweigh the risks.

An induction, or speeding up labor, could include applying cervical softeners (a ripening agent), injecting artificial oxytocin, rupturing the membranes (breaking the waters with a small hook), stripping the membranes (separating the amniotic sac from the wall of the

uterus), or using a water-filled balloon catheter to expand the cervix. Risks associated with induction procedures include inducing too early (prior to 39 weeks gestation), intensifying contractions, lowering of the baby's heart rate, increasing the risk of infection, increasing the need for a cesarean section, or causing uterine rupture. Cytotec, for example, is a drug used to induce labor and is associated with uterine rupture (Oden, 2009; Wagner, 1999).

*The Journal of Perinatal Education*, a journal dedicated to advancing normal birth, published an article titled *Healthy Birth Practice #1: Let Labor Begin on Its Own*, which reports that physicians are saying that their "patients are demanding to be induced" (Amis, 2014). Nonetheless, the conclusion of this article states:

> Current evidence overwhelmingly supports the wisdom of allowing labor to begin on its own for healthy women and their babies. With professional organizations such as ACOG actively promoting vaginal birth and discouraging elective inductions, childbirth educators and others in the birth community have new support to help women to desire, plan for, and achieve letting labor begin on its own.

Amis had stated in an earlier version of this article:

> Induced labor, especially when it is not medically necessary, can send a powerful message that your body is not working correctly—that you need help to begin your labor. Allowing labor to begin on its own may increase your confidence in your ability to give birth and take care of your baby once it arrives. (Amis, 2004)

There are several concerns with elective induction including increased use of fetal monitoring, administration of epidural analgesia, and assisted delivery by means of vacuum extraction or forceps. There is also a greater risk for postpartum hemorrhage and transfusion, and a longer intrapartum period and postpartum stay at the hospital. Costs also increase with the use of inductions. Although costs have escalated in recent years Vivian von Gruenigen (2013), the chair of obstetrics and gynecology at Akron City and St. Thomas Hospitals states:

> In today's health care environment, the elective induction of labor is no longer sustainable. Recent medical research questions the safety of inductions and labor and delivery units are closing secondary to negative financial margins. Patient and physician convenience can no longer be the driving force of elective inductions of labor.

Elective inductions prior to 39 weeks increase the rate of prematurity since it is difficult to accurately determine when conception actually occurred. A baby induced might be 37 weeks gestational age or less, and at risk for respiratory challenges or in need of neonatal intensive care. Despite these facts, labor inductions are commonly performed in hospitals today.

A comparative study reported by the National Institutes of Health (2019) states that "a growing body of evidence supports improved or not worsened birth outcomes with nonmedically indicated induction of labor at 39 weeks gestation compared with expectant management." The authors of this article, Souter and colleagues, conclude:

> Elective induction of labor at 39 weeks gestation is associated with a decrease in cesarean birth in nulliparous women, decreased pregnancy-related hypertension in multiparous and nulliparous women, and increased time in labor and delivery. How to use this information remains the challenge.

The American College of Obstetricians and Gynecologists (ACOG) recommends that "when a woman and her fetus are healthy, induction should not be done before 39 weeks. Babies born at or after 39 weeks have the best chance at healthy outcomes compared with babies born before 39 weeks" (2022).

This statement does not suggest that induction at 39 weeks should *not* be performed. However, the March of Dimes is clear that the best place for a baby to develop is in utero and a fetus should remain in mother's womb for 280 days or 40 weeks. This is considered full term as "babies born full term have the best chance of being healthy, compared with babies born earlier or later" (2022). Further, the March of Dimes website states: "Every week of pregnancy counts for your baby's health. For example, your baby's brain and lungs are still developing in the last weeks of pregnancy" (*What is full term?* 2022).

**Epidural Analgesia**

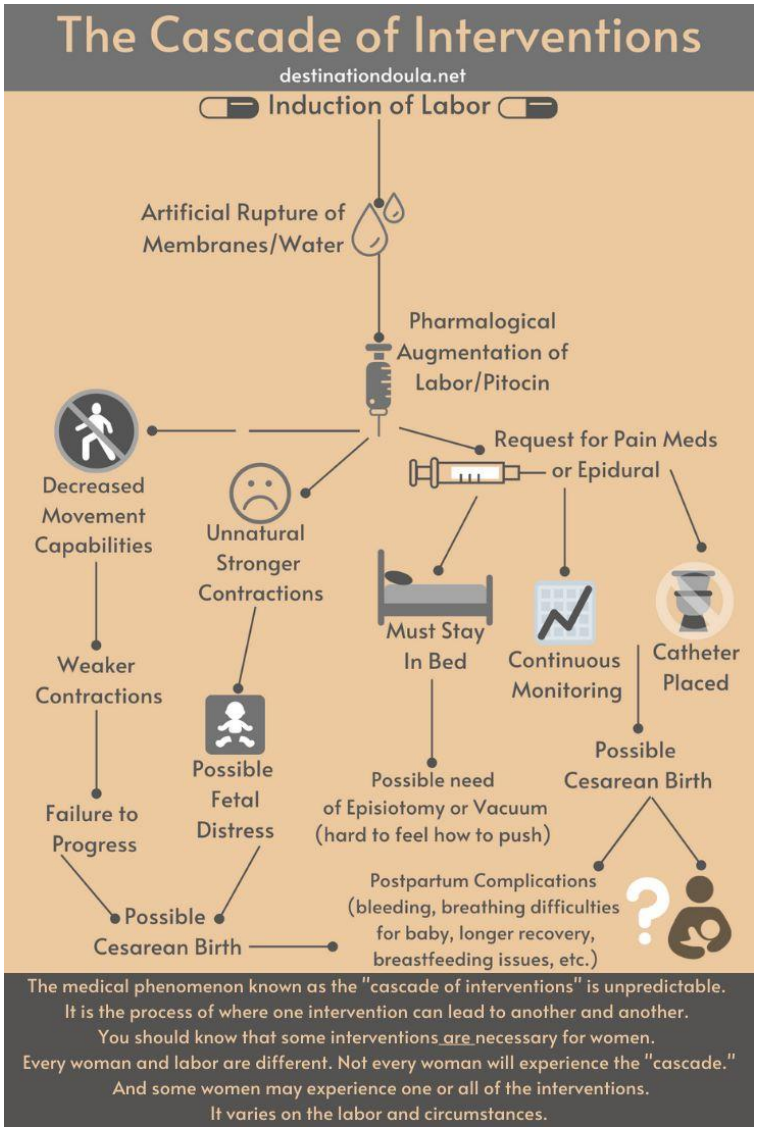
Epidurals are injected into the lower spine—through the dura, the outer protective layer of tissue surrounding the spine—in adult doses, which cross the placenta and reach the child, although it is said to be in smaller doses. Epidurals relieve pain, often caused by the induction drug given to speed up contractions, but reduce the ability of the laboring mother to *give birth* naturally. In the most radical course of events, the baby experiences fetal distress and the mother, in severe pain and fearing for the life of her baby, agrees to a cesarean section. Needless to say, this pattern occurs far too often according to the American College of Obstetricians and Gynecologists (ACOG, 2014) and the World Health Organization (WHO, 2015). Current ACOG guidelines seeking to safely prevent cesarean deliveries note, "Recent data show that contemporary labor progresses at a rate substantially slower than what was historically taught" (2014). This suggests that there is wisdom in disregarding Friedman's Curve and waiting longer before inducing labor or administering drugs.

Labor epidurals are a frequent component of childbirth today, with 76% of mothers experiencing them according to the *Listening to Mothers III* survey (Declercq, Sakala, Corry, Applebaum, & Herrich, 2013). Although epidurals are effective at relieving pain, they change the birthing process, leading to many unintended, negative results for both the mother and baby. Effects of epidurals for mothers include sedation, fever, hypotension, longer length of the pushing phase of labor, and perineal tears. Babies may experience

unusually low heart rates, poorer performance on newborn assessment scales, exhibit drowsiness, lack of coordination, and an inability to latch on to mother's breast. If they are removed from their mothers, these conditions might barely be noticed. The sleepiness would be considered normal. The baby's inclination to suckle would be suppressed and interpreted as normal as well. Again, we at Loving Birth believe an intervention-free birth followed by skin-to-skin contact is the best option for both mothers and newborn babies.

**Cascade of Interventions**

"When you choose even a small intervention and, as a direct result, another intervention becomes necessary, you've fallen into the cascade of intervention" (Pyanov, 2021). The following flow chart produced by destinationdoula.net shows the typical course of actions taken when a woman enters a hospital either already in labor but *too early*, or when she has agreed to have her labor induced.



In the first case, a woman in labor may go to the hospital when her cervix has dilated to less than five centimeters. If the medical staff is using Friedman's Curve, they may want labor to progress rapidly and/or according to the institution's policies and procedures. Often, particularly when it is a woman's first pregnancy, the laboring mother will experience *white coat syndrome*, a well-known anxiety response when a person enters a hospital. This reaction causes blood pressure to elevate. Because human mothers are mammals, they respond to anxiety (fear) as any other mammal would. A laboring woman's body will go into fight/flight causing her cervix to constrict to protect her child from being born until a threat has passed and she feels safe.

This normal, healthy response is labeled *failure to progress*, a pejorative diagnostic term that justifies intervention and ultimately surgical deliveries, and she is encouraged to start what can become a *cascade of interventions.* Frequently, a cervical softener is applied. If her body does not begin to relax and resume normal contractions or cervical dilation, she is injected with Pitocin or other medication that induces contractions. These drugs do not flow naturally from the pituitary gland in the same gentle, rhythmic pulsations that the secretion of her own hormones would. They cause frequent, intense, hard, painful contractions that provoke staff to suggest an epidural to relieve pain—and mothers often agree. If this combination of counteracting drugs—Pitocin increases and intensives contractions while epidurals slow them down—does not succeed, a cesarean section will be performed.

**The Loving Birth Task Force supports a reduction in the use of interventions and the cascade of those interventions, and advocates normal physiologic childbearing**.

**Episiotomy**

"Episiotomy is a procedure in which a small cut is made to widen the opening of the vagina when a woman is giving birth . . . . The American College of Obstetricians and Gynecologists (ACOG) recommends that episiotomy be done only when it is absolutely necessary" (ACOG, October 2020). These cuts were made routinely in the recent past by attending physicians, as it was believed that an incision would prevent more extensive tearing. That belief has been dispelled by research that has shown that

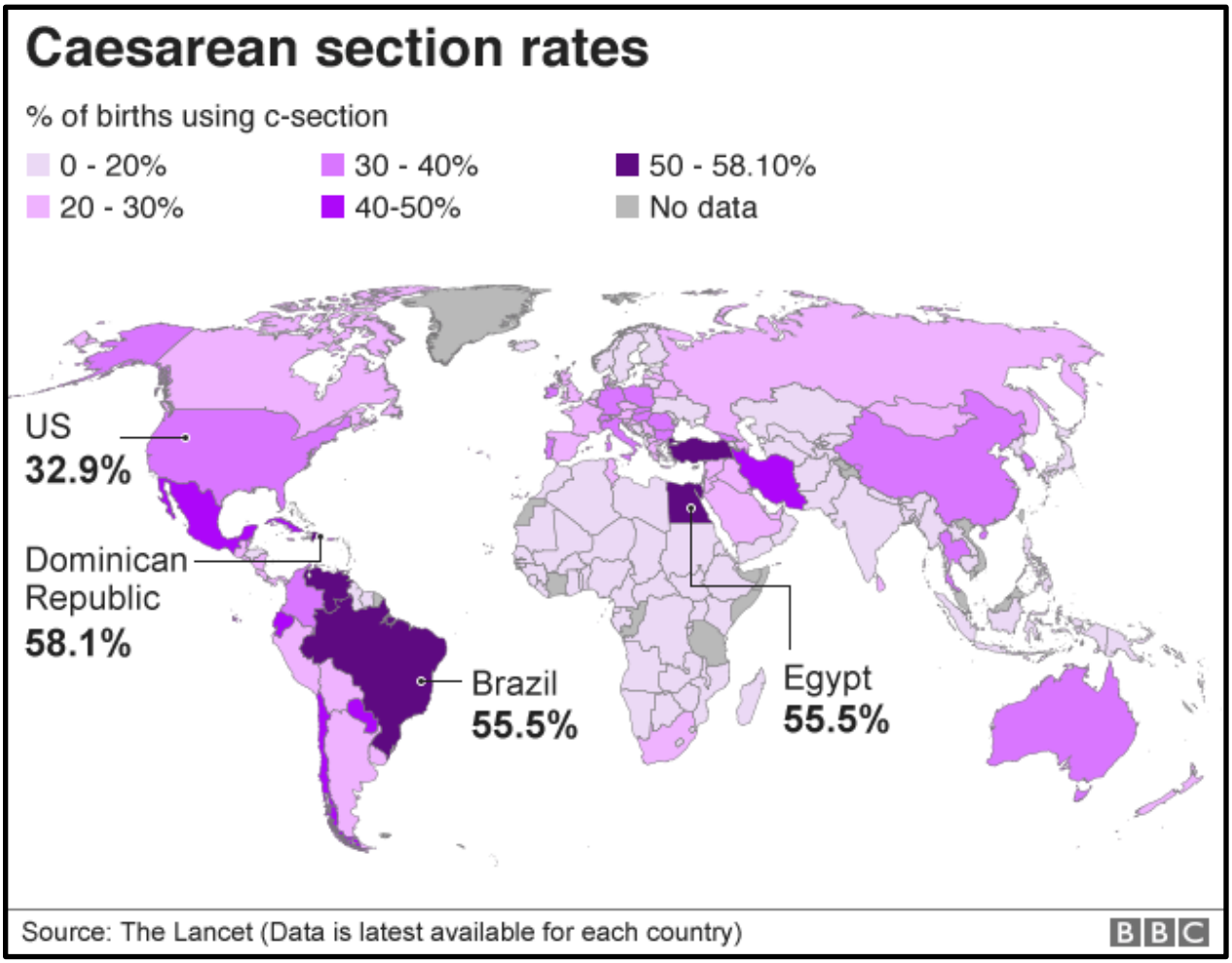
> recovery [from an episiotomy]is uncomfortable, and sometimes the surgical incision is more extensive than a natural tear would have been. Infection is possible. For some women, an episiotomy causes pain during sex in the months after delivery. A midline episiotomy puts you at risk of fourth-degree vaginal tearing, which extends through the anal sphincter and into the mucous membrane that lines the rectum. Fecal incontinence is a possible complication. (Mayo Clinic Staff, 2020).

As of 2022, "ACOG recommends that episiotomy be done only when it is absolutely necessary." (*What is an episiotomy?* ACOG.org).

**Cesarean Section (CS)**

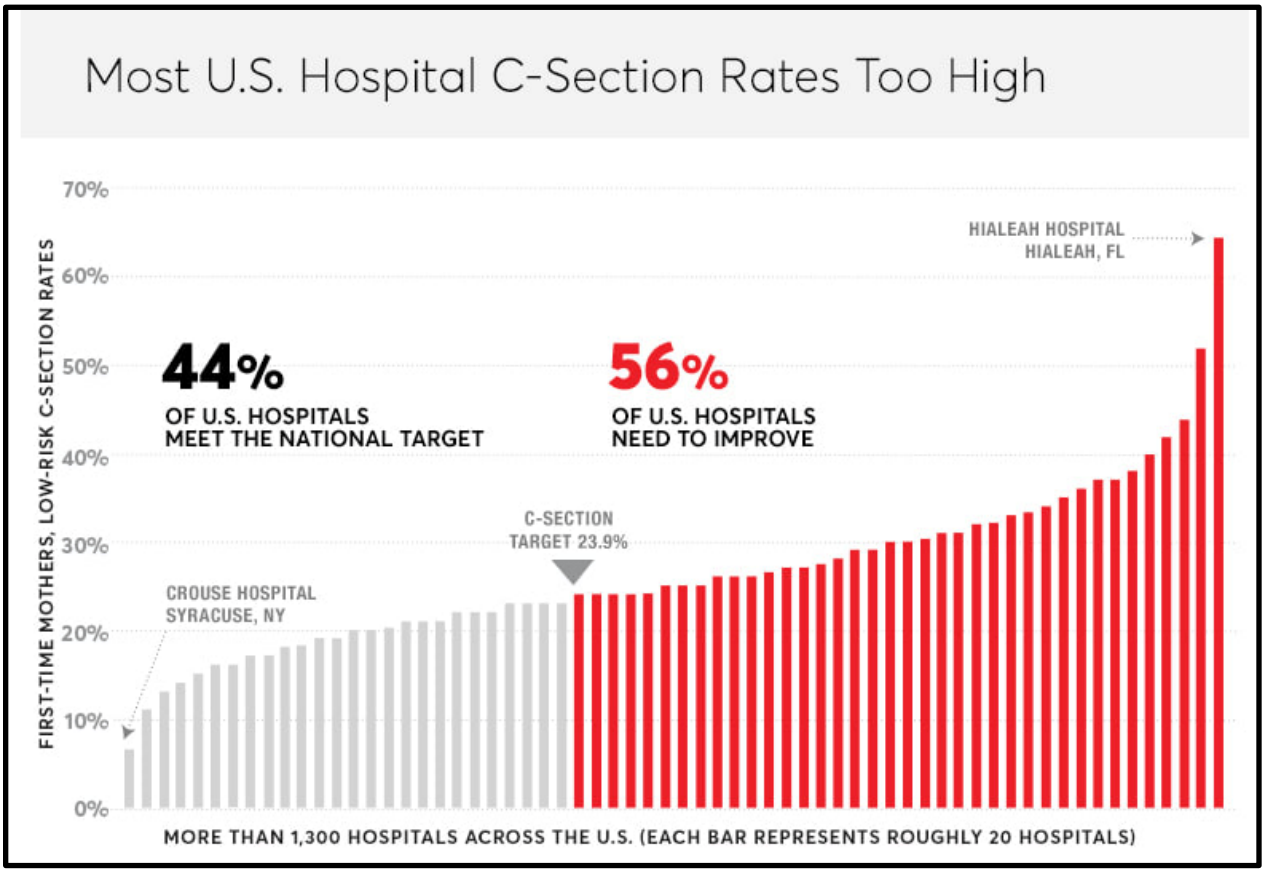
Cesarean sections have been performed for centuries. This surgical procedure was originally used to save the life of the baby when the mother was dead or dying. Reports can be found in the mythology of many countries, both Eastern and Western. Today, used for birthing worldwide, C-sections appear to be both over-used for convenience in developed nations and under-used for complicated births in third world counties.

According to the World Health Organization (WHO), "Caesarean section rates continue to rise, amid growing inequalities in access" (June 16, 2021). Globally the rate is now 1 in 5 or 21% of all childbirths. "In Latin America and the Caribbean, rates are as high as 4 in 10 (43%) of all births. In five countries (Dominican Republic, Brazil, Cyprus, Egypt and Turkey), caesarean sections now outnumber vaginal deliveries" (who.int).




Map retrieved from BBC News website https://www.bbc.com/news/world-45834011

There has been a rapid increase in cesarean-sections in the United States since 1989. It is the most common major surgery performed in this country and generates enormous revenue for medical facilities. The United States C-section rate in 2020 was 31.8%, up slightly from 31.7% in 2019 according to a *National Vital Statistics Report* issued February 7, 2022. The rate can vary widely from state to state: the rate in Arizona is 28.4%, among the thirteen states with the lowest C-section rates nationwide. These figures are averages. In the United States the overall average C-section rate is about one third of all births, however, individual teaching hospitals can have rates over 60% as the following chart (2017) depicts.



Map retrieved from https://www.simplemost.com/map-shows-rate-c-sections-state/

It appears that c-sections are being overused as the rate recommended by the World Health Organization is between 10-15%, a rate considered optimum since 1985 by the international healthcare community (WHO & HRP, 2021). In a joint development effort between ACOG and the Society for Maternal-Fetal Medicine, the following statements were published in the *American Journal of Obstetrics and Gynecology*:

> Cesarean birth can be life-saving for the fetus, the mother, or both in certain cases. However, the rapid increase in cesarean birth rates from 1996 to 2011 without clear evidence of concomitant decreases in maternal or neonatal morbidity or mortality raises significant concern that cesarean delivery is overused. (*Safe Prevention of the Primary Cesarean Delivery*, Obstetric Care Consensus, 2014, Reaffirmed 2019)

CNN (Birnbaum, 2009) reported other considerations regarding the increase in cesarean sections: 1) there is now better technology (men in particular prefer to rely on technology, encouraging partners to give birth in hospitals where they perceive it is safest); 2) mothers are older and believe that their gestational window is closing and want assurance that they will have a successful outcome; 3) more of today's mothers are overweight; 4) more inductions lead to more C-sections; and 5) one C-section leads to another—vaginal birth after cesarean section (VBAC) is uncommon.

Unfortunately, doctors often do not tell pregnant women that a C-section is major abdominal surgery and that adverse conditions can arise after such an operation. While C-sections are the most common operating room procedures, they seem to provide minimal benefit. The Maternity Action Team of the Childbirth Connection is addressing inappropriate and unsafe maternity care with a goal to reduce C-sections to the maximum 15% recommended by WHO and ACOG. Avoidance of malpractice law suits may be a driving force for many physicians to perform C-sections. Tort reform could impact physician decisions, encouraging them to put mothers' and babies' welfare first. Of course, birthing women should be informed of potential, and possibly chronic, complications that can result from surgical deliveries. Negative consequences are possible for both mother and baby: negative postpartum quality of life, difficulties establishing breastfeeding, subsequent reproductive complications such as placental issues, psychological morbidity, and, for the child, chronic childhood illnesses. As the number of pregnancies ending in C-sections increase for women, risk factors also increase, including those that are life threatening. Subsequent C-sections entail a much longer recuperation period with more pain, requiring the mother to have additional assistance in the home.

In addition, babies experience different outcomes based on whether they are born vaginally or by Cesarean section. Babies born vaginally appear to have both a higher rate and more complete variety of microbes necessary for digestion and immune system function. The process of birthing vaginally prepares the baby's lungs for breathing in the outside world, thus a baby delivered via C-section may experience a 50% risk for respiratory difficulties. New guidelines from ACOG (2014) recommend babies be born as close to term as possible for optimal development and fewer complications, and, if possible, not before 39 weeks of pregnancy.

The risks for a child born by Cesarean section are most often related to breathing. Respiratory distress syndrome (RDS) is experienced more among babies born by C-section than by those born vaginally. Long term chronic diseases are associated with C-sections: asthma, allergies, and obesity. Because of the separation of mother and baby following an operative delivery, breastfeeding can be deterred and bonding and secure attachment can be adversely affected.

A study of mice at the University of Texas reported by Ed Cara in *Medical Daily* June 25, 2015 may have strong implications for human birth. The researchers found that a protein, called a surfactant, released by the lungs of the fetus, may be the trigger for labor to commence. The report, originally published in the *Journal of Clinical Investigation* (2015), was titled

"Steroid receptor coactivators 1 and 2 mediate fetal-to-maternal signaling that initiates parturition" (Gao et al., 2015). The surfactant kills viruses and bacteria that could be detrimental to the baby and is necessary for the fetus to be able to breathe outside the mother's womb. If this protein/surfactant is the trigger for labor to begin, then the preclusion of its release might be the reason why babies born via C-section have a 50% risk of respiratory complications.

Oster and McClelland (October 17, 2019), writing for *The Atlantic*, observe:

> the fact is that a lot of C-sections are performed in clinical gray areas, where the necessity is not clear—for reasons like "abnormal labor progress," or out of concern for the baby's safety based on the fetal heart tracing (an intervention notoriously poor at identifying babies who truly are at risk if they continue in labor). And some C-sections are performed electively, at maternal request.

These authors describe the decision to perform a c-section a complex and rates "can vary from 7 percent to 70 percent" (Oster & McClelland, 2019) from one hospital to another. They note that "physician-patients are about 10 percent less likely to have a C-section than comparable nonphysician patients." In addition to avoiding the risk of the unknown consequences and greater length of time associated with allowing normal vaginal births to occur, "physicians are routinely paid more for a C-section than they are for a vaginal delivery." They say "the fact is that the existing system creates a financial incentive to perform a C-section—or a disincentive to manage labor—that may make the difference in the clinical gray areas."

What Oster and McClelland (2019) propose is an alternative. They suggest insurers "raise the vaginal-birth reimbursement rate to the level of the C-section rate." Even if nothing else changed the "costs would rise about 1.7percent" but the "C-section rate would go down." They anticipate that ultimately "we may see the share of vaginal births go up dramatically over time, and healthcare costs go down." Even if costs go up, "if vaginal birth is a better outcome for moms in most situations—and we think it is—then we should be willing to accept some increase in costs for safer maternity care."

**The Loving Birth Committee supports the promising policy strategies advocated by the Childbirth Connection and researchers Oster and McClelland. We favor the promotion of spontaneous labor, minimal intervention, and cesarean deliveries only when medically necessary. We encourage expectant mothers to become familiar with the risks of inductions and c-sections, as well as the culture, philosophy and policies of the place they choose to give birth.**

**Vacuum Extraction & Forceps (Instrumental Delivery)**

Vacuum extraction (also known as *ventouse*) is a procedure that can be performed to *extract* a baby from the mother during vaginal childbirth. "The apparatus consists of a flexible cap attached to a handle, tubing, and a vacuum source. The doctor uses the vacuum to hold the cap to the baby's head. The doctor then pulls while the mother pushes" (Goer, 1999, pp. 114-115). Goer points out, "vacuum extraction can cause a blood-filled swelling (*cephalohematoma*) beneath the cup, which increases the likelihood of developing jaundice" (p. 117). The swelling on the head of a baby born with the application of a vacuum extractor can be observed for months following birth.

Forceps are large metal instruments also used to extract a baby from the mother. "For safe forceps delivery, the head must be at least partially through the mother's pelvis. The doctor inserts the curved blades on either side of the baby's head, locks them together, and pulls" (Goer, 1999, p. 115). Goer's book, *A Thinking Woman's Guide to a Better Birth*, is an older but popular source of information on childbearing.

More current information available on the Mayo Clinic (2022) website lists the possible risks to mother and baby associated with these procedures. Risks to the mother associated with vacuum extraction include pain in the perineum, lower genital tears, short-term difficulty urinating, short- or long-term urinary or fecal incontinence. Risks to the baby include scalp wounds, skull fracture, bleeding within the skull, and a risk that the baby's shoulder will get stuck after the head has been delivered.

Possible risks to a mother associated with the use of forceps include pain in the perineum, lower genital tract tears and wounds, difficulty urinating, short or long-term urinary or fecal incontinence, injuries to bladder or urethra, uterine rupture, and weakening of the muscles and ligaments that support the pelvic organs. Risks to the babies include minor facial injuries, temporary weakness of facial muscles, minor external eye trauma, skull fracture, bleeding within the skull, and seizures (Mayo Clinic Staff, 2022).

An August 20, 2018 the *Research Update: Vacuum Extractors and Forceps Are Both Associated with a Higher Risk of Shoulder Dystocia* explains that "shoulder dystocia is an emergency situation that endangers both mother and baby" (abclawcenters.com.). The *Up To Date* website (2022) includes a caveat that physicians should be consulted, but the article this admonition accompanies, written by doctors Wegner and Bernstein, addressing *Operative Vaginal Delivery* states:

> Use of either forceps or vacuum is reasonable when an operative intervention to complete labor is indicated and operative vaginal delivery can be safely and readily accomplished; otherwise, cesarean delivery is the better option.

**The Loving Birth Committee discourages the routine use of instrumentation during labor and endorses the midwifery model of care, which provides more natural assistance to loboring mothers.**

**Suctioning (Aspirating on the Perineum)**

Clearing the newborn baby's respiratory passages is often done at birth, even while the baby's head is lying on the mother's perineum with the larger portion of its body still within the mother. Neumann, Mounsey and Das (2014) state: "Although it is still standard practice to perform oronasopharyngeal suctioning with a bulb syringe immediately after delivery, multiple studies have found no benefit to routine suctioning" (ncbi.nim.nih.gov). They emphatically advise:

"**Stop suctioning neonates at birth. There is no benefits to this practice, and it can cause bradycardia and apnea. Instead, wipe the baby's mouth and nose with a towel to clear excess secretions and stimulate respiration**."

Whitfield, Charsha, & Chiruvolu, (2009) concur saying, "Suctioning of the upper airway [of newborns] is no longer recommended" (p. 128) to prevent meconium aspiration syndrome (MAS). Even so, this procedure is routinely performed in hospitals and even in births at home and in birth centers attended by midwives.

**The Loving Birth Committee promotes education among childbirth professionals and childbearing women to reduce suctioning except in those cases that are truly determined to be emergencies.**

**Eye Drops & Vitamin K**

Historically babies have eye drops (silver nitrate) or ointment (erythromycin) administered to prevent eye infections (ophthalmia neonatorum) or blindness caused by mothers infected with gonorrhea or chlamydia. This has become a prophylactic procedure and can be prevented by screening for sexually transmitted diseases during pregnancy. Eye drops can be refused or application delayed by parents who are making informed decisions regarding the care they and their babies receive.

Newborns often receive an injection of vitamin K, which is needed for normal blood clotting. This has been a standard procedure since 1961 as recommended by the American Academy of Pediatrics. Dekker (2014, and 2021 on the evidencebasedbirth.com website) notes the benefits of receiving a vitamin K shot: it is "highly effective in preventing classic and late VKDB [Vitamin K Deficiency Bleeding]; Vitamin K is slowly released over time from the injection site, which provides enough Vitamin K1 until the baby's Vitamin K levels reach adult levels naturally" (Dekker, 2014). Three primary dangers associated with vitamin K injections are enumerated by Dr. Cees Vermeer (2010), the foremost expert in the world on vitamin K:

- Among the most significant is inflicting pain immediately after birth which has the potential to cause psycho-emotional damage and trauma to a newborn.

- The amount of vitamin K injected into newborns is 20,000 times the needed dose. Additionally, the injection may also contain preservatives that can be toxic for your baby's delicate, young immune system.
- An injection creates an additional opportunity for infection in an environment that contains some of the most dangerous germs, at a time when your baby's immune system is still immature (Mercola & Vermeer, 2010).

**Inflicting pain or blurring the vision of a newborn are procedures discouraged by the Loving Birth Committee. If well-informed parents choose eye drops or vitamin K injections (Vitamin K can now be administered orally), it would be advisable to delay the procedures for at least one hour while essential bonding with the baby is taking place.**

## Circumcision

"Circumcision is the surgical removal of the skin covering the tip of the penis. The procedure is fairly common for newborn boys in certain parts of the world, including the United States" (Mayo Clinic.org). It is carried out for medical, social/cultural, or religious reasons. Circumcision is performed routinely within a short time following a baby boy's birth. Between 1979 and 2010 the Centers for Disease Control and Prevention (CDC) report the rate of circumcision declined from 64.5% to 58.3% (Owings, Uddin, & Williams, 2013, p. 1). Before the mid-1980s most circumcisions were performed with no anesthetic. Neuropsychologist James Prescott (1989) suggests that the "early experiences with genital pain contribute to the encoding of the brain that begins the neurobiological foundation for sado-masochistic behaviors." Although this an extreme hypothesis, it is Prescott's contention that the pain of circumcision experienced by the infant confounds the brain's ability to distinguish between pain and pleasure and can lead to violent sexual behaviors in later life.

The National Organization of Circumcision Information Resource Centers (NOCIRC) provides the following information:

- No national or international medical association recommends routine circumcision.
- Only the USA circumcises the majority of newborn boys without medical or religious reason.
- Medicalized circumcision began during the 1800s to prevent masturbation, which was believed to cause disease.
- Today's parents are learning that the foreskin is a normal, protective, functioning organ.
- Today's parents realize circumcision harms and has unnecessary risks.
- Circumcision denies a male's right to genital integrity and choice for his own body.

Circumcision is a questionable procedure that parents should seriously consider before allowing the surgery to be performed on their newborn son. It seems that parents are doing

so in increasing numbers (Owings, Uddin, & Williams, 2013) as credible sources estimate that the circumcision rate in the United States is over 80 percent.. It is also worthy of note that many hospitals now charge for the procedure. More parents appear to view circumcision as an unnecessary expense when they are paying the exorbitant costs of giving birth in today's economy.

**The Loving Birth Committee encourages all parents to carefully consider whether circumcision is the best choice for their sons.**

## MIDWIVES & DOULAS

### Midwives

"The midwife is recognized worldwide as being the person who is alongside and supporting women giving birth. The midwife also has a key role in promoting the health and well-being of childbearing women and their families before conception, antenatally and postnatally, including family planning" (Fraser & Cooper, 2009, p. 3).

According to the Midwives Alliance of North America (MANA) website (2020):

> Midwives are the traditional care providers for mothers and infants. Midwives are trained professionals with expertise and skills in supporting women to maintain healthy pregnancies and have optimal births and recoveries during the postpartum period. Midwives provide women with individualized care uniquely suited to their physical, mental, emotional, spiritual and cultural needs. Midwifery is a woman-centered empowering model of maternity care that is utilized in all of the countries of the world with the best maternal and infant outcomes such as The Netherlands, United Kingdom and Canada. (mana.org)

Midwifery has been practiced for thousands of years, but declined when men began to practice obstetrics in the 1800s and women were urged to go hospitals to have their babies. Birthing in hospitals became common as many believed it was safer and more modern. Because women were usually given a sedative, physicians developed interventions to *deliver* babies when mothers were anesthetized. These included the use of mechanical devices such as forceps, and increased surgical deliveries. Midwifery became thought of as old fashioned and unsafe, and used only by the poor. The opposition to midwifery has continued into the late 20th and early 21st century.

In the 1970s the American College of Obstetrics and Gynecology (ACOG) actively discouraged homebirth, threatening doctors who provided assistance to midwives in emergencies with loss of hospital privileges and licenses. In the mid 1980s the American Academy of Family Physicians (AAFP) opposed nurse-midwifery, issuing a formal statement that all nurse midwives should work non-independently, under the supervision of a physician, and that all payments should go through the physician. These beliefs and practices promoted the distrust of midwifery *and* natural birth. However, in many European countries, midwives have continued to be the primary caregivers assisting nonhigh risk mothers to birth their babies. Industrialized countries similar to the United States have vastly different cultural beliefs surrounding birth, embracing midwifery and providing high quality care while having lower infant and maternal mortality rates (CIA World Factbook).

The American College of Obstetricians and Gynecologists (ACOG) website updated in 2022 states the position of this organization:

> ACOG respects a pregnant person's right to make a medically informed decision about their birth attendant and place of delivery and believes hospitals and licensed, accredited birth centers are the safest setting for birth. ACOG supports the standards used by the American Midwifery Certification Board (AMCB) which credentials certified nurse-midwives (CNM) and certified midwives (CM). ACOG's Joint Statement of Policy with the American College of Nurse-Midwives supports CNMs and CMs practicing to the full extent of their credential, training, and experience.
>
> ACOG also supports the worldwide midwifery education standards set by the International Confederation of Midwives' (ICM) in 2010—as a baseline for midwifery licensure in the U.S. All midwives—including certified professional midwives (CPMs), sometimes referred to as licensed midwives (LMs) and direct-entry midwives (DEMs), and others educated through non-accredited pathways—should meet the global standards. Birthing persons in every state should be guaranteed care that meets these important minimum standards.

In September of 2015 the Cochrane Collaboration reprinted a report for inclusion in the Cochrane Library. This report distilled the results of 15 trials involving 17,674 women. The authors noted that "in many parts of the world, midwives are the main providers of care for childbearing women" (Sandall, Soltani, Gates, Shennan, & Devane, 2015). They found that the midwifery model was associated with significant benefits for mothers and babies, without adverse effects when compared with medical models. Women received fewer interventions including episiotomies and instrumental births, fewer epidurals, and fewer instances of preterm birth or miscarriages before 24 weeks' gestation. The researchers concluded "that most women should be offered midwife-led continuity models of care, although caution should be exercised in applying this advice to women with substantial medical or obstetric complications."

"The Midwives Model of Care is based on the belief that pregnancy and birth are normal life processes" (NACPM.org) and its application "has been proven to reduce the incidence of birth injury, trauma, and cesarean section". This Model of Care includes:

- monitoring the physical, psychological, and social well-being of the mother throughout the childbearing cycle
- providing the mother with individualized education, counseling, and prenatal care, continuous hands-on assistance during labor and delivery, and postpartum support
- minimizing technological interventions
- identifying and referring women who require obstetrical attention. (Midwives Model of Care©)

Midwives are qualified health care providers who receive comprehensive training and must pass an examination to become certified. Certification is offered by the American College of

Nurse Midwives (ACNM) and the North American Registry of Midwives (NARM). Even so, the practice and credentials related to midwifery differ throughout the United States. Below is a brief description of each of type of midwife:

**Certified Nurse-Midwife (CNM):** CNMs practice in hospitals and medical clinics and may also deliver babies in birthing centers and attend at-home births. Some work with academic institutions as professors. They are able to prescribe medications, treatments, medical devices, therapeutic and diagnostic measures. CNMs are able to provide medical care to women from puberty through menopause, including care for their newborn (neonatology), antepartum, intrapartum, postpartum and nonsurgical gynecological care.

**Certified Nurse-Midwife (CNM):** CNM programs are graduate level programs that are only open to licensed RNs who already hold a bachelor's degree (preferably in nursing). CNM programs grant a master's or graduate degree. They take a minimum of 24 months to complete. After completion of an accredited CNM program, CNM candidates need to confirm that their graduate program is accredited by the Accreditation Commission for Midwifery Education (ACME) and then pass the national qualifying exam from the American Midwifery Certification Board (AMCB). AMCB is the only organization in the U.S. that issues CNM credentials.

**Direct-Entry Midwife (DEM):** A direct-entry midwife is an independent practitioner educated in the discipline of midwifery through self-study, apprenticeship, a midwifery school, a college, or university-based program distinct from the discipline of nursing. A direct-entry midwife is trained to provide the Midwives Model of Care to healthy women and newborns throughout the childbearing cycle primarily in out-of-hospital settings. Licensed Midwives (LM) and Registered Midwives (RM) are examples of direct-entry midwives.

**Certified Midwife (CM):** The Certified Midwife (CM) credential was created to allow individuals with an undergraduate degree in a discipline other than nursing to obtain a graduate degree in midwifery and then practice as a midwife. They are trained and certified according to the requirements of the American College of Nurse-Midwives, take the same certification exam, and have the same scope of practice as CNMs. To date, only a few states have recognized the CM credential: NY, NJ, DE, ME, MO, and RI.

**Certified Professional Midwife (CPM):** A Certified Professional Midwife's (CPM) competency is established through training, education and supervised clinical experience appropriate for midwives who practice "The Midwives Model of Care" predominately in out-of-hospital settings. CPMs can train through an apprenticeship with a qualified midwife or by attending a midwifery program or school. Graduates of MEAC accredited schools are qualified to take the NARM written exam. All others must complete an Entry-Level Portfolio Evaluation Process (PEP). The CPM is the only midwifery credential that requires knowledge about and experience in out-of-hospital settings.

> Traditional Midwives: In addition, there are midwives who—for religious, personal, and philosophical reasons—choose not to become certified or licensed. Typically they are called traditional or community-based midwives. They believe that they are ultimately accountable to the communities they serve; or that midwifery is a social contract between the midwife and client/patient, and should not be legislated at all; or that women have a right to choose qualified care providers regardless of their legal status. (mana.org, 2020)

Midwives believe in facilitating a natural childbirth as much as possible. Accordingly, it is common to receive care from a midwife in a private and comfortable birthing center or in one's own home. Because of their professionalism and expertise, midwives are often part of a labor and delivery team associated with a local hospital.

According to the American Pregnancy website, benefits of receiving midwifery care include:

- Decreased risk of needing a cesarean
- Reduced rates of labor induction and augmentation
- Reduced use of regional anesthesia
- Decreased infant mortality rates
- Decreased risk of preterm birth
- Decreased third and fourth degree perineal tears
- Lower costs for both clients and insurers
- Increased chances of having a positive start to breastfeeding
- Increased satisfaction with quality of care.

If a mother or baby require medical interventions that are outside the scope of services offered by a midwife, appropriate referrals are made to obstetricians, perinatologists, or other healthcare professionals.

**The Loving Birth Task Force encourages the use of midwives and adheres to the midwifery model which supports natural childbirth and promotes the empowerment of women to give birth as Nature designed.**

## Doulas

The use of doulas is a centuries-old phenomenon of women helping women. The word originates from the Greek word *doulos*, which means servant. Doula has come to mean "a woman experienced in childbirth who provides continuous physical, emotional, and informational support to the mother before, during, and just after childbirth" (Klaus, Kennell, & Klaus, 1993). Doulas are trained to be prenatal, labor and birth, and/or postpartum assistants and to look for signs of perinatal mood disorders and provide support as needed. Doulas promote bonding and attachment, which have wide-ranging positive effects. Most doulas are professionally trained and certified but do not provide medical information or interfere with the birthing process.

Rebecca Dekker (2019), RN and PhD, describes the role of a doula on her website *Evidence Based Birth*. She distinguishes between doulas and medically trained professionals who have other duties to perform and work in shifts which can take them away from laboring women instead of providing continuous support. Dekker points to the "harsh environment theory" to explain why doulas are so effective saying,

> In most developed countries, ever since birth moved out of the home and into the hospital, laboring people are frequently submitted to institutional routines, high intervention rates, staff who are strangers, lack of privacy, bright lighting, and needles. Most of us would have a hard time dealing with these conditions when we're feeling our best. But people in labor have to deal with these harsh conditions when they are in a very vulnerable state. These harsh conditions may slow down a person's labor and their self-confidence. It is thought that a doula "buffers" this harsh environment by providing continuous support and companionship which promotes the mother's self-esteem

Dekker (2019) proposes that "doulas are a form of pain relief in themselves." She cites research that has found:

> With continuous support, laboring people are less likely to request epidurals or pain medication. It is thought that there is fewer use of medications because **birthing people feel less pain when a doula is present.** An additional benefit to the avoidance of epidural anesthesia is that women may avoid many medical interventions that often go along with an epidural, including Pitocin augmentation and continuous electronic fetal monitoring.

Adding to the list of reasons why doulas are thought to be so effective, Dekker (2019) states that "the attachment between the birthing person and doula which can lead to an increase in oxytocin, the hormone that promotes labor contractions." Oxytocin, naturally released, has a calming effect. This effect seems to be reciprocal between the laboring woman and her doula. This chart graphically points out the benefits of having continuous labor support, particularly provided by a doula.

Dekker has created a conceptual model of *continuous labor support* which appears below.

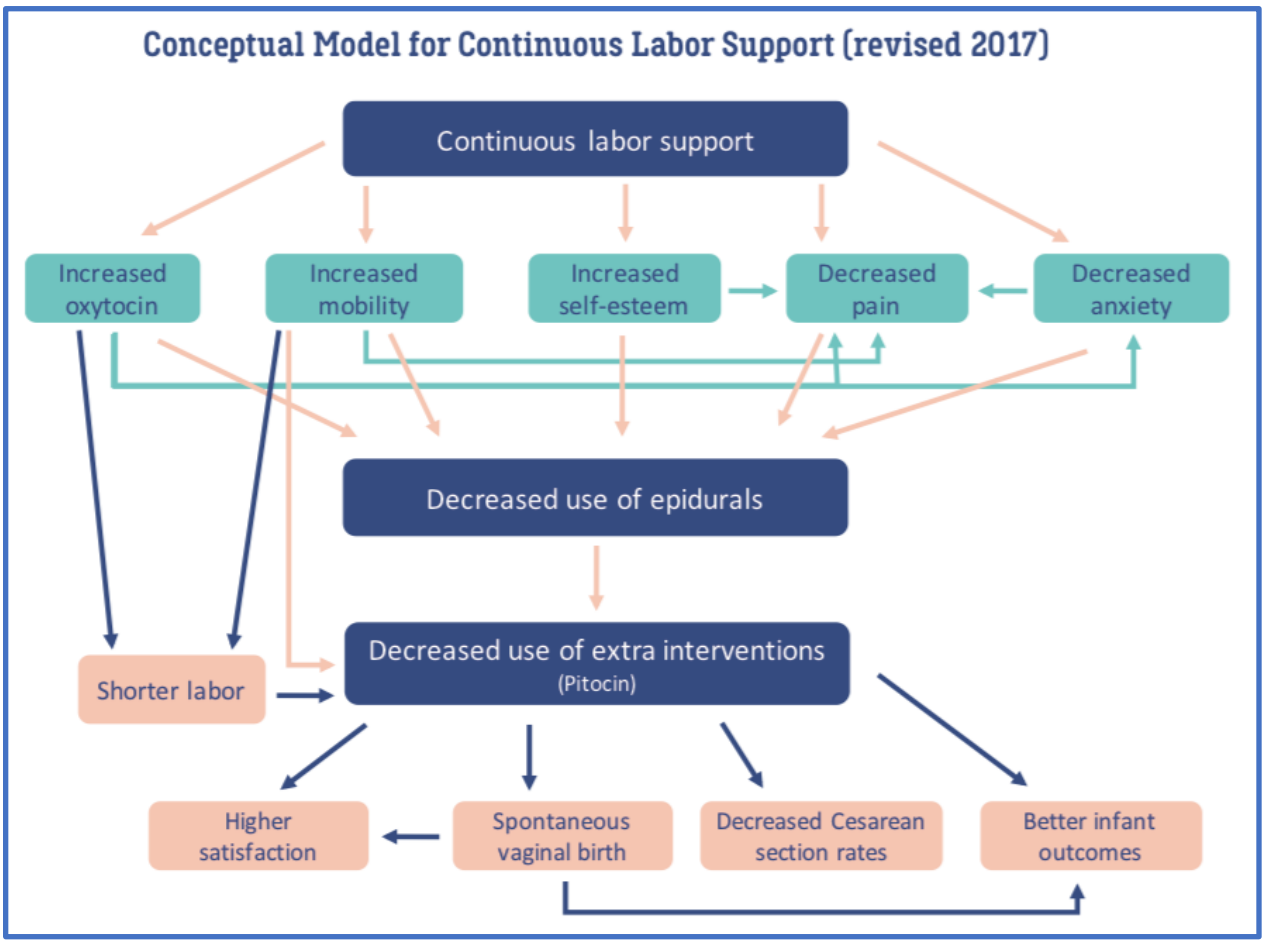



Chart available at https://evidencebasedbirth.com/the-evidence-for-doulas/

Dekker (2019) cites extensive research as she presents the evidence in support of doulas. Distilling that research, she presents the following data which suggest the best results occurred in situations "when a birthing person had continuous labor support from a doula—someone who was NOT a staff member at the hospital and who was NOT part of their social network."

According to Dekker (2019), researchers have found that overall, people who have continuous support during childbirth experience a "25% decrease in the risk of Cesarean; the largest effect was seen with a doula (39% decrease), [and an] 8% increase in the likelihood of a spontaneous vaginal birth; the largest effect was seen with a doula (15% increase)."

In general, continuous support provided for women during labor has been shown internationally to be effective in fostering spontaneous vaginal births, reducing the use of intrapartum drugs, and increasing mothers' satisfaction with their childbearing experiences.

Hodnett, Gates, Hofmeyr, and Sakala (2013) published the results of a review of the literature examining 22 studies involving 15,288 women in 16 countries. Titled *Continuous Support for Women during Childbirth (Review)*, the authors concluded:

> given the clear benefits and absence of adverse effects of continuous labour support, policy makers should consider including it as a covered service for all women. Every effort should be made to ensure that women's birth environments are empowering, non-stressful, afford privacy, communicate respect and are not characterised by routine interventions that add risk without clear benefit.

Hodnett and her colleagues (2013) further recommended:

> Continuous support during labour should be the norm, rather than the exception. Hospitals should permit and encourage women to have a companion of their choice during labour and birth, and hospitals should implement programs to offer continuous support during labour.

Considering studies conducted in the United States, an article titled "U study finds doulas improve birth outcomes, cut costs" (Benson, 2016), the author reported: "Across the 12 states analyzed, including Minnesota, the U of M study estimated that doula-supported births could eliminate more than 3,200 preterm births and save Medicaid $58 million each year."

Researchers Gruber, Cupito, and Dobson (2013) described their study, saying:

> Birth outcomes of two groups of socially disadvantaged mothers at risk for adverse birth outcomes, one receiving prebirth assistance from a certified doula and the other representing a sample of birthing mothers who elected to not work with a doula, were compared. All of the mothers were participants in a prenatal health and childbirth education program. Expectant mothers matched with a doula had better birth outcomes. Doula-assisted mothers were four times less likely to have a low birth weight (LBW) baby, two times less likely to experience a birth complication involving themselves or their baby, and significantly more likely to initiate breastfeeding. Communication with and encouragement from a doula throughout the pregnancy may have increased the mother's self-efficacy regarding her ability to impact her own pregnancy outcomes. (p. 49)

**The Loving Birth Committee endorses the model of continuous labor support created by Dr. Rebecca Dekker and further recommends the engagement of doulas to provide continuous care for pregnant women prior to, during, and following labor.**

## POSTPARTUM MATERNAL & NEWBORN CARE

The World Health Organization (WHO) has published *Recommendations on Postnatal Care of Mother and Newborn* (2013) beginning with this statement:

> The days and weeks following childbirth – the postnatal period – is a critical phase in the lives of mothers and newborn babies. Most maternal and infant deaths occur during this time. Yet, this is the most neglected period for the provision of quality care.

The postpartum period is a time following the birth a child that should be filled with joy, but that might not be the case for many women. Many young mothers in the United States today are raising babies without their fathers. Many must return to work to provide financial support for themselves and their child. Many do not have adequate support of any kind, limited knowledge of how to care for a newborn, responsibilities for other children, and on and on.

WHO (2014) continues to display the following recommendations for maternal and newborn postnatal care on their website (2022). These are international guidelines that may not apply in first world nations, but it is remarkable how many women do not receive adequate postnatal care even in industrialized countries.

1. After an uncomplicated vaginal birth in a health facility, healthy mothers and newborns should receive care in the facility for at least 24 hours after birth.
2. If birth is at home, the first postnatal contacts should be as early a possible within 24 hours of birth. At least three additional postnatal contacts are recommended for all mothers and newborns, on day 3 (48072 hours), between days 7-14 after birth, and 6 weeks after birth.
3. Home visits in the first week after birth are recommended for care of the mother and newborn.
4. The following signs should be assessed during each postnatal care contact and the newborn should be referred for further evaluation if any of the signs is present: *stopped feeding well, history of convulsions, fast breathing), severe chest in-drawing, no spontaneous movement, fever, low body temperature, any jaundice in first 24 hours, low body temperature (temperature <35.5 °C), any jaundice in first 24 hours of life, or yellow palms and soles at any age.* The family should be encouraged to seek health care early if they identify any of the above danger signs in-between postnatal visits.
5. All babies should be exclusively breastfed from birth until 6 months of age. Mothers should be counseled and provided support for exclusive breastfeeding at each postnatal contact.
6. Daily chlorhexidine application to the umbilical cord stump during the first week of life is recommended for newborns who are born at home in settings with high neonatal mortality (30 or more neonatal deaths per 1000 live births). Clean, dry cord care is recommended for newborns born in health facilities and at home in low neonatal mortality settings. Use of chlorhexidine in these situations may be

considered only to replace application of a harmful traditional substance, such as cow dung, to the cord stump.

7. Bathing of the newborn should be delayed until 24 hours after birth. If this is not possible due to cultural reasons, bathing should be delayed for at least six hours. Appropriate clothing of the baby for ambient temperature is recommended. This means one to two layers of clothes more than adults, and us of hats/caps. The mother and baby should not be separated and should stay in the same room 24 hours a day. Communication and play with the newborn should be encouraged. Immunization should be promoted as per existing WHO guidelines. Preterm and low-birth-weight babies should be identified immediately after birth and should be provided special care as per existing WHO guidelines.
8. All postpartum women should have regular assessment of vaginal bleeding, uterine contraction, fundal height, temperature and heart rate (pulse) routinely during the first 24 hours starting from the first hour after birth. Blood pressure should be measured shortly after birth. If normal, the second blood measurement should be taken within six hours. Urine void should be documented within six hours. *Beyond 24 hours after birth:* At each subsequent postnatal contact, enquiries should continue to be made about general well-being and assessments made regarding the following micturition and urinary incontinence, bowel function, healing of any perineal wound, headache, fatigue, back pain, perineal pain and perineal hygiene, breast pain, uterine tenderness and lochia. Breastfeeding progress should be assessed at each postnatal visit. At each postnatal contact, women should be asked about their emotional wellbeing, what family and social support they have and their usual coping strategies for dealing with day-to-day matters. All women and their families/partners should be encouraged to tell their health care professional about any change in mood, emotional state and behavior that are outside of the woman's normal pattern. At 10-14 days after birth, all women should be asked about resolution of mind, temporary postpartum depression ("maternal blues"). If symptoms have not resolved, the woman's psychological wellbeing should continue to be assesses for postnatal depression, and if symptoms persist, evaluated. Women should be observed for any risks, signs and symptoms of domestic abuse. Women should be told whom to contact for advice and management. All women should be asked about resumption of sexual intercourse and possible dyspareunia as part of an assessment of overall wellbeing two to six weeks after birth. If there are any issues of concern at any postnatal contact, the woman should be managed and/or referred according to other specific WHO guidelines.
9. All women should be given information about the physiological process of recovery after birth, and that some health problems are common, with advice to report any health concerns to a health care professional, in particular:
    a. Signs and symptoms of PPH: sudden and profuse blood loss or persistent increased blood loss, faintness, dizziness, palpitations/tachycardia.
    b. Signs and symptoms of pre-eclampsia: headaches, accompanied by one or more symptoms of visual disturbances, nausea, vomiting, epigastric or hypochondrial pain, feeling faint, convulsions (in the first few days after birth).
    c. Signs and symptoms of infection: fever, shivering, abdominal pain and/or offensive vaginal loss.

d. Signs and symptoms of thromboembolism: unilateral calf pain, redness or swelling of calves, shortness of breath or chest pain.
e. Women should be counseled on nutrition.
f. Women should be counseled on hygiene, especially handwashing.
g. Women should be counseled on birth spacing and family planning. Contraceptive options should be discussed, and contraceptive methods should be provided if requested.
h. Women should be counseled on safer sex including the use of condoms
i. In malaria epidemics areas, mothers and babies should sleep under insecticide-impregnated bed nets.
j. All women should be counseled to mobilize as soon as appropriate following the birth. They should be encouraged to take gentle exercise and make time to rest during the postnatal period.

10. Iron and folic acid supplementation should be provided for at least three months.
11. The use of antibiotics among women with vaginal delivery and a third or fourth degree perineal tear is recommended for prevention of wound complications.
12. Psychosocial support by a trained person is recommended for the prevention of postpartum depression among women at high risk of developing this condition. Health professional should provide an opportunity for women to discuss their birth experience during their hospital stay. A woman who has lost her baby should receive additional supportive care.

**Paid Parental Leave**

Although the President's Commission on the Status of Women recommended paid maternity leave in 1963, Francis, Cheung and Berger (November 11, 2021) reported in the Washington Post that "The United States is one of the richest countries in the world — and yet one of only a few countries not to offer some form of paid family leave for new parents." This article compares the United States' policy to other countries. While the United States provides NO paid parental leave, Britain provides 39 weeks, Sweden 68 weeks, Estonia 82 weeks or more, and Japan 52 weeks or more.

*Paid Parental Leave in the United States* (2014) by Gault and colleagues concludes:

> The benefits of paid family leave to individuals, to businesses, and to society are well-documented. Not only could a paid family leave program keep women in the workforce and decrease their need for public assistance, but it could reduce employer costs and contribute to U. S. economic growth. Paid family leave substantially increases the amount of leave taken by parents and is linked to health benefits like lower rates of infant and child mortality, increased incidence and length of breastfeeding, and improved cognitive development in children. It also allows lower-income families to take care of loved ones without sacrificing much needed income.

Further, Gault and colleagues (2014) report:

> the United States is the only high-income country, and one of only eight countries in the world (Heymann and McNeill 2013), that does not mandate paid leave for mothers of newborns. Nearly every member of the European Union (EU) provides at least 14 weeks of job-guaranteed paid maternity leave, during which workers receive at least two-thirds of their regular earnings (International Labour Organization, 2010).

The Department of Labor reported:

> The Federal Employee Paid Leave Act (FEPLA) makes paid parental leave available to Federal employees covered under Title 5 following in connection with a qualifying birth of a son or daughter or the placement of a son or daughter with an employee for adoption or foster care. As a result. the Family and Medical Leave Act (FMLA) provisions were amended in Title 5, United States Code (U.S.C.) to provide up to 12 weeks of paid parental leave to covered Federal employees in connection with the birth or placement (for adoption or foster care) of a child occurring on or after October 1, 2020.

**The Loving Birth Committee supports efforts to change governmental and business policies to provide paid parental leave for mothers *and* fathers.**

### Care for Mother Means Baby Receives Care

Without financial support, mothers can feel even more overwhelmed than they might otherwise. KidsHealth, an online resource for mothers who have just given birth, acknowledges women's feelings of exhaustion, discomfort, emotional instability, and doubts about physical appearance. The website notes that women might experience everything from sore breasts to baby blues. The list of physical symptoms that will take time to heal is extensive.

Recommendations include drinking 8-10 glasses of water a day; avoiding stairs and lifting; avoiding bathing, swimming, and driving until their healthcare provider says it's OK. Napping while baby sleeps, taking time for relaxation, showering daily, exercising and getting fresh air, scheduling a few minutes a day for private time with their partner, enjoying the baby, limiting housekeeping as well as cooking and entertaining, and talking to other new mothers are all self-care practices that can speed their adjustment.

WHO (described above) recommends postnatal visits with a healthcare provider for both mother and infant. Of course, the organization advises exclusive breastfeeding for six months, taking iron and folic acid for three months, and obtaining psychosocial support to

prevent postpartum depression. The Mayo Clinic (2015) also has online suggestions for care of mother and newborn. After a vaginal birth Mayo Clinic staff recommends care for vaginal tears or episiotomy wounds such as sitting on pillows or padded surfaces, pouring water over the site while urinating, applying cold packs, and taking pain relievers and stool softeners. After a Cesarean section self-care should include more rest, supporting the abdomen especially when coughing, sneezing or laughing, using a heating pad or taking pain medication, and drinking lots of fluids. Care of the incision includes keeping the site clean with soapy water, rinsing and then patting it dry.

Both mothers and newborns need care at this vulnerable time while they are bonding, learning to know what it is like to hold a newborn or be held in mother's arms. Offering to relieve stress by running errands, bringing prepared food, performing cleaning chores, shopping, doing laundry and other tasks can be offered by friends and family members. Demonstrating our love by listening, holding the baby while mother showers, and offering to help can be supportive in ways that are appreciated more than we know.

One alternative in providing postpartum care is, for those who can afford it, to hire a Newborn Care Specialist, trained in newborn care, who can work around the clock, helping mother sleep through the night or bringing baby to her if she is nursing (ncsainfo.com).

**Breastfeeding**

*Breastfeeding* is the term used to describe mothers holding their infants and nursing them so that the babies receive milk produced by the mothers' bodies (mammary glands/breasts). Breastfeeding is strongly recommended by both the American College of Obstetricians and Gynecologists (ACOG) and the American Academy of Pediatrics (AAP). The World Health Organization (WHO) estimates, "increasing breastfeeding could save 800,000 children and U. S. $300 billion every year." Further, the WHO website states:

> A major new Series on breastfeeding, published in *"The Lancet"*, finds that despite strong health and economic benefits from breastfeeding, few children are exclusively breastfed until 6 months, as recommended by WHO. Globally, an estimated 1 in 3 infants under 6 months are exclusively breastfed – a rate that has not improved in 2 decades.

Breastfeeding is considered "the normal way of providing young infants with the nutrients they need for healthy growth and development. Virtually all mothers can breastfeed, provided they have accurate information, and the support of their family, the health care system and society at large." In addition, "colostrum, the yellowish breast milk produced at the end of pregnancy [but thought for years to have no nutritional value and *real* milk had not yet come in], is recommended by WHO as the perfect food for the newborn, and feeding should be initiated within the first hour after birth" (WHO, 2016).

WebMD provides a user-friendly overview of breastfeeding which describes the benefits of breastfeeding to mother and baby. The website notes the advantages for babies:

> Breast milk provides the ideal nutrition for infants. It has a nearly perfect mix of vitamins, protein, and fat – everything your baby needs to grow. And it's all provided in a form more easily digested than infant formula. Breast milk contains antibodies that help your baby fight off viruses and bacteria. Breastfeeding lowers your baby's risk of having asthma or allergies. Plus, babies who are breastfed exclusively for the first 6 months, without any formula, have fewer ear infections, respiratory illnesses, and bouts of diarrhea. They also have fewer hospitalizations and trips to the doctor.
>
> Breastfeeding has been linked to higher IQ scores in later childhood in some studies. What's more, the physical closeness, skin-to-skin touching, and eye contact all help your baby bond with you and feel secure. Breastfed infants are more likely to gain the right amount of weight as they grow rather than become overweight children. The AAP says breastfeeding also plays a role in the prevention of SIDS (sudden infant death syndrome). It's been thought to lower the risk of diabetes, obesity, and certain cancers as well, but more research is needed.

The advantages for mothers include a discussion of baby massage:

> Breastfeeding exclusively and on demand until 6 months of age is also a perinatal best practice. Benefits include increased immunity, greater bonding, longer periods of sleeping by three months, and a decrease in common ailments such as ear infections, allergies and asthma. . . . In addition, parents can be taught to massage their babies, promoting bonding, decreasing stress, increasing circulation and immunity in babies, and supporting well-being in the family overall.

Infant formula is *not* the same as mother's milk. Babies are often not able to easily digest cow's milk or soy, which is frequently added to formula. Cows are fed genetically modified grains and are injected with antibiotics and hormones. These substances are not good for developing infants.

Wikipedia, another online source of information used by young adults of reproductive age, states:

> Benefits of breastfeeding for the mother include less blood loss following delivery, better uterus shrinkage, weight loss, and less postpartum depression. It also increases the time before menstruation and fertility returns, known as lactational amenorrhea. Long term benefits may include a decreased risk of breast cancer, cardiovascular disease, and rheumatoid arthritis. Breastfeeding is less expensive for the family than infant formula.
>
> Health organizations, including the World Health Organization (WHO), recommend feeding for six months only through breastfeeding. This means that no other foods

or drinks other than vitamin D are typically given. Continued partial breastfeeding until at least one to two years of age is then recommended. Globally about 38% of infants are only breastfed during their first six months of life. In the United States, about 75% of women begin breastfeeding and about 13% only breastfeed until the age of six months. Medical conditions that do not allow breastfeeding are uncommon. Mothers who take recreational drugs and certain medications should not breastfeed.

**The Loving Birth Committee strongly advocates breastfeeding as the perfect start for new humans. Human milk is uniquely designed for human babies. It is much cheaper and easier than formula, it has no GMOs (as long as mother is careful not to ingest them) so there is no question about safety, and it has many health and psycho-social benefits for both mother and baby.**

**Co-Sleeping**

Co-sleeping, that is mother sleeping with her infant, has been controversial in American society. To help distinguish between fact and myths about this ancient practice, Dr. James McKenna conducts anthropological research on co-sleeping in his Behavioral Sleep Lab at the University of Notre Dame. His website provides valuable resources for parents who consider co-sleeping with their infants. Addressing "what constitutes a 'safe sleep environment' irrespective of where the infant sleeps?" Dr. McKenna offers excellent guidance.

> Safe infant sleep ultimately begins with a healthy gestation. Specifically, safe infant sleep begins without the fetus being exposed to maternal smoke during pregnancy. A second factor that has a strong influence on safe infant sleep is breastfeeding. Breastfeeding significantly helps to protect infants from death including deaths from SIDS/SUDI and from secondary disease and/or congenital conditions. Post-natally safe infant sleep begins especially with the presence of an informed, breastfeeding, committed mother, or an informed and committed father.
>
> Regardless of whether an infant sleeps on the same surface as his or her parents, on a same-surface co-sleeper, in a bassinet or in a separate crib, in the same room as their parents or in a separate room, all infants should follow these same guidelines: ***infants should always sleep on their backs, on firm surfaces, on clean surfaces, in the absence of (secondhand) smoke, under light (comfortable) blanketing, and their heads should never be covered.***
>
> The bed should not have any stuffed animals or pillows around the infant and never should an infant be placed to sleep on top of a pillow or otherwise soft bedding. Sheepskins or other fluffy material and especially beanbag mattresses should never be used with infants. Waterbeds can be especially dangerous to infants too, and no matter the type of mattress, it should always tightly intersect the bed-frame to leave no gaps or space. Infants should never sleep on couches or sofas with or without adults as they can slip down (face first) into the crevice or get wedged against the

> back of a couch where they may suffocate. (https://cosleeping.nd.edu/safe-co-sleeping-guidelines/)

Dr. McKenna's advice is wise, respectful of the choice of each family, and rests on extensive research that supports the togetherness of mothers and their infants. Admonitions would include insuring that adults NOT smoke, drink alcohol, or ingest any strong drugs, and avoid co-sleeping if they have sleep issues that cause them to sleep so soundly they cannot awaken when a child cries or moves in ways that signal distress. Learning about adult sleep cycles could be beneficial for those who would like to co-sleep but are unsure of their own ability to do so.

Dr. McKenna declares that, with regard to "**Bedsharing: It is important to be aware that adult beds were not designed to assure infants' safety!**"

Further, The Loving Birth Committee agrees with Dr. McKenna who states:

> **Aside from never letting an infant sleep outside the presence of a committed adult, i.e. separate-surface cosleeping which is safe for all infants, I do not recommend to any parents any particular type of sleeping arrangements since I do not know the circumstances within which particular parents live. What I do recommend is to consider all of the possible choices and to become as informed as is possible matching what you learn with what you think can work best for you and your family.**

## BELIEFS

- Pregnancy is a natural biological and sociological process, not a pathological disease nor medical condition.
- Improving a woman's health—and a man's health—before conception decreases the risks to a healthy pregnancy and increases the chances for a healthy baby.
- A baby who is nurtured in the womb of a healthy, loving, tranquil mother receives the best possible start in life.
- Birth is a natural life event that should be approached from a wellness model rather than a pathology model.
- Pregnant and laboring women deserve to be respected.
- Women have innate knowledge about pregnancy and birth, and the ability to birth a baby successfully.
- Women have the right to full information prior to labor about all options for care so they can make informed and objective choices about what is best for themselves and their babies.
- The birth experience is enhanced in hospitals, birth centers, and homes that support the parents' culture, values, and birth preferences (aka: birth plans).
- Bonding in infancy is essential for optimal development and secure attachment.
- Optimal bonding occurs more easily within the first hour following birth and is facilitated by skin-to-skin contact and the commencement of breastfeeding.
- Nationally certified nurse-midwives can be an integral part of the medical birthing team, especially being utilized to assist routine, low-risk births.
- The use of doulas provides support for the birthing mother during pregnancy, labor, and postpartum periods.
- What happens before pregnancy and throughout—at conception, in the womb, at birth, and in the first days and months following childbirth—establishes the foundation for every child's life.
- Breastfeeding, skin-to-skin contact, and being carried on the body are important for brain, nervous system, and immune system development, and bestow long-term health benefits for both baby and mother.
- Every baby and child needs to be securely bonded with at least one human being who is a loving and consistent presence in the child's life.

## RECOMMENDATIONS

- Restoring confidence in the normal birth process among childbearing women and healthcare professionals.
- Encouraging mothers' innate knowledge and inner wisdom regarding how to give birth naturally.
- Educating women and their care providers about the flow of hormones, particularly oxytocin, which occur during unmedicated births.
- Advocating for the tenets of the Baby-Friendly Hospital Initiative.
- Providing education about all birth options, including full disclosure regarding the possible risks and benefits of induction, cesarean births, medical interventions, and natural birth.
- Encouraging women to develop a birth preference list that outlines where she will labor and give birth with qualified providers of her choice (physician or midwife).
- Advocating strategies, such as immediate skin-to-skin contact after birth, that allow maternal-infant bonding to unfold.
- Encouraging the initiation of breastfeeding within an hour of birth, helping to establish latching on and suckling, and also to enhance bonding.
- Supporting mothers' breastfeeding their babies according to the recommendation of the American Academy of Pediatrics for at least one full year.
- Collaborating with women, providers, and health care organizations to redesign the facilities in which women give birth.
- Bringing together all knowledge and best practices to achieve optimal birth outcomes.
- Changing the paradigm from *delivering a baby* to *birthing a baby*.
- Changing the paradigm from a pathological/disease model of birth to a positive, physiological (natural) model.
- Examining those cultures of excellent maternal infant outcomes to seek out best practice strategies.
- Promoting the positive impact of birth doulas who provide continuous support to the mother throughout labor and postpartum.
- Advocating for evidenced-based use of tests, procedures, technology and restrictions.
- Supporting the governmental *Healthy People 2030* objectives of reducing Cesarean sections for first time mothers and increasing vaginal births following cesarean surgeries for subsequent births.
- Advocating for a change, including, but not limited to, tort reform, including the reduction in premiums of liability in malpractice insurance for all professionals involved in the birthing profession so they can afford to practice their art.
- Advocating for full health coverage for all births for both babies and their mothers.
- Advocating for more holistic methods, for example, Natural Pain Relief suggested by doulas.


Chart distributed by destinationdoula.net

**The Loving Birth Committee supports the Midwifery Model of Care, including the use of the Optimality Index-US advocated by the American College of Nurse Midwives "that shifts the measurement focus from adverse to good outcomes, and counts the frequency of 'optimal' events during childbirth" (midwife.org).**

# LOVE VERSUS FEAR

Susan Highsmith, PhD

## Fear

The polarization of love and fear appears in the realm of childbearing today. Fear is so predominant that a word has been coined to describe an extreme fear of childbirth: *tokophobia* (Hofberg & Brockington, 2000). This term stems from the Greek *tokos*, which means childbirth, and *phobos*, which means fear. This psychological condition is either primary or secondary. Primary tokophobia originates *before* a woman gets pregnant, and often starts in adolescence. It is experienced as a deeply felt dread of giving birth and arises from her own birth, her mother's experience giving birth, or things she learned through the media, from her friends, or at school. Secondary tokophobia arises from the woman's personal experience when she previously gave birth. That event was perceived as traumatic due to receiving poor care, having had post-partum depression, and/or experiencing a significant loss or other distressing circumstances during her pregnancy or while giving birth. Tokophobia can be present even though a woman strongly wants to have a child.

A 2014 study found that 34 percent of the 174 women who had never given birth and participated in a survey were "identified as severely tokophobic" (Greathouse, p. 103). Greathouse stated: "Evidence from 30 years of international research suggests that maternal tokophobic perceptions are generational, contribute to the technological birth schema, increase caesarean-section rates, and contribute to increased childlessness" (p. vi).

## The Dual Nature of Cells' Responsiveness

Cell biologist Bruce Lipton (2005) has described the nature of cells, including human cells, which have the ability to respond to stimuli in only two ways: growth or protection. If a cell is growing, it perceives its environment as safe, nurturing, and growth promoting. If a cell is protecting itself, it perceives threats in its environment, and, therefore, must contract or otherwise defend itself. According to Dr. Lipton, these perceptions translate as love/growth or fear/protection. Beliefs—instilled at a cellular level—are based on how the environment is perceived, that is, threatening and fearful or nurturing and loving.

## The Social Nervous System

Stephen Porges (2011), author of *The Polyvagel Theory*, has found that the autonomic nervous system (ANS) does not just have two parts as most have come to believe. Although the sympathetic nervous system (SNS) and parasympathetic nervous system (PNS) are readily accessible; in fact, they are default mechanisms, go-to responses. There is another immediate response possible—the social nervous system. When a child is feeling stressed, that is in fear, the first system, according to polyvagal theory, is to seek relief from a caregiver. When this does not happen, the child must rely on the other two systems, either fight/flight (the SNS) or freeze (the PNS). Parents have been told not to spoil a child;

therefore, many parents do not respond to their children, assuming that the emotions and behaviors that reflect fighting, resisting, running away, or collapsing are all normal responses. When a child's needs are met, they learn to interact with others with confidence and patience. When their needs are *not* met, they learn to fight, flee or freeze; and thus, they repeat those responses throughout life. More—they expect to have to employ these strategies, often not even realizing that consideration or help might be available to them.

Attachment parenting is a manner of parenting that promotes the activation and development of the social nervous system. According to Rebecca Buffum Taylor (2020), answering the question, "What is Attachment Parenting?" for *Web*MD,

> **Attachment parenting** focuses on the nurturing connection that parents can develop with their children. That nurturing connection is viewed as the ideal way to raise secure, independent, and empathetic children. Proponents of this parenting philosophy include the well-known pediatrician William Sears, MD. They make the case that a secure, trusting attachment to parents during childhood forms the basis for secure relationships and independence as adults. (https://www.webmd.com/parenting/what-is-attachment-parenting)

Cultivating secure attachment, independence and empathy in their children are worthy goals for parents. These aspirations can be achieved in loving, gentle ways.

Dr. Sears himself pronounces:

> A close attachment after birth and beyond allows the natural, biological attachment-promoting behaviors of the infant and the intuitive, biological, caregiving qualities of the mother to come together. Both members of this biological pair get off to the right start at a time when the infant is most needy and the mother is most ready to nurture.

Further, he states,

> Attachment Parenting is nothing new and certainly not a trend. It is the way parenting has been done for most of human history and, in most cases, will come intuitively to new mothers and fathers. It is important to remember that Attachment Parenting is an approach rather than a set of rules, so while birth bonding, breastfeeding, baby wearing and safe co-sleeping are encouraged in this style of parenting, the benefits of Attachment Parenting are not exclusive to those who are able to do all of these things.

And,

> The principles of Attachment Parenting are being responsive and sensitive to your baby's needs, nurturing your child through touch, and creating a bond that allows the child's needs to be easily deciphered and cared for. (www.askdrsears.com)

*Ultimately, it's all about love*.

**Love**

Love is not a word found often in research, however, the chemistry of love is now studied as it relates to childbirth, mother-child attachment, and personal relationships. John Gottman's research on marriage and *The Science of Trust* (2011) is awakening consciousness to the importance of the vital chemical involved in relating to one another, and has made *oxytocin* a household word. Oxytocin is a neuropeptide that is produced in the hypothalamus, and is stored in and then secreted from the posterior pituitary gland. According to Gottman, "the word *oxytocin* comes from the Greek for 'swift birth'" (p. 135). He reports that animal studies have found that maternal behaviors are inhibited when the subjects are deprived of oxytocin, and enhanced when given oxytocin. Importantly, oxytocin appears to down-regulate fear responses. Gottman contends that the hormones of love, "oxytocin and vasopressin appear to be the hormones of trust in all relationships" (p. 135).

Psychoanalyst Erik Erikson created a model of psychosocial development that occurs in eight stages across the lifespan beginning in infancy and ending in late adulthood. During each stage an individual faces a particular challenge. During the first stage, an infant must have its needs met by caregivers and faces the challenge of learning to trust or mistrust. An infant perceives the care provided in a way that shapes his or her developing personality, and is answering the existential question, "Can I trust the world and the people in it?" If the child feels safe and loved, it learns to trust; if the child experiences neglect, abuse, or inconsistent care, s/he learns to mistrust. This choice mirrors the polarity of love or fear.

Developing secure or insecure attachment is also predicated on the infant being able to trust, or mistrust, caregivers who ideally consistently respond to his or her needs in a timely manner. One of the first ways this trust is built is by gazing into the infant's eyes. This infant-mother gaze has become known as the bonding gaze. Researchers have found that mothers who gaze into their babies' eyes have blood levels of oxytocin increase; those who shift their gaze away more frequently have lower levels of oxytocin. "Findings underscore the involvement of oxytocin in regulating the mother's responsive engagement with her infant, particularly in times when the infant's need for access to the mother is greatest" (Kim, Fonagy, Koos, Dorsett, & Strathearn, 2014).

*Medical News Today* reported in June 2015, "**The release of oxytocin by the pituitary gland acts to regulate two female reproductive functions: Childbirth** [and] **Breastfeeding.**" Other hormones including beta-endorphin, a natural painkiller, and prolactin, "the major hormone of milk synthesis and breastfeeding," (Buckley, 2003) act in concert with oxytocin to create an optimal birth experience for both mother and baby. During breastfeeding mothers often gaze into their babies' eyes, releasing oxytocin that literally reinforces a loving bond between them.

In his classic book *The Scientification of Love* (1999), retired French obstetrician Michel Odent clarifies oxytocin's role: "it stimulates uterine contractions for the birth of the baby and the delivery of the placenta. It stimulates the 'milk ejection reflex'" (p. 11). Due to the inordinate number of interventions and Cesarean sections, during which women are

anesthetized, birthing women often do not release their own naturally produced hormones. Dr. Odent points out, "Today, for the first time in the history of humankind, most women, in many countries, become mothers without releasing a complex cocktail of hormones of love" (p. 132).

Animal studies demonstrate that virginal rats whose brains are injected with oxytocin will manifest maternal behaviors (Pederson & Prange, 1979). Interestingly, these injections do not cause maternal behaviors when administered intravenously. This implies that oxytocin needs to cross the blood/brain barrier, which naturally produced oxytocin does but artificial oxytocin does not. Synthetic oxytocin injected into the blood streams of laboring women generates different responses in the body. Candace Pert (1997) described in her book, *The Molecules of Emotion*, the action of oxytocin during childbirth when it binds with uterine receptors to produce contractions. Artificial oxytocin—Pitocin—occupies those same receptor sites but does not act in the same way as naturally produced oxytocin. It generates more intense, painful contractions, increasing the need for pain medication, and very likely affects babies as well. A 2020 study, published as *Perspectives of Pitocin administration on behavioral outcomes in the pediatric population: Recent insights and future implications*, states,

> Given that fetal past experiences shape the future behavior of the adult, further work on oxytocin signaling pathways will provide valuable references and insights for early-brain development and state-dependent regulation of behavioral outcome. (Torres, Mourad, & Leheste, 2020)

Anecdotal accounts are related by Ray and Mandel (1987) in *Birth & Relationships: How Your Birth Affects Your Relationships.* They postulate that individuals who have been induced "often have trouble 'getting started.' They need to be 'induced' into new things that they want to do or need to do" (p. 99). In addition, perhaps there should be concern for those who have been exposed to Pitocin as many children have been observed to be hyperactive. Although this issue is still quite controversial, Kurth and Haussmann (2011) found that the results of their study "revealed a strong predictive relationship between perinatal Pitocin exposure and subsequent childhood ADHD onset."

Researchers who studied voles conclude that there are long-term effects from manipulating neurochemicals at birth, in this case, oxytocin, as the brains of the voles showed differences in the neocortex that were evident in adulthood (Kramer, Yoshida, Papademetriou, & Cushing, 2007). Animal studies are valuable because dissections cannot be performed on living humans. By means of brain scans and observations of behaviors, human children have been found to have neurological effects resulting from their experiences. The *Center on the Developing Child* at Harvard University reports on development of brain architecture:

> Early experiences affect the development of brain architecture, which provides the foundation for all future learning, behavior, and health. Just as a weak foundation compromises the quality and strength of a house, adverse experiences early in life can impair brain architecture, with negative effects lasting into adulthood.

Infants are receiving input from their environments that alter the developing architecture of their brains, just as lab animals receive by injection the neurochemicals associated with loving or stress-inducing treatment. Data from a longitudinal study begun at Harvard 35 years earlier and reported by Russek and Schwartz (1997) "suggest that perceptions of parental caring obtained during college predict health and illness in midlife" (p. 11). Anatomy, physiology, and psychology of individuals are found to be impacted by the presence or absence of loving care, evidenced by measurable oxytocin levels, brain scans, and/or personal reflections.

While animal studies may not translate directly to humans (Teicher, Tomoda, & Anderson, 2006), psychologists observe behaviors in adults that can be correlated with events, or even parental attitudes, that took place during pregnancy and at birth; for example, "unwantedness in early pregnancy has a detrimental effect on children's psychosocial development" (David, 1992/2012). Those people who exhibit violent behavior, and harm others and themselves, all seem to have a deficit in their ability to love. There appear to be long-term negative consequences that result from missing the natural flow of hormones during pregnancy and birth. Both animal and human studies are revealing that oxytocin is vital in manifesting maternal behaviors (Buckley, 2003; Gottman, 2011; Pederson & Prange, 1979). Longitudinal studies are revealing detrimental effects in the offspring of mothers who had a deficiency of naturally produced oxytocin. Odent (1999) comments:

> When looking at the background of those people who have demonstrated an impaired capacity to love in different ways – whether it be love of oneself or love of others – it seems that the capacity to love is determined, to a great extent, by early experiences during foetal life, and the period around birth. (p. 21)

Odent is so concerned about childbirth interventions impeding the natural flow of oxytocin in mothers and babies that he declares: "The questions must be raised in terms of civilisation. Can Humanity survive obstetrics?" (p. 132).

Whether the hormones of optimal childbirth or the development of loving bonds and secure attachments through parenting practices are all considered, the goal of Loving Birth is to have every conception, gestation, labor, birth, the postpartum period and early childhood to be as love-filled as possible. Personal experiences, and the science that confirms the long-lasting effects of those experiences, demonstrate that how a child is perceived and treated during gestation, at birth and in early childhood is critical to his or her development. Children who learn that they are loved, in turn love others. A child's sense of worthiness and self-esteem are built on Love. Citizens who contribute to the well-being of society learn they have something to uniquely contribute to their communities by learning that they are loveable. Peace within the hearts and minds of every individual upon the planet depends on **Love**.

**The Loving Birth Committee is dedicated to the premise**
**More Love = Less Fear**
**in all aspects of childbearing and childrearing.**

**The Loving Birth Committee of the Foundation for Living Medicine recognizes that many of the topics included in this Position Paper represent IDEALS. The beliefs shared here and the recommendations made are meant to raise awareness of the many ways in which the paradigm of childbirth can be modified and improved. We intend to inspire women to realize their inherent potential as the givers of birth and nurturers of life while honoring their own intrinsic value. We trust that fathers, mothers, caregivers, medical personnel, childbirth educators and anyone associated with childbearing will differentiate between policies and procedures that are fear-based and those that are grounded in love. May LOVE prevail.**

## About the Author

Susan Highsmith, PhD is a counselor and educator residing in Tucson, Arizona. She earned a doctorate in Prenatal & Perinatal Psychology and is certified in EMDR, PSYCH-K, and EFT. She speaks at international congresses addressing consciousness in the womb and the long-lasting effects of our earliest experiences. She serves on the Association of Prenatal and Perinatal Psychology and Health (APPPAH) Advisory Board and is a mentor in the APPPAH Prenatal and Perinatal Education (PPNE) Program.

Susan has published an easy-to-read primer introducing prenatal and perinatal psychology to young audiences, *The Renaissance of Birth: Changing the Language of Childbirth*. Inspired by research revealing that babies in the womb are listening and remembering what they hear, she has created four fairy tales to be read by mothers and fathers to their Little Ones while they are in utero. *The First Fairy Tale*, *Books I, II, III, and IV*—the stories of conception, the awakening heart, the developing senses, and birth—are all told as metaphors. These stories can be enjoyed again and again as children recall having heard them while they were in the womb.

Motivated by the transitions of beloved friends and associates during recent years, and the eighth psychosocial stage of life proposed by Erikson, that of *integrity versus despair*, Susan has written a book to read by or to those who are birthing into the next life, *Sailing into the Light*. This beautifully illustrated metaphor, based on the 1880s' poem by Henry Van Dyke titled "Gone from My Sight," will be published in 2022.

Susan is a National Board Certified Counselor (NBCC), has a Masters level Certificate in Gerontology, and holds a Doctorate of Divinity from the American Institute of Holistic Theology (AIHT) seeking to balance psychological theory and practice with spiritual and holistic wisdom.

## HELPFUL DEFINITIONS

- ***Auscultation:*** *listening to sounds of the body using a stethoscope.*
- ***Childbirth Educator:*** *a professional trained to offer sources of information, with skills to support parents as they prepare for pregnancy, labor, birthing, and parenthood.*
- ***Circumcision:*** *the surgical removal of the foreskin, the tissue covering the head(glans) of the penis.*
- ***Doula:*** *a woman who serves other women by providing physical and emotional support before, during, or after they give birth.*
- ***Evidenced Based:*** *a designation given to processes or procedures that demonstrates effectiveness through scientific studies.*
- ***Failure to Progress:*** *a term used to describe arrested labor but is both over diagnosed and disempowering to women.*
- ***Green Pregnancy, Birth, Nursery:*** *the use of products that are natural with no chemicals and considered safe for baby**.***
- ***Holistic medicine:*** *a form of healing that considers the whole person—body, mind, emotions, and spirit—in the quest for optimal health and wellness.*
- ***Homeopathy:*** *treatments used with natural remedies.*
- ***Induction:*** *the process of causing labor to begin, usually with medication. It may be medically necessary or elective.*
- ***Infant Massage:*** *combinations of touch and massage therapy to enhance the physiological, structural, and emotional well-being of newborns through the first year, and to bond and form secure attachments with their caregivers.*
- ***Infant Mortality Rate****: the number of infant deaths per 1,000 live births.*
- ***Intervention:*** *procedures administered either to speed up or slow down labor.*
- ***Lactation Consultant:*** *a healthcare professional trained to assist mother and baby in breastfeeding.*
- ***Maternal Mortality Rate****: the number of women per 100,000 who die from birth related causes up to one year following giving birth.*
- ***Midwife: a*** *traditional care provider trained to support women during pregnancy, at birth, and during the postpartum period.*
- ***Miscarriage:*** *the loss of an embryo or fetus before the 20$^{th}$ week of pregnancy**.***
- ***Newborn Care Specialist:*** *a trained person who aids the mother after birthing, often to help baby learn to sleep through the night; not a nurse.*
- ***Nulliparous:*** *the medical term for a woman who has never given birth although the term includes women who have borne a stillborn or nonviable infant.*
- ***Oxytocin:*** *the "love" hormone secreted during birthing and lactation.*
- ***Physiological birth:*** *birthing vaginally according to Nature's design.*
- ***Placental Encapsulation:*** *a process of saving the placental nutrients in capsule form.*
- ***Postpartum Depression:*** *a negative mental state following birthing that usually needs treatment and extra care*

- ***Prenatal and Perinatal Psychology:*** *The study of the mental, emotional, and behavioral aspects of life that originate prior to or around the time of birth.*
- ***Preterm birth (Prematurity)****: Birth before 37 completed weeks of gestation.*
- ***V-BAC:*** *Vaginal birth after having had a previous Cesarean section.*

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**Love vs. Fear**

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