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ICEA The International Childbirth Education Association (ICEA)

October 13 -15 Core Conference
October 11 & 12 Preconference workshops

Renaissance Denver Stapleton Hotel
3801 Quebec Street | Denver, CO 80207
Free airport shuttle

Reaching the Highest Peaks in Evidence-Based Practice

Join us for the 2016 Conference!

Sessions this year will include information on:

- ✓ Learning Lab Skills Sessions
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- ✓ Somatic Trauma Resolution
- ✓ Self – Care for the birth professional
- ✓ Perinatal Mood and Anxiety Disorders
- ✓ ICEA Member reception hosted by the President

We are excited to feature these Internationally acclaimed childbirth activists and speakers:

Barbara Harper RN CD CCE

Rep. Kelly Townsend
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Jennie Joseph LM CPM

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Nicette Jukelevics | Birdie Gunyon Meyer | Jeanne Green
Donna Walls | Connie Livingston | Tamela Hatcher | Lisa Wilson
Jennifer Shryock | Colleen Weeks | Jana McCarthy

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Part 1 Creating & Developing an Effective Curriculum
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For the first time ever Attendees who attend all general sessions with Jennie Joseph will receive a certificate as a Maternal Child Health Specialist – *at no additional charge!*

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International Childbirth Education Association

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Indexed in the Cumulative Index to Nursing and Allied Health Literature (CINAHL)

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Making *Change*

by Debra Rose Wilson, PhD MSN RN IBCLC AHN-BC CHT

It's up to each of us to make a difference. Positive social change is possible in your neighborhood or throughout world. You already touch so many lives, and send out a ripple of change. And those you touch transform the lives of others because of you and your influence. Set your intention to meet a need and make a difference using your skill and passion.

The Social Change Model of Leadership used in many university community service programs offers insight into those wishing to effect positive social change. The model seems to apply particularly well to care teams and educators in many settings. Social change comes about through the symbiotic interactions of individuals, groups, and the larger society. There are core values associated with each of these perspectives that map well to practitioners and educators, all conveniently beginning with the letter "C."

The key individual values consist of:

- Consciousness of self (awareness, reflection on values and goals)
- Congruence (personal integrity, true presence)
- Commitment (serving others)

The group values in the model include:

- Collaboration (fostering collegiality)
- Common purpose (shared goal), and
- Controversy with civility (mutual respect)

The value represented at the societal level is citizenship, a positive investment in the community.

Debra Rose Wilson

There is so much work to be done, and you are already doing so much. Reflect on what is important to you and look for ways of making a difference. Commit to even more service to others. Seek partnerships and shared goals that will help others. Learn strategies and develop the capacities to make a difference. There is a growing movement of global citizens actively solving the world's problems. Service to your professional organizations like ICEA or service to an in need population can change the world. Take action. Believe your actions will have an effect. Civic responsibility is required from all, but even more so for those of us with special training or education. Make an even bigger ripple.

My special thanks to the guest editors Drs Deborah Weatherspoon and Debra Sullivan who are nurse educators. They helped gather, review, and edit articles for this issue. Let us know what you think about the issue.

Peace,

Debra
editor@icea.org

Brief Writer's Guidelines for the ICEA *Journal*

Articles should express an opinion, share evidence-based practice, disseminate original research, provide a literature review, share a teaching technique, or describe an experience.

Articles should be in APA format and include an abstract of less than 100 words. The cover page should list the name of the article, full name and credentials of the authors and a two to three sentence biography for each author, postal mailing addresses for each author, and 3 to 5 keywords. Accompanying photographs of people and activities involved will be considered if you have secured permission from the subjects and photographer.

In Practice Articles – These shorter articles (minimum 500 words) express an opinion, share a teaching technique, describe personal learning of readers, or describe a birth experience. Keep the content relevant to practitioners and make suggestions for best practice. Current references support evidence-based thinking or practice.

Feature Articles – Authors are asked to focus on the application of research findings to practice. Both original data-driven research and literature reviews (disseminating published research and providing suggestions for application) will be considered. Articles should be double spaced, four to twelve pages in length (not including title page, abstract, or references).

For more information for authors please see our website at www.icea.org.

Join the R.A.C.E. – Reaching the Highest Peaks in Evidence Based Practice

by Connie Livingston, RN BS FACCE LCCE ICCE

One of the major goals of this ICEA Board of Directors has been to come along side of the members and assist in setting the members up for success. Nothing reflects this goal better than the 2016 ICEA Annual Conference in Denver October 13 -15!

Join us in the R.A.C.E. – **R**aising **A**wareness for maternity **C**are that is **E**vidence-based. As an organization, we should be raising awareness for care that is evidence-based to our peers, colleagues and those who visit our practices and classes. Research today defines changes in the maternity care system as coming from the informed consumer. Education is key. What you tell your clients in each doula, prenatal or postpartum visit and in your childbirth education classes raises awareness and strengthens them as parents. Ultimately, this education will stimulate a consumer-driven push for more evidence-based maternity care.

The 2016 Conference will definitely enable you to reach the highest peaks in evidence-based practice with pre-conference workshops including Professional Childbirth Educator, Birth Doula, Postpartum Doula, and Early Lactation Care Workshop. For the first time, ICEA is proud to be presenting a two part preconference workshop entitled "Tools for Success." Part One includes skills for curriculum development and Part Two includes skills for creating PowerPoint Presentations.

Connie Livingston

The 2016 Conference speakers include many of the birth industry leaders including: Jennie Joseph, Barbara Harper, Nicette Jukelevics, Birdie Gunyon Meyer, and Jeanne Green. We are also excited to welcome Arizona Representative Kelly Townsend. Representative Townsend is a long-time advocate of evidence-based maternity care. Another first for ICEA is our "Learning Labs" session where attendees can experience essential hands-on learning skills they can immediately take back and add to their childbirth education or doula practice! Of course, you can see the entire line-up of amazing speakers by clicking on www.icea.org/2016-conference.

Please join us at the ICEA Member Reception (hosted by the President!) on Thursday night, October 13 from 6:00 pm to 9:00 pm. This is a perfect opportunity to meet new friends and rekindle past relationships. You'll be able to chat with exhibitors, enjoy food and beverage, and mingle with the speakers, while thoroughly enjoying the beauty of the Renaissance Denver Stapleton Hotel.

So don't wait another moment! Register now for the conference and join us in Raising Awareness for maternity Care that is Evidence-based as we Reach the Highest Peaks in Evidence Based Practice! This is one conference you won't want to miss!

In your service,

Connie Livingston, RN BS FACCE LCCE ICCE
ICEA President
President@icea.org

Receive *Healthy Mom&Baby* Magazine for Prenatal Classes

ICEA members can obtain AWHONN's *Healthy Mom&Baby* magazines for distribution at prenatal classes by creating an account and requesting these magazines at www.bit.ly/hmbmags. *Healthy Mom&Baby* media is AWHONN's free, evidence-based, baby-friendly, and expert-authored patient education program in the form of a quarterly magazine, iPad app, flipbook, website, and social media. Find *Healthy Mom&Baby* online at www.Health4Mom.org

Open Forum Issue Offers *Something for Everyone*

by Debra Henline Sullivan, PhD MSN RN CNE COI and Deborah Weatherspoon, PhD MSN CRNA COI

As young nurses, we thought obstetrics was the happiest unit in the hospital… most of the time. Occasionally there are challenges and perhaps even negative outcomes that childbirth educators should be ready to discuss. A current example is the latest increase in Zika virus infection and the negative outcomes associated with the infection during conception and pregnancy. The rapid spread of Zika is a public health crisis that has created a political storm regarding funding for research. Fueled by fear of the unknown, heavy media coverage, and concerns about what this virus can do, Zika is a topic that childbirth educators are likely to be asked to address. Parents want to know the risks for their future children. The far reaching psychological effects of the recent media coverage was emphasized to me when my granddaughter, who has no plans for a pregnancy for several more years, asked me if she needed to be concerned or do something to protect herself. As childbirth educators, we will be asked to explain, reassure, and guide our clients and future clients with accurate information. This issue includes two articles on Zika with information on the virus, its transmission, and recommendations to share with clients.

In this open topic edition, we touch on several other important issues that may occur during pregnancy and present accurate information and understanding. Maternal cardiovascular and pulmonary disease, psoriasis, and breast cancer unfortunately occur before, during, and after pregnancy and present unique challenges and the need for education. In addition to physical challenges, there are many psycho-social challenges and health behaviors as well. One article addresses the unique population of pregnant veterans who are at risk for PTSD and depression. Another addresses the distinctive needs of lesbian couples; even simple things like what name do they want to be called…mom 1, mom 2, bio-mom create a sometimes awkward moment when one is not prepared for it. This article provides useful information on how to approach questions and concerns for this population. Possessing a high Emotional Intelligence is helpful when communicating with all clients and this issue includes how EI supports a good relationship and clear communication patterns for all those awkward moments. In addition, we include information on health literacy, and education for fathers. Finally, if you are looking for some interesting new books, check out the book reviews. We believe that there is something for everyone in this issue and sincerely hope you enjoy it.

Debra Henline Sullivan, PhD, MSN, RN, CNE, COI is a certified nurse educator (CNE) and certified online instructor (COI). She is a full time faculty member teaching graduate nursing education at Walden University.

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In the Midst of Zika: The Role of Childbirth Professionals

by Christine Frazer, PhD CNS CNE, Leslie C. Hussey, PhD RN CNE, Bobbie Sue Whitworth, PhD MSN RNC, and Nicole Paleo, BSN BA RN C-EFM

Abstract: The rapid spread of Zika virus presents a public health crisis. Zika is a mosquito-borne virus transmitted through the bite of infected Aedes mosquitoes. Symptoms of Zika virus develop 2 to 12 days after the bite and range from no symptoms to maculopapular rash, fever, arthralgia, muscle pain, headache, and conjunctivitis. Zika virus is especially dangerous to pregnant women as it can cause fetal brain defects, hearing loss, ocular abnormalities, and central nervous system defects. Because there is no vaccine or specific treatment, it is imperative for childbirth professionals to arm themselves with the most up-to-date information. This article aims to provide childbirth professionals with an overview of Zika virus, the recommended prevention measures, and their role in preventing the spread of Zika virus and its consequences.

Keywords: Zika virus; Aedes mosquitos; Aedes aegypti mosquito, microcephaly; fetal outcomes; childbirth professional role

Globally, the rapid spread of Zika virus presents a public health crisis (World Health Organization [WHO], 2016). Awareness of this crisis amongst the general population has spread just as rapidly through various media outlets (newspapers, television, radio, and internet). Currently, there is no vaccine to prevent Zika virus infection, and an increasing amount of research suggests an association between Zika virus and microcephaly in newborns. Coupled with this heightened awareness, a lack of a vaccine, and dire fetal outcomes, questions, concerns, and perhaps fears arise especially in women who are pregnant or trying to get pregnant. Henceforth, it is imperative for childbirth professionals working directly with pregnant women or women who are trying to conceive to arm themselves with the most accurate and up-to-date information in the midst of this Zika crisis. For this reason, an overview of Zika virus (what it is, how it is transmitted, clinical manifestations, diagnosis, treatment, and associated fetal outcomes), along with recommended Zika prevention measures is presented in this article.

the rapid spread of Zika virus presents a public health crisis

Overview of Zika Virus

Zika is a mosquito-borne virus predominantly transmitted through the bite of infected female *Aedes aegypti* mosquitoes; tiny black mosquitos with distinctive white stripes on its back and legs (Center for Disease Control and Prevention [CDC], 2016; Chang, Ortiz, Ansari, & Gershwin, 2016; WHO, 2016). WHO (2016) reports that the Zika virus was first identified in rhesus monkeys in the late 1940s. Over a decade later, in 1952, the virus presented itself in humans in Uganda and the United Republic of Tanzania. In 2007 and 2013, outbreaks of the Zika virus disease were reported in Yap and French Polynesia, and in 2015 from Brazil, Colombia, and Africa (WHO, 2016a). As of April 28, 2016, countries and territories with active Zika virus transmission (see table 1) include Africa, Americas, and the Oceania/Pacific Islands (CDC, 2016a).

Transmission of Zika Virus

Transmission of Zika virus can be broken down into two categories: mosquito-borne transmission and non-mosquito transmission.

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Mosquito-Borne Transmission

Zika virus can be transmitted to humans through direct bite from an infected mosquito. The *Aedes aegypti* mosquito is primarily the dominant carrier of Zika; however, *Aedes albopictus*, also known as the Asian tiger mosquito with similar black and white striped legs and body, is believed to play a role in transmission of the virus in 2007 (CDC, 2016; Chang et al., 2016; WHO, 2016). Zika virus continues to spread as mosquitoes bite and feed on humans who are sick and infected with the virus and then bite and feed off other people who are healthy (CDC, 2016). The term, *local mosquito-borne* transmission, is a term used to identify when infected mosquitoes are present in the local environment in which one lives, and an individual becomes sick (CDC, 2016). Travel-associated transmission occurs when individuals travel into an area of local Zika infected mosquitoes and then become infected (CDC, 2016). In total, since 2007, 55 countries and territories have reported mosquito-borne (local and travel-associated) transmission. However, 42 of the 55 countries are experiencing mosquito-borne transmission of the Zika virus for the first time since 2015 (WHO, 2016b). Currently, no local mosquito-borne cases of Zika virus have been reported in the United States; however, 426 travel-associated transmission cases have been reported (CDC, 2016c).

Non-Mosquito Transmission

The spread of Zika virus through non-mosquito transmission includes vertical modes (from mother to child) along with horizontal modes (through sexual contact). Other modes of transmission include laboratory exposure, organ or tissue transplantation, and blood transfusion (Driggers et al., 2016). Although transmission of Zika virus occurring through blood transfusion has not been reported in Brazil, this mode of transmission is currently being investigated further (CDC, 2016).

Vertical Transmission

Evidence reports transmission of Zika virus from mother to fetus can occur in any trimester throughout the pregnancy (Baden, Petersen, Jamieson, Powers, & Honein, 2016; Besnard, Lasatere, Teissier, Cao-Lormeau, & Musso, 2014; CDC, 2016e). "Zika virus RNA has been identified in the amniotic fluid of mothers whose fetuses had cerebral abnormalities detected by ultrasonography, and viral antigen and RNA have been identified in the brain tissue and placentas of

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Table 1. Active Zika Virus Countries and Territories

Africa	Oceania/Pacific Islands	Americas	
Cape Verde	American Samoa	Aruba	Guatemala
	Fiji	Barbados	Guyana
	Kosrae, Federated States of Micronesia	Belize	Haiti
	Marshall Islands	Bolivia	Honduras
	New Caledonia	Bonaire	Jamaica
	Papua New Guinea	Brazil	Martinique
	Samoa	Colombia	Mexico
	Tonga	Commonwealth of Puerto Rico, US territory	Nicaragua
		Costa Rica	Panama
		Cuba	Paraguay
		Curacao	Saint Lucia
		Dominica	Saint Martin
		Dominican Republic	Saint Vincent and the Grenadines
		Ecuador	Saint Maarten
		El Salvador	Suriname
		French Guiana	Trinidad and Tobago
		Guadeloupe	U.S. Virgin Islands
			Venezuela

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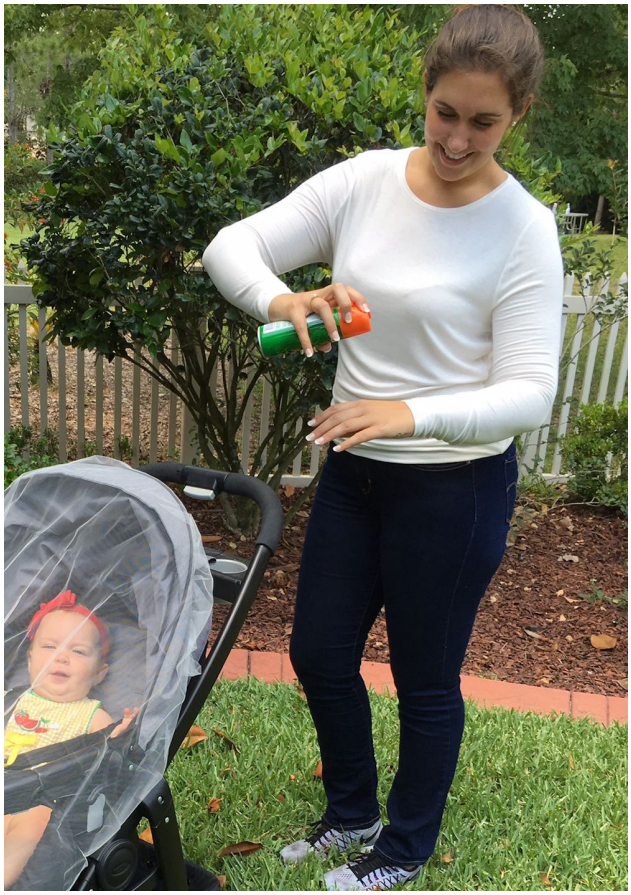
children who were born with microcephaly and died soon after birth, as well as in tissues from miscarriages" (Baden et al., 2016, p.1555). In addition, Zika virus in saliva and urine of mothers and their newborn babies after birth has been detected (Brasil et al., 2016). Lastly, although breast milk from mothers confirmed with Zika virus detected Zika virus RNA, there are no documented reports of the virus transmitting to infants through the act of breastfeeding (CDC, 2016d; WHO, 2016c). Even in areas with active Zika virus, mothers are urged to breastfeed (CDC, 2016d).

Horizontal Transmission

Zika virus can transmit to pregnant women who engage in sex (vaginal, anal, and oral) with partners who have either lived in or recently traveled to areas with active Zika virus (CDC, 2015). Studies show the presence of Zika RNA in male semen and the virus can spread before Zika virus symptoms present and after Zika virus symptoms resolve (Atkinson et al., 2016; CDC, 2016e; Mansuy et al., 2016). A total of nine countries (Argentina, Canada, Chile, France, Italy, New Zealand, Peru, Portugal and the United States of America) report person-to-person transmission of Zika virus, most likely through sexual route (WHO, 2016b).



Clinical Manifestations of Zika Virus

Reports vary in regards to the incubation period between time of mosquito bite and the onset of clinical manifestations; however, most report symptoms usually appear between 2 to 12 days (Zanluca & dos Santos, 2016). Symptoms of Zika virus in the pregnant woman range from asymptomatic (80%) to maculopapular rash, low-grade fever, arthralgia, muscle pain, headache, and conjunctivitis (Chang et al., 2016; Zanluca & dos Santos, 2016). Symptoms of the virus usually last up to a week (CDC, 2015; WHO, 2016a). Moreover, there is no evidence that directly points to pregnant women being more susceptible to Zika virus infection than nonpregnant adults (Besnard et al., 2014; Petersen et al., 2016).

Diagnosing Zika

Symptoms of Zika virus are similar to other mosquito-transmitted illnesses such as dengue and chikungunya viruses; therefore, evaluation by the healthcare provider is required to diagnose Zika virus. Pregnant women infected with Zika virus may be asymptomatic. Preliminary diagnosis of Zika virus is based on clinical manifestations of the pregnant woman along with recent dates and places of travel (WHO, 2016a). For pregnant women with no relevant exposure (i.e. living in or traveling to and from an area with known mosquito-borne transmission or unprotected sexual contact with a partner who meets these criteria), laboratory testing for Zika virus infection is not indicated (Petersen at al., 2016). However, if a pregnant woman with relevant exposure presents with two or more symptoms indicative of Zika virus, such as rash, arthralgia, or low-grade fever, healthcare providers should check serum Zika virus by reverse transcription polymerase chain reaction (RT-PCR) within the first seven days after onset of symptoms (WHO, 2016a). A diagnosis of Zika virus is based on positive test results (Driggers et al., 2016). Zika virus serologic testing (Zika virus IgM and neutralizing antibody titers) is recommended for asymptomatic pregnant women with relevant exposure (WHO, 2016a). Lastly, ultrasound examination for pregnant women who are symptomatic or asymptomatic but with relevant exposure to Zika virus is also recommended (Driggers et al., 2016; Petersen et al., 2016; WHO, 2016d).

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Treatment

At present, there is no specific treatment for Zika virus or a vaccine to prevent Zika virus infection. Current treatment is aimed at reducing symptoms. Supportive treatment includes bed rest, increased fluid intake, use of analgesics and antipyretics (Petersen et al., 2016). Non-steroidal anti-inflammatory drugs (NSAIDs) and aspirin should be avoided (CDC, 2015). Serial ultrasounds should be used to monitor for fetal anomalies and referral to a specialist is recommended to manage the illness and promote positive patient outcomes.

Zika Virus and Associated Fetal Outcomes

Zika virus has been shown to increase the development of fetal abnormalities (McCabe, 2016). Studies support that Zika virus is the cause of microcephaly and other fetal brain defects in infants born to mothers who have had the Zika virus (Baden et al., 2016; CDC, 2016e; Rubin, Greene, & Baden, 2016). Fetal defects also include hearing loss and impaired growth (CDC, 2015) and ocular abnormalities such as focal pigment mottling, chorioretinal atrophy and optic nerve deformities (McCabe, 2016). Central nervous system defects detected as a result of Zika virus include ventriculomegaly, global hypogyria, hydranencephaly and fetal growth restrictions (McCabe, 2016).

Table 2. Mosquito Prevention Measures

Environmental Measures

- Empty standing water in pots, buckets, tires, birdbaths, kiddy pools, trash cans, and other containers
- Cover water tanks and rain barrels
- Cover open vent or plumbing pipes with wire small hole mesh
- Eliminate still water soon after rain

Personal Protective Measures

- Wear long-sleeved shirt and pants, socks and shoes
- Wear Permethrin-treated clothes
- Use age appropriate and EPA-registered insect repellents
- Install screens on windows and doors
- Keep windows and doors shut
- Stay inside in screened-in or air-conditioned rooms
- Use mosquito netting to cover infants and children in strollers and carriers
- Sleep under mosquito nets covering cribs or beds

Role of Childbirth Professionals

Stay Current and Well-Informed

In the ever changing midst of Zika virus, it is imperative for childbirth professionals working with women who are pregnant or trying to get pregnant to stay current and well-informed as new evidence and recommendations for disease management and prevention emerge. Professionals should monitor both the WHO and CDC websites routinely as these agencies continue to update their websites regularly in regards to Zika outbreaks, new research findings, recommendations/guidelines, and even to dispel myths and rumors around Zika.

Communicate Risks of Transmission and Potential Preventive Measures

Equally important to staying current and well-informed about Zika virus is communicating with clients the risks of transmission and potential preventive measures. According to the World Health Organization (2016a) and CDC (2016f), an estimated 3 to 4 million people will become infected with Zika virus in the upcoming year, with only one in five people developing symptoms. Though no specific treatment is required while the virus takes its course, helping clients to understand the risks of transmission and the potential preventive measures to put into action is an essential part of helping to protect them from infection in the first place.

In January, agencies began cautioning women who are pregnant against traveling to areas where the Zika virus is actively being transmitted (CDC, 2016f; WHO, 2016e). Recommendations have continued evolving as more and more evidence is being discovered about the Zika virus. Henceforth, the most recent changes to the advisories have been the extension of the Zika travel precautions from just pregnant women to their partners and other individuals or couples considering starting a family as well.

In addition to updated travel precautionary measures, evolving research and the potential to affect adverse fetal outcomes guidelines were updated to include counseling clients about pregnancy planning and the timing of pregnancy. The CDC (2016g) recommends a specified timeframe based on actual Zika diagnosis or presentation of Zika virus symptoms, before men and women attempt to conceive a child. For individuals with a diagnosis of active Zika or have active Zika virus symptoms, the recommended timeframe is 8 weeks for women and 6 months for men. For men and women who had possible exposure but show no symptoms of Zika virus, the recommended timeframe is 8 weeks. Lastly, for those who live in areas of active Zika transmission, the CDC encourages health professionals to have conversations with couples about Zika facts, current research findings, and

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potential fetal outcomes. In the end, it is ultimately up to couples to decide whether or not to postpone family planning until the Zika outbreak subsides in their area.

In addition to the above, documented cases of transmission through semen have contributed to further precautionary measures in regards to sexual activities. The CDC (2016g) urges individuals with confirmed Zika virus or symptoms of Zika virus to use condoms or to abstain from sex (oral, vaginal, or anal) for up to 6 months. For individuals who are asymptomatic but have recently traveled to an area with active Zika virus, the use of condoms or sexual abstinence for a period of at least 8 weeks or the remainder of any current pregnancy is recommended. Lastly, for those without symptoms of the virus but living in an area of active Zika transmission, CDC advises for use of condoms or abstinence while there is active Zika transmission in their area.

Experts at the CDC (2016h) encourage those who are infected with Zika virus to protect others by using preventive measures to stop any further transmission through additional mosquito bites during the first week of illness. For asymptomatic travelers returning from countries and territories with active Zika virus to locations without active virus, steps to prevent mosquito bites for 3 weeks is necessary.

Teach Mosquito Prevention Measures

Mosquito prevention measures aid in reducing the risk of people being bitten by Zika-infected mosquitoes; therefore, it is crucial to share recommended prevention measures with all clients (CDC, 2016h; WHO, 2016d; Zanluca & dos Santos, 2016). Table 2 includes both environment and personal protective measures to be taken to reduce the risk of mosquito bites and to remove or modify breeding sites (WHO, 2016a). Although Aedes mosquitoes are most active during the daytime hours, mosquito bites can happen at any time, day or night; therefore, a mindset of 24/7 prevention needs to emerge.

Mosquito Insect Repellents

Childbirth professionals should educate clients on the safe use of insect repellents. Repellents registered with the Environmental Protection Agency (EPA) that are safe for pregnant and breastfeeding women are those that contain DEET (up to 30 percent concentration) and picaridin (20 percent) (Lafrance, 2016; WHO, 2016a). Although warranted for women who are pregnant and breastfeeding, insect repellents should not be used in babies younger than 2 months old (CDC, 2016h). Alert clients of the importance of following product label instructions when applying and reapplying insect repellent. Moreover, if using sunscreen, inform clients that repellents should be applied after sunscreen (CDC, 2016h).

Make Referrals

Lastly, childbirth professionals must be aware of other professionals (i.e. infectious disease specialists, maternal-fetal medicine) with expertise and experience in Zika virus management within their local or surrounding area. Referrals to infectious disease and maternal-fetal medicine specialists, especially for pregnant women, may be warranted.

Conclusion: Points of Relevance

In summary, childbirth professionals working with women who are pregnant or trying to conceive, must be ready to not only answer those common "what to expect in pregnancy" questions, but now be prepared to provide accurate and clear answers to clientele during a worldwide Zika crisis. Therefore, it is important for childbirth professionals to:

- Equip themselves with knowledge about Zika virus (transmission, clinical manifestations, diagnosis, treatment, and outcomes)
- Stay up-to-date on Zika virus as new information and research findings emerge
- Ask questions about possible exposure, recent travel, and occurrence of symptoms
- Communicate facts about the Zika virus infection and guidelines for prevention
- Make referrals as necessary

The spread of Zika virus indeed presents a global health crisis. Unequivocally, childbirth professionals can play an important role in halting Zika's path and its consequences.

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Impact of Health Literacy Levels in Educating Pregnant Millennial Women

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Abstract: A pregnant woman's ability to understand information on prenatal care is crucial. Millennials are accustomed to instant availability of information via the internet, but health literacy levels affect their ability to understand and apply this information to health needs. A significant portion of the population has low health literacy skills. Childbirth health care professionals must be aware of patients' health literacy levels and utilize appropriate teaching strategies to ensure health information is understood in order to maximize its benefits.

Keywords: health literacy, millennial, pregnant, health literacy levels

A pregnant woman's ability to find and understand information on prenatal care is crucial regarding her health and the health of her baby. Before seeing the obstetrician or childbirth practitioner, which may be several weeks or months following conception, pregnant women may seek sources of information from other sources. Because the vast majority of pregnant women are Millennials, who were born between 1980 and 2000, they often obtain health information from the internet and media. Readily available information, such as that from the internet and the media, does not assure quality or accuracy of the information (Frazer, Hussey, Bosch & Squire, 2015), nor does it guarantee pregnant women will understand the information and be able to apply it to their health needs. This need is especially critical in pregnant women who may have a low health literacy level. Health literacy is "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (Glassman, 2013, p. 2). Health literacy is not only the ability to read but also requires the skills of listening, analyzing and decision-making and the capacity to apply these skills to healthcare situations, such as understanding how to take medications correctly, understanding documents such as consent forms, and following treatment plans (Glassman, 2013).

A particular focus area of health literacy is maternal health literacy. Renkert and Nutbeam (2001) proposed the definition of maternal health literacy as "cognitive and social skills which determine the motivation and ability of women to gain access to, understand, and use information in ways that promote and maintain their health and that of their children" (p. 382). Millennials have been exposed to the internet and instant availability of information for most of their lives, so gaining access to information is relatively easy for them. Millennials are characterized as assertive, self-reliant, and curious using technology to gather information (Skiba & Barton, 2006; Tapscott, 1998). They are quick to learn and are proficient at multitasking. Millennials use social networking sites as a primary communication strategy for conducting and maintaining relationships and discovering information, and many prefer texting to phone calls or face to face conversations (Chambers, 2010). The Millennial generation is accustomed to a digital world and how technology enables them to access instant information (Grimes, Forster, & Newton, 2014; Kraschnewski et al., 2014). Characteristics of the Millennial generation are listed in Table 1. Despite the desire for multiple information sources and electronic information seeking, it is not clear how well this information is understood and how it affects the health and wellbeing of the pregnant Millennial woman (Lloyd et al., 2013) because a significant portion of the population has low health literacy skills (Shieh, Mays, McDaniel, & Yu, 2009).

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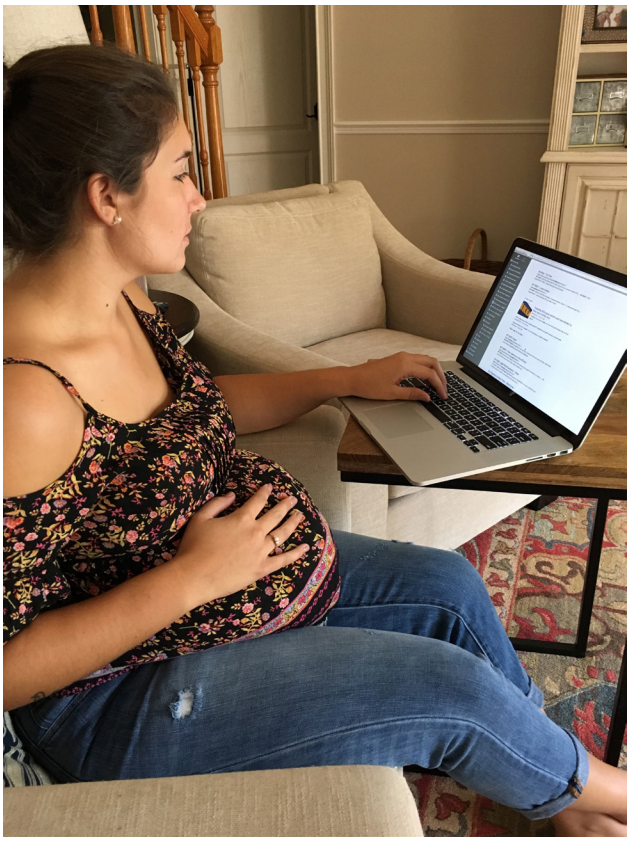
Table 1. Characteristics of the Millennial Generation

- Seek information via the internet and smartphone apps
- Desire information from many sources
- Seek support through social web sites
- Prefer texting to phone calls or face to face contact
- Need flexibility and want constant stimulation
- Are assertive, self-reliant and curious

Note: (Sources: Grimes et al., 2014; Kraschnewski et al., 2014; Skiba & Barton, 2006; Tapscott, 1998).

Health Literacy and Pregnant Millennial Women

Baker (2006) described two domains of health literacy: individual capacity and health-related literacy. Individual capacity refers to the person's reading ability and fluency and prior knowledge including vocabulary and conceptual knowledge of health and health care (Baker, 2006). Health-related literacy includes the ability to understand oral communication and written materials about health care topics (Baker, 2006). The level of complexity of the oral and written health care information influences a pregnant woman's ability to understand and communicate her perception of understanding (Baker, 2006).



Low health literacy impairs women's ability to understand and apply health information to their pregnancy (Shieh et al., 2009). Low literacy levels are associated with lower levels of education and low socio-economic status, which makes access to health care resources challenging, and those with special communication needs can be linked to cultural and language backgrounds (Barber et al., 2009; Federman et al., 2013). A person's beliefs about medicine and their health literacy level also have a significant impact on healthcare decisions (Fang, Panguluri, Machtinger, & Schillinger, 2009). According to Lloyd et al. (2013) and Schulz and Nakamoto (2012), Millennials receive and understand basic health information, such as "don't smoke" and "eat healthy" but may not be able to interpret the application of that information to more complex situations such as pregnancy.

Health literacy, then, extends beyond the basic ability to gain access to common health information and services needed to make health decisions to deeper levels of understanding. This deeper level is the ability to extract health information from various sources, evaluate the information, and apply it to their own individual situation to derive maximum benefit to their health (Lori, Munro, & Chuey, 2016; Nutbeam, 2000).

Levels of health literacy influence the health-related decisions made by pregnant women (Duggan et al., 2014; Lupatelli, Picinardi, Einarson, & Nordeng, 2014). Considering that these decisions greatly affect the unborn fetus as well as pregnant women, emphasis must be placed on helping pregnant women, especially those with low health literacy skills, to understand and utilize the information that is readily available to them.

Health Literacy and Maternal-Fetal Outcomes

Low health literacy is linked to higher mortality, negative outcomes, and less use of preventive care in pregnant women (Gazmararian, Yang, Elon, Graham, & Parker, 2012). Women with low health literacy are less likely to know about important pregnancy and prenatal topics, such as screening tests for birth defects and the effects of smoking on the baby during pregnancy. They are more likely to have unplanned pregnancies due to the lack of understanding about fertility and ovulation. These women may lack the necessary skills to understand the requirements for health maintenance, such as keeping appointments and taking medication properly. This lack of health literacy skills is linked to poor pregnancy outcomes, including low birthweight and pre-term babies (Shieh et al., 2009; Wiener & Wiener-Pla, 2014).

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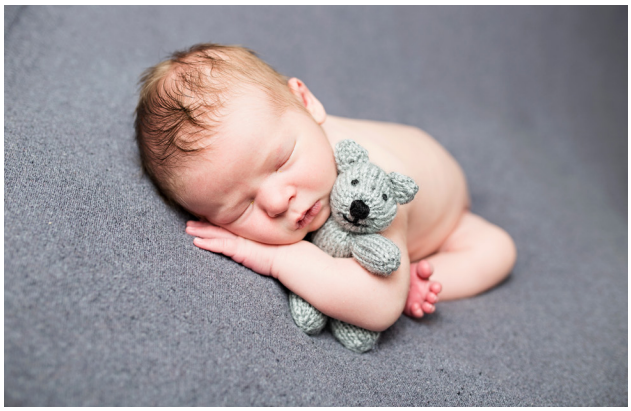
Health Literacy and Perception of Risk

Adherence to a prescribed treatment plan often depends on the patients' perceptions of the impact of medically identified risk factors (MIF) (Headley & Harrigan, 2009). The understanding and perception of risk have an impact on patients' motivation to follow antenatal recommendations and adjust behaviors to minimize risk factors. One study by Headley and Harrigan (2009) sought to determine if a relationship existed between a pregnant woman's perception of her risk and MIFs. MIFs included hypertension, obesity, gestational diabetes, advanced maternal age and vaginal bleeding during pregnancy. The authors used the Pregnancy Perception of Risk Questionnaire (PPRQ) to evaluate the patient's perception of prenatal risk. The PPRQ, initially developed and tested by Heaman and Gupton (2009), is a self-administered tool that measures the intensity of subjective feelings and strength of attitudes and opinions in pregnant women. Headley and Harrigan (2009) found a relationship between the type of prenatal clinic (high risk versus standard care) and PPRQ scores but showed no significant relationship between patients' PPRQ scores and the MIFs. Women who were not identified as high risk may not realize or fully understand that risk also exists for them during their pregnancy (Headley & Harrigan, 2009).

Health Literacy and Medication Adherence

Choices that pregnant women make affect both her and her baby. Medication non-adherence by patients challenges childbirth healthcare professionals to provide information which instructs the patients about appropriate medications. Low health literacy contributes to patient dissatisfaction when communicating with the childbirth healthcare professional as well as fear or misunderstanding about the purpose of medications and how they affect the patient's quality of life. For example, low health literacy has an impact on a woman's ability to use contraceptive methods effectively for family planning and has been linked to unplanned pregnancies (Lupatelli et al., 2014). Unplanned pregnancies and nonadherence to prescribed medication regimens due to negative beliefs about medicines can adversely affect fetal health outcomes (Duggan et al., 2014). Lupatelli et al. (2014) conducted a multinational cross-sectional study to evaluate the connection between health literacy, mothers' perception of beliefs and risks of medications to their use and non-adherence to prescribed medications during pregnancy. Lupatelli et al. (2014) revealed that women with low health literacy often had negative beliefs about medications and a lower rate of medication use in both over-the-counter and long-term/chronic medications such as serotonin antagonists, selective serotonin reuptake inhibitor antidepressants, and paracetamol. Lupetalli et al. (2014) concluded that low health literacy contributes to suboptimal or nontreatment of conditions such as hyperemesis, depression, infections, such as those of the urinary tract, and cardiovascular disorders during pregnancy. Another study conducted by Duggan et al. (2014) in Ireland supported these findings by showing that at least one in seven pregnant women had limited health literacy skills which were associated with a higher level of negative beliefs about taking medication.



Bianca Hubble, Axsys Design

Health Literacy and Breastfeeding

Breastfeeding has many health benefits such as protection of the mother's health and antibodies that protect the baby against infant diseases (Bartick & Reinhold, 2010; Hung & Berg, 2011). The recommendations from the Centers for Disease Control and Prevention (2014) are to increase the rate of infants who are ever breastfed to 81.9%, and the infants who are exclusively breastfed for three to six month after birth to 46.2% and 25.5% respectively. The goal for breastfeeding in the Healthy People 2020 initiative calls for 60.6% of women to continue to breastfeed their babies to six months of age (United States Breastfeeding Committee, (2015). Although initial breastfeeding rates have risen to 79%, they continue to be below the recommended rates at age 3 months (40.7%) and 6 months (18.8%) (Bartick & Reinhold, 2010; Mass, 2011; United States Breastfeeding Committee, 2015).

Many elements can impede breastfeeding. Low health literacy and the access to health care were found to have a significant influence on the woman's choice to breastfeed (Danawi, Estrada, Hasbini, & Wilson, 2016; Kaufman, Skipper, Small, Terry, & McGrew, 2001). Kaufman et al.

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Impact of Health Literacy Levels

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(2001) examined the relationship between literacy levels and women's persistence to breastfeed exclusively for the first two months. There was a statistically significant correlation between breastfeeding and the mother's literacy levels, with only 23% of women in the low literacy group who initiated and exclusively breastfed their infant for the first two months compared to 54% in the higher literacy group (Kaufman et al., 2001). These breastfeeding trends related to health literacy were substantiated by other researchers. Danawi et al. (2016) reported a correlation between health literacy, cultural awareness, and breastfeeding and recommended that culturally sensitive and culturally informed education be provided.

Implications

The childbirth healthcare professional must be aware of the potential health literacy limitations of pregnant women. Conducting a comprehensive evaluation of the patient's health literacy with a validated instrument will help determine what the patient will understand and assist the childbirth healthcare professional to tailor information to the appropriate level. There may be some apprehension for childbirth healthcare professionals to conduct an assessment of health literacy levels. However, being sensitive and professional in conducting the health literacy assessment and using a validated instrument will help to allay anxiety (Ryan, et al., 2007). The Agency of Healthcare Research and Quality (2016) maintains a list of health literacy measurement tools at http://www.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/literacy/index.html

The teach-back method is one strategy to use to evaluate understanding. This method involves asking the patients to explain the topic back to the childbirth health care professional in their words rather than only asking the patient if they understand the content (Wilson, Mayeta-Peart, Parada-Webster, & Nordstrom, 2012). Using the teach-back method has been successfully used to help women with low health literacy skills (Wilson et al., 2012).

Using a range of approaches in teaching and disseminating health information is also effective such as brochures and booklets that are written at appropriate reading levels (Wilmore et al, 2015). To assist in tailoring of health information that is similar in quality, each member of the healthcare team should be trained in the use of criteria for adaptation of level appropriate communication techniques (Nutbeam, 2009) with consistent application of these teaching principles over time (Wilmore et al, 2015).

Table 2: Features of the Txt 4 Baby Program

(https://www.text4baby.org/)

- Provides text messages on baby's growth, progress and medical updates
- Texts reminders for doctor's appointments
- Web pages on health and safety topics
- Information on topics such as nutrition, baby's development, safety via web and videos
- Links to Pregnancy Resources: Weight gain, nutrition & exercise, Food safety, Prenatal Care
- New Mom Information: Growth Charts for Babies, Baby Care, Health & Safety

Because the Millennial generation is accustomed to using mobile devices such as smart phones, applications (apps) can be used as a health-literate intervention. Being aware of the e-information available through apps and web sites and evaluating the information will enable the childbirth healthcare profession to recommend the most accurate and useful information available (Frazer et al., 2015).

Evidence suggests that text messages with health care information have positive short-term outcomes (Fjeldsoe, Marshall, & Miller, 2009). The content can be written to be concise, clear, and aligned with the needs of the pregnant Millennial woman (Gazmararian et al., 2012). The Text-4Baby program is a digital health messaging program that texts health information that includes tips on healthy habits and behaviors for both mother and baby to the pregnant woman. Three free text messages per week are sent to each participant with information and tips to encourage healthy choices for the pregnancy (http://www.Text4Baby.org). Features of this program are contained in Table 2. Childbirth healthcare professionals should ensure that pregnant women understand how to enroll and benefit from this information. Gazmararian et al. (2012) found that to successfully enroll and use a simple intervention such as the Text4Baby program, participants with low health literacy are at a disadvantage; Only 50% of pregnant women with low health literacy skills were able to enroll successfully.

Meeting the patients at their level of understanding is essential. Each woman's self-efficacy, educational background, and prior knowledge affect health literacy. Lori et al. (2016) found that using varied approaches to teaching rather than just verbal communication could enhance health literacy. Approaches can include the use of picture cards,

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focus groups, and individual feedback (Lori et al., 2016). A summary of tips for teaching patients with low health literacy skills is listed in Table 3.

Table 3: Tips for Teaching

- Assess for Health Literacy Skills
- Talk in common language and keep explanations simple
- Use the teach-back method: Ask the patient to explain the topic in their own words
- Tailor health information that is consistent in quality
- Incorporate a variety of teaching methods such as level-appropriate written materials, pictures, apps
- Consistent teaching methods

Conclusion

Awareness of health literacy is crucial to meet the health information needs of pregnant Millennial women. Low health literacy contributes to patients' dissatisfaction when communicating with their healthcare professional. Easing fears about medicines to prevent pregnancy complications can be accomplished by improving childbirth healthcare professional to patient communication and utilizing multiple teaching strategies to enhance understanding and overcome low health literacy (Walfisch, Sermer, Matok, Einarson, & Koren, 2011).

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Emotional Intelligence and the Childbirth Educator

by Mary Morrison, BS, and Jeanne Morrison, PhD MSN RN

Abstract: Pregnancy is a life-changing event for any woman and many challenges and stressors can be present. It is important the childbirth educator not only recognizes these possible stressors of an expectant mother but also understands how to interact and intervene when necessary. An educator must first begin to understand their own level of emotional intelligence (EI) with the four competencies of EI: self-awareness, self-management, social awareness, and relationship management. The article will discuss the understanding and application of the competencies of emotional intelligence for the childbirth educator.

Keywords: emotional intelligence, pregnancy, childbirth, educator

Pregnancy is a life-changing event for any woman. Because of the physical and emotional changes, pregnancy may trigger a variety of emotions such as happiness and joy to stress and fear of the unknown. Understanding how to cope with the various stressors may vary for each woman. It is imperative that the childbirth educator is not only aware of these possible stressors of an expectant mother, but also how to interact and intervene when necessary. A childbirth educator with a high level of emotional intelligence can help guide and comfort the expecting mother who is trying to cope with these stressors (Chen, Wang, & Chang, 2001). EI involves understanding one's own emotions and feelings to make good decisions. This article will discuss the understanding and application of the competencies of emotional intelligence for the childbirth educator.

Emotional Intelligence

As a result of recent research on brain activity and behavioral research, the importance of Emotional Intelligence (EI) has emerged. Theorists, such as Goleman (1995), have suggested that EI is twice as important as a person's IQ or technical abilities. EI also plays a key role in effective leaders and educators. These individuals are not only judged on how smart they are but also how well they handle themselves and interact with others. EI consists of competencies that can be acquired, developed, and fostered. EI is based on personal and social competencies, which include self-awareness, self-management, social awareness, and relationship management (Goleman, Boyatzis, & McKee, 2002).

Self-awareness is understanding one's emotions, strengths, and motives as well as limitations. It also involves perceiving the emotions of one's self and the introspection of circumstances.

Self-management is taking those perceived emotions of one's self then processing this important information to make correct decisions. Many people may have a high level of self-awareness but lack emotional regulation and understanding.

Social-awareness is being able to understand others and being open to positive and negative emotional states.

Relationship-management is the merging of self-awareness, self-management and social-awareness. This competency is important because it is necessary when understanding and/or perceiving other people's emotions. At this stage, educators start to inspire and guide.

EI is a mixture of self-control, motivation, open-mindedness, tact, negotiation, and empathy. Individuals are more effective when the heart and head, feeling and thought meet (Goleman, Boyatzis, & McKee, 2002). An educator must be able to guide, motivate, inspire, listen, and persuade. As cited by Goleman, et al. (p. 27) Albert Einstein said, "We should take care not to make the intellect our god".

Relationships are fundamentally rooted in an emotional process. An educator must not only appreciate their

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client's emotional needs but also seek to understand them and develop ways to help manage them. If the health care professional has passion, energy, and enthusiasm, this feeling will also be felt by the others (Savel & Munro, 2016)

Physiology of Emotions and the Brain

How emotions relate to the brain's architecture are understood more clearly due to brain imaging technology now available. We can now see why emotions can drive a person to anger and rage. The two primary structures in the brain that are considered the heart of emotional intelligence are the amygdala and the neocortex. Goleman (1995, p. xi) states, "the past decade has seen an unparalleled burst of scientific studies of emotions. Most dramatic are the glimpses of the brain at work, made possible by innovative methods such as new brain-imaging technologies."

The neocortex is the rational or thinking part of the brain and the amygdala is the specialist for emotional matters. Think of the amygdala as a central alarm system for the brain. When a person receives sensory information from the eyes and ears, this information goes first to the amygdala, which sends this information to other parts of the brain. It also prepares the body for fight or flight and activates the cardiovascular system. Even though sensory information is sent to the neocortex, the amygdala can start to take control while the neocortex is deciding how to handle the situation. Goleman (1995) calls these neural hijackings. Fear and rage can take over before the thinking part of the brain can rationally decide a course of action. This is why we have all reacted to situations too hastily and have later regretted.

Stressors

An educator with a high level of emotional intelligence can help guide and comfort the mother during the childbirth experience. Understanding how to handle stress is important for the both the educator and expecting mother. When stress becomes excessive, it can lead to both physical and psychological symptoms. Physical symptoms may include an elevated blood pressure and heart rate, low energy, insomnia, indigestion, colds and/ or infection. Psychological symptoms may include anxiety, depression, powerlessness, and disengagement. Maternal stress may also contribute to lower birth weight of the infant, and even miscarriage. These stressors may be due to hormonal changes, discomforts of pregnancy such as weight gain, managing the demands of work and family, the health of the baby, labor and delivery (Rondo, et al., 2003). EI minimizes negative stress factors. Stress cannot be totally eliminated, but learning emotional intelligence skills and competencies can be helpful (Zysbert, Orenshtein, Gimmon, & Robinson, 2016).

Emotional intelligence and the Childbirth Educator

During pregnancy, a woman will experience life-changing uncertainties (Chen, Wang, & Chang, 2001). Being an educator involves more than cognitive intelligence but also emotional intelligence. It is about relationships and knowing oneself. Compassion and empathy are the basic tenets of caring for others. An educator, with higher skills of emotional intelligence, can assist the woman to handle the pressures of pregnancy more effectively. These skills include empathy, compassion and trust building. Utilizing the competencies of EI has been shown to improve customer satisfaction and communication in the workplace. Individuals with higher levels of EI display more professionalism and compassion when dealing with others and also experience lower levels of stress (Codier & Freitas ,2013).

A childbirth educator not only needs expertise in clinical skills but also knowledge in psychological care. Being a childbirth educator requires frequent interactions with the expecting mother, family, and other health care providers. These interactions involve an opportunity for educators to perceive, assess, and also understand their own emotions and feelings as well as those of others. Childbirth educators must be caring and show empathy for their patients and families. Educators must not only guide with their heads but also with their hearts (Vitello-Cicciu, 2003).

Educators with an accurate self-assessment can better understand how their emotions affect their performance. Mayer and Salovey (1997) suggest individuals with high levels of EI can monitor their own feelings and emotions and make appropriate decisions to guide their thinking and actions. Childbirth educators are confronted with their own personal emotions but also the emotions of expecting women. For example, if a woman is highly anxious about the birth of her baby, the educator must be empathetic and display this with verbal communication, eye contact, body language, and touch.

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Steps to Improve Your EI

The good news is EI does not have genetic origins. It is within everyone's reach and can be acquired and improved by education and self-discipline. Recognizing and managing emotions, self-motivating, as well as understanding other's emotions are skills needed for employment (Thory, 2015, p. 16). The development of EI takes commitment and time and must be practiced on a daily basis. Emotions and reason can work together to produce sound decisions. Unhealthy emotions will cloud an individual's rational thinking (Sharif, Rezaie, Keshavarzi, Mansoori & Ghadakpoor, 2013)

Mindfulness training can actually change the brain centers that control negative and positive emotions. It teaches people to focus on the present, minimize distracting and distressing thoughts, and control emotional impulses (Beattie, Hall, Biro, Lau, & East, 2014). Keeping a reflection journal, meditating daily, and creating a positive visualization of events can be ways to strengthen EI (Vitello-Cicciu, 2003). A person can also measure their level of EI by taking an EI assessment or quiz. EI can be developed and improved by listening, training, and/or experience.

Other strategies individuals can use to improve EI is being cognizant of stressful situations and understanding how to respond in such situations. Developing relaxation techniques, taking deep breathes and not reacting too quickly to a stressful situation can be very helpful.

Educators must first understand where they need to improve their emotional competencies. It is not unusual the higher up a person is in the career ladder, the less accurate his or her self-assessment will be. It is important for educators to encourage accurate feedback from their

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Table 1. Guide to EI

EI Competency	Question	Actions
Self-awareness	How are you feeling?	Pay attention to how you are feeling. Learn to trust your emotions. Understand those circumstances that trigger negative emotions. The more you are aware of these feelings, the better you will be at managing them. Take a positive approach to feedback from others.
Self-management	How do you react to your emotions?	When you are overwhelmed, how do you manage your emotions? Take time to breath and let the rational part of your brain take over. Don't react in haste. Be aware of your internal thermometer. Reacting is generally done in haste. Take time to think about the appropriate response. Handle frustration appropriately when things don't go as planned.
Self-management	Do you have a positive environment?	Don't blame others for your actions. You must take responsibility for your decisions, attitude and actions.
Social-awareness	Do you empathize?	Practice on understanding how others are feeling. Listen well. Listening should be 10 times your talking time. High EI individuals put their own emotions aside and understand the emotions of others (verbal and body language)
Relationship management	Do you live in a positive environment?	Practice living in a positive environment. You will like yourself better and people will like being around you. Individuals with high EI get along with others and have people skills that build relationships.

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colleagues and clients (Goleman, Boyatzis & McKee, 2002). A common factor among many educators and leaders was that each lacked an accurate portrait of self. They thought they were doing the right things and accomplishing goals but their peers, subordinates and superiors perceived them differently. Educators must first seek to understand their own emotions before they can understand the emotions of others. Self-management is the key to having positive interactions with others. A person must understand when to walk away from a negative interaction with a patient/family/colleague or how to adapt to a current situation (Marquis & Huston, 2015).

Conclusion

A childbirth educator with a high level of emotional intelligence can help guide and comfort the expecting mother who is experiencing the challenges and stress of pregnancy. An educator must first start to understand their own level of EI with the four competencies of EI: self-awareness, self-management, social awareness, and relationship management. This understanding of self and other's emotions can guide the interaction to be either positive of negative. EI can be developed through experience, mentoring, or training.

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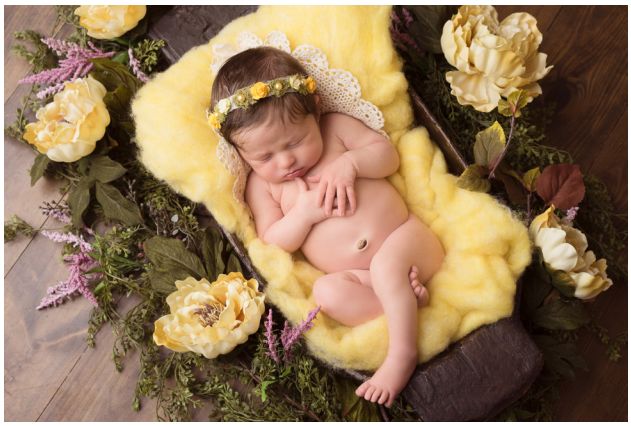

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Supporting Lesbian Couples During Pregnancy

by Angela Pharris, ABD MSW, Justin Bucchio, PhD, Carmelita Dotson, ABD MSSW, and Wanda Davidson, PhD

Abstract: This articled discusses issues childbirth educators must consider when working with pregnant lesbian couples. Careful choice of language can help the childbirth educator develop respectful working relationships with pregnant lesbian couples. These terms were provided as a place to start building the foundation for a respectful and inclusive relationship. Supporting the pregnant lesbian couple via active listening and referring supportive networks were also discussed.

Keywords: lesbian couples, inclusive language, supportive listening, cultural competence

Introduction

Becoming a parent is often rewarding (Baiocco & Laghi, 2013). This article focuses on helping lesbian couples through their pregnancy. Discussed are terms that can help the childbirth educator build a rapport with the pregnant lesbian couples, inclusion of both parents, and support. The information presented is not intended to cover all of the issues that affect pregnant lesbian couples but rather to add guidance to the current practice for pregnant lesbian couples.

Terminology

Having an extensive word bank is important in almost every situation as the words we use shape and expand our worldview (Hartman, 1991). Our word bank affects how we share ourselves, our thoughts, and shapes our opinion of self and others. For childbirth educators, understanding words that are used helps them talk with and understand pregnant lesbian couples.

The job for the childbirth educator is to understand the preferences of the family system and avoid patterns of communication and expression that follow heteronormative preferences. Inclusive language is likely to improve the relationship between the parents and birth staff. In "normal thinking," the "parents" are assumed a mother and a father. Communicate in a neutral way during the early meetings, and explore the preferences of the parents. Evaluate the way they communicate throughout the pregnancy to ensure it is inclusive of same sex families. This would include a critical evaluation of program materials, forms, applications and other relevant information used by the birth educator.

Lesbian parents often choose from a variety of terms to describe their family system. Terms such as non-biological mother, co-parent, social mother, other mother and second female parent are examples. This family is likely to have talked about their family, preferences for how they would like to experience their pregnancy, birth experiences, and family relationships. Understanding the preferences of the parents will illuminate ways to demonstrate respect for the family. Ask the couples if they've considered what terms they want unborn child to use when referring to them and don't question their choices. There is now an opportunity for the pregnant lesbian couple to become experts by culturally enlightening the childbirth educator.

Birth Certificates

The legal parameters for naming parents on a birth certificate vary greatly. It helps to have a working knowledge of the legal system in their country, state, or province. The pregnant lesbian couple may have already made legal arrangements for the non-bio mom to adopt their child or be considering both parents' names on the birth certificate. The couple may need guidance maneuvering through the local legal system and names of knowledgeable contacts might help.

Prior to using the terms such as co-parent or second parent adoptions, it is important to ask the lesbian couple how they wish to be referred to concerning their parenting roles. Make no assumptions. The couple should be the one to offer a label, not the childbirth educator. Allowing the couple to identify the ways in which they wish to be regarded as a family shows respect for the couple as a unit and as individuals.

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Inclusion of Both Parents

According to Pennington and Knight (2011), the motivation to become a parent "may occur regardless of one's sexual orientation" (p.60). The desire to experience the joy and the angst of parenting is universal. The National Lesbian Family Study found that children conceived by donor insemination were "highly desired and thoughtfully conceived, and that all participants were well educated about the potential difficulties of raising children in a homophobic society" (Gartrell, Banks, Reed, Hamilton, Rodas, & Deck, 2000). In this historical time, there are multiple ways to become a parent. Some lesbian couples may bring children with them from a previous heterosexual relationship; others may decide to become parents after they become a couple. Lesbian couples often choose to become parents through donor insemination (DI) after they became a couple. There are significant financial and physical costs associated with DI and with this knowledge the childbirth educator can prepare informational material to share with the pregnant lesbian couple. When assisting pregnant lesbian couples through the DI process and pregnancy, include both parents in all discussions, encourage bonding with the fetus. Participating in decision making sessions during the pregnancy and birth of the fetus helps the couple psychologically and emotionally become parents.

Support

Pregnant lesbian parents need to have an attentive professional to be a supportive listener, help them build active parenting networks, and to help them maintain their social networks. Acting as a supportive listener, listen for misunderstanding and unasked questions. When and if you recognize that one or both of the pregnant lesbian parents do not have a full understanding of the material being shared, immediate rephrasing of the material helps to respectfully correct the misunderstanding. As a supportive listener, listen for unasked questions. Identify supportive networks in the community or online to provide parenting information, act as a friendship circle, assist with connecting with community resources, and connect with others. By providing opportunities for social connectedness, the supportive networks add several protective layers for the pregnant lesbian couple and their fetus (Power, et al., 2014). Assure networks suggested to the pregnant lesbian couple are accepting of sexual variance. Social connectedness, through building social connections, provides a number of individuals who care about and are available to the parents.

Conclusion

Like all first time parents, pregnant lesbian couples need information from a knowledgeable childbirth educator. Developing a respectful relationship with the pregnant lesbian couple promotes better outcomes for all involved. Ask questions about the words they want to use, the labels they prefer. These ideas are provided as a place to build the foundation for a respectful and inclusive relationship. Consider additional training for even more cultural competence. By examining our own thoughts, biases, and feelings we can identify that which may interfere negatively with a quality birth experience and provide the best experience for all we serve.

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Pregnancy with Psoriasis: What New Parents Need to Know

by Debra Sullivan, PhD MSN RN CNE COI, Deborah Weatherspoon, PhD MSN RN CRNA, and Christopher A. Weatherspoon, APRN MS FNP-BC

Abstract: Psoriasis is a common, chronic, autoimmune inflammatory disease that affects a substantial number of women annually during pregnancy and childbirth. Some of these women will need and seek guidance before or during their pregnancies and during lactation. The childbirth educator needs a basic knowledge base and ability to answer questions that may arise regarding psoriasis during the childbirth experience. This article will define psoriasis and its effects on pregnancy and childbirth, consider genetic concerns, and explore treatment options.

Keywords: psoriasis, fertility, pregnancy, maternal psoriasis, psoriasis treatment, genetics

Psoriasis: Description and Incidence

Psoriasis can occur anywhere on the body and appear as well-demarcated erythematous papules and plaques with a silver scale, usually on the extensor surface of the elbows and knees, or the scalp. It is generally diagnosed by history and physical and rarely needs a skin biopsy to rule out other conditions. It is an immune-mediated disease with genetic factors playing an important role. Psoriasis has been associated with several co-morbid diseases such as cardiovascular disease and metabolic syndrome. The disorder affects both men and women equally and appears to be increasing in prevalence. Although not conclusive, Danielsen, Olsen, Wilsgaard, and Furberg (2013) report an increase in the prevalence of psoriasis, particularly in some western populations, over the past 30 years. An earlier study found the annual incidence of psoriasis almost doubled between the 1970s and 2000 (Armstrong, Harskamp, &Armstrong, 2012). Psoriasis can begin at any age; however the incidence peaks between the ages of 15-30 years and a second time between 50-60 years old, with the average age being 28 (Horn et al., 2009; Icen et al., 2009).

Psoriasis's Effect on Pregnancy

Peak exacerbation times coincide with common age groups for pregnancy increasing the importance for understanding in this population. Unique considerations to address psoriasis during pregnancy include the impact of maternal psoriasis on the fetus, the effect of pregnancy on the psoriasis severity, and therapeutic restrictions during pregnancy.

The Impact of Maternal Psoriasis on the Fetus

The effect of maternal psoriasis remains uncertain. Every pregnancy and every woman will have a different experience and subsequently the effect psoriasis will have on pregnancy varies. In one study, 55% of women reported that their psoriasis improved, 21% reported no change, and 23% reported worsening of their psoriasis during pregnancy (Boyd, Morris, Phillips, & Menter, 1996). Psoriasis does not affect fertility or any reproductive organs; however, a preconception consultation with a physician is recommended, especially if the mother is on medication or treatment for psoriasis (National Psoriasis Foundation [NPF], n.d.a). Unfortunately, the mother may have a flare post-partum; more than half of women experience a psoriatic flare after delivery within 6 weeks post-partum (NPF, n.d.b). If a woman has genital psoriasis and plans on a vaginal delivery, it is very important to let your Obstetrician or Midwife know (NPF, n.d.a).

Psoriasis is not associated with any increased rates of miscarriage, birth defects, or premature births (Weatherhead, Robson, & Reynolds, 2007). The timing or mode of delivery should not be affected (Weatherhead et al., 2007). Caesarean section wounds could theoretically have a risk of infection and delayed healing (Weatherhead et al., 2007). There are some conflicting data about a correlation between

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psoriasis during pregnancy and low birth weight babies. Yang, Chen, Chen, and Lin (2011) did a nationwide study of 1463 mothers with psoriasis, where 645 (44.2%) had received phototherapy or systemic therapy within 2 years before deliveries and were considered to have severe psoriasis. Mothers with severe psoriasis were associated with a 1.4-fold increased risk of low birth weight babies compared with unaffected mothers. Mothers with mild psoriasis did not show any excess risk of adverse pregnancy outcomes (Yang et al., 2011). A smaller but contradictory retrospective study looked at 35 women with moderate-to-severe psoriasis and found newborns had a higher birth weight, but also found "spontaneous and induced abortions, pregnancy induced hypertensive diseases, premature rupture of membranes, large-for-gestational age newborns, and macrosomia" (Cohen-Barak, Nachum, & Rozenman, 2011).

The Effect of Pregnancy on the Psoriasis Severity

Hormone changes during pregnancy affect the severity of symptoms differently for different women. Psoriasis symptoms improve in approximately 40-60% of women during pregnancy. Approximately 10-20% report worsening symptoms and some women do not notice any change at all. The severity of the condition depends on the extent of body surface area affected (BSA); mild is less than 3% BSA, moderate is 3-10% BSA, and severe is greater than 10% BSA (Horn, et al., 2009). In one small study of 16 women with greater than 10 percent body surface area involvement with psoriasis, an 84% reduction in lesions were noted between 10 and 30 weeks gestation (Murase, Chan, Garite, Cooper, & Weinstein, 2005). In the postpartum period, psoriasis severity remains the same or worsens in most women (Ceovic et al., 2013).

Therapeutic Restrictions during Pregnancy

The severity of the disease determines the treatment selection. Risks to the fetus present challenges for management during pregnancy; unfortunately, there is very little data detailing the effects of psoriasis on pregnancy outcomes (Landau, Moody, Kazakevish, & Goldberg, 2011). In general, the treatment is the same for pregnant and non-pregnant women with some medications avoided during pregnancy. Three main treatment options include topical therapy, phototherapy, and systemic therapy. Topical and phototherapy are preferred treatments during pregnancy with an avoidance of systemic medication (Lam, Polifka, & Dohil, 2008).

Treatment Options

Topical Treatments

Topical treatments for psoriasis are the first choice for treatment of pregnant women with mild (5-10% BSA) psoriasis. Emollients or petroleum jelly are the first line treatment and may be used as desired with frequent re-application. Emollients or moisturizers help to control scale and are well tolerated.

The Medical Board of the National Psoriasis Foundation (Bae et al., 2012) includes a low- or medium-potency topical corticosteroid as a first-line medical intervention for pregnant women with limited psoriasis. However, medicated topical applications require some caution. Topical medications are absorbed through the skin and care is required when applying over large areas of skin or in large quantities to prevent excess absorption and systemic concentrations. Topical corticosteroids are prescribed intermittently with no or minimal maternal or fetal risk. Expectant women should be cautioned only to use the topical medication as directed. If psoriasis is at the point where topical steroids are needed for relief, the amount should be used sparing and the breast area should be avoided if breast-feeding (NPF, n.d.b). A point of interest to some women is that topical corticosteroids may increase the risk or incidence of striae (stretch marks).

Avoid the use of Dovonex, Talconex, or Vectical ointment during pregnancy unless the potential benefits outweigh the risks to the fetus (NPF, n.d.b). This is a decision that the woman should make with her prescribing physician. See table 2 for more information from the Federal Drug Administration (FDA) on particular drugs.

Phototherapy

Psoriasis often improves spontaneously during summer months and this is attributed to the ultraviolet UV) light exposure of the sun. UV radiation decreases cell turnover and slows keratinization. It also has some anti-inflammatory effects on the T-cells of the psoriatic plaques. This therapy requires the supervision of a dermatologist.

Ultraviolet Light B (UVB)

Generally, pregnant and breastfeeding women can safely receive UVB treatments (NPF, n.d.c). Current evidence supports that UVB phototherapy (particularly narrowband UVB) is the preferred treatment for women with more severe symptoms (Bae et al, 2012). A disadvantage to this treatment is the need to travel to a treatment center three days per week. Home phototherapy may be ordered, though it is very expensive. UVB broadband may be used if narrowband is

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not available; however, it may not be as effective (Weatherhead, Robson, & Reynolds, 2007).

Practical advice includes that using emollients, such as thin oils prior to treatment are fine; however, some emollient creams can inhibit the penetration of the UV. These products should not be applied before treatment (Asztalos, Heller, Lee, & Koo. (2013).]. Gentle removal of plaques by bathing does help prior to UV exposure. Commercial tanning beds may improve psoriasis; however, there is significant variability in the UV output of tanning beds.

Ultraviolet light A (UVA) and PUVA

UVA penetrates deeper into the dermis than UVB. It is often used in combination with a medication called psoralen. Photochemotherapy (PUVA) treatment begins with either oral or bath psoralen followed by ultraviolet A (UVA) radiation. Both the oral medication psoralen and UVA light should be avoided by both partners around conception and for the mother during pregnancy because they may be linked to birth defects (NPF, n.d.c). Breastfeeding women should also avoid PUVA because psoralen in breast milk can cause light sensitivity in the baby (NPF, n.d.c).

Excimer Laser

A specialized laser may be used to treat only the involved skin at a higher UVB dose because it is focused on smaller areas. This relatively new treatment may not be covered by third party insurance.

Systemic Medications

Systemic steroids have not shown an increase in birth defects in studies of pregnant women (NPF, n.d.b). Anthralin has been used safely by pregnant women for decades but has not been tested on humans or animals (NPF, n.d.b). Oral Dovenex in high does has shown birth defects in some animal models. All retinoids, oral and topical, are contraindicated in pregnancy, especially in the first trimester and should be discontinued for two years before pregnancy (Weatherhead et al., 2007). Methotrexate is also contraindicated as it has been associated with birth defects, cleft palate, and skeletal deformities (Weatherhead et al., 2007). As stated above, the oral medication psoralen should be avoided by both partners around conception and for the mother during pregnancy and lactation (NPF, n.d.c). Systemic and biologic drugs should be avoided by pregnant and breastfeeding women unless there is a clear medical need (NFD, n.d.b). See table 2 for more information from the Federal Drug Administration (FDA) on particular drugs.

Another option for women with severe disease who cannot transition to topical therapy or phototherapy is biologic tumor necrosis factor (TNF) inhibitors and cyclosporine. In these situations, the potential risks and benefits of therapy must be considered carefully. The FDA has determined approved treatment and can be found at this site https://www.psoriasis.org/pregnancy/fda-determinations

Alternative Treatments

Sunlight

A little sun, about 5-10 minutes a day, can help suppress inflammation from psoriasis. One study found that bathing in salt water, such as the sea water, improves the efficacy of sunlight therapy. Sunscreen should be worn on the face to avoid melasma (a condition in pregnant women that causes the appearance of brown spots on the face)(NPF, n.d.c).

Lower Stress

Meditation and Yoga can help alleviate stress that is associated with psoriasis flares.

Genetics

Many parents will worry that their new child will inherit psoriasis from either of them or a relative. Psoriasis is thought to have a genetic component or hereditary condition, which means that researchers believe there is a psoriasis gene carried by a parent and is passed on during conception (NPF, n.d.a). Some people may have the gene but it is dormant, so the gene may not be triggered in family members or it could be a combination of genes (Psoriasis and Psoriatic Arthritis Alliance [PAPAA], n.d.). It is also speculated that it may be more than just having the gene but also an encounter with an environmental trigger (PAPAA, n.d.). If one parent has psoriasis the offspring will not necessarily develop psoriasis. About a third of those who have psoriasis have a relative who also has or had psoriasis (PAPAA, n.d.).

Summary

Psoriasis during pregnancy is manageable through a variety of therapeutic strategies. The goal of therapy is to reduce symptoms and lesions with agents that pose the least risk to the fetus. Ideally, pregnancies should be planned during times of remission when the woman is not taking medication. While that is sound advice, it may not be practical. The following are takeaway points from this article:

- Psoriasis affects a substantial number of pregnant women.
- Incidence of psoriasis peaks during childbearing years.
- Treatment is based on the severity of psoriasis.

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- Severe Psoriasis has been shown to have an effect on fetus and mother during pregnancy showing low birth weight babies.
- Teratogenic effects of psoriatic medications on fetus are noted.
- UVB treatment ok during pregnancy.
- Sunlight 5-10 min a day good for psoriasis.
- FDA approved psoriasis treatments are listed.

In summary, since psoriasis is a common problem in our population, the childbirth educator should be current on trends in treatment of psoriasis and its effect on the pregnant family.

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Pregnancy and Cardiovascular Disease: Promoting Best Outcomes

by Maria A. Revell, PhD MSN RN COI, Tasha L. Ceass, BS, Marcia A. Pugh, DNP MBA HCM RN, and Melanie N. McGhee, MSN RN ACNP-C

Abstract: Cardiovascular disease can be a cause of maternal morbidity and mortality. It is critical for health care providers, especially childbirth educators, to know cardiac complications and potential sources of these complications. Appropriate management requires knowledge of disease processes in order to promote effective psychological and physiological care administration by the provider. Safe motherhood also requires education and counseling of pregnant women. This will promote the best outcome for both mother and infant.

Keywords: heart failure, pregnancy, pulmonary congestion, cardiovascular disease

Introduction

Cardiovascular disease (CVD) occurs in women as both a congenital or acquired conditions. The most common CVD complications occur in women with congenital heart disease and those with acquired hypertension as a preexisting condition. CVD occurs in 1% to 4% of pregnancies (Weiss, Segresser, Alon, Seifert, & Turina, 1998). Despite the low overall prevalence, CVD is responsible for 10% to 15% of maternal mortality (Nanna, & Stergiopoulos, 2014; Siu, et al., 2001).

Cardiovascular disease (CVD) is increasing in women of child-bearing age (Regitz-Zagrosek, Gohlke-Bärwolf, Iung, Pieper, 2014). Many CVD changes that can adversely affect maternal health as well as that of the unborn child are the result of profound maternal circulatory changes. Caring for these patients requires addressing physiological issues that directly affect the woman and indirectly affect the unborn child. The incidence of direct causes of maternal death from CVD has decreased due to recent advances. This has allowed more emphasis to be placed on indirect causes which account for the highest incidences of maternal death and include CVD, thromboembolism and hypertension (Parlakgumus, & Haydardedeoglu, 2010).

Childbirth educators serve a pivotal role in maternal awareness and prevention. They can form the foundation for parental knowledge acquisition. These individuals serve to be the link between care needed and received as they educate parents and empower them regarding pregnancy and the birthing process of women who have mechanical or acquired cardiovascular conditions.

Cardiovascular disease is increasing in women of child-bearing age

Physiologic Changes During Pregnancy

Pregnancy causes intense changes in physiology throughout pregnancy, labor and delivery, and postpartum, even in patients without CVD. Hemodynamic changes occur in or during all three timeframes. Initial changes can be seen in the first five to eight weeks of gestation. Changes peak late in the second trimester of pregnancy. Cardiovascular changes include increases in blood volume, heart rate, cardiac output and electrocardiographic changes (see Table 1) (Russel, 2014). The apex of the heart is displaced superior and lateral. Circulating angiotensin II increases which promotes sodium and water retention which leads to a 50% plasma volume increase by 30 weeks and potential edema. Blood plasma increase leads to reduced blood cell components such as the hematocrit and hemoglobin. Plasma volume increase is

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necessary to meet nutritional and oxygen demands of the uterine bound infant by increasing uterine blood flow. This also enables delivery blood loss of as much as 500 ml without physiological decompensation of the mother.

Following delivery, it can take up to three months for some cardiovascular system changes to return to normal. The heart rate may normalize in 10 days but changes in circulatory volume which affects stroke volume, cardiac output, and systemic vascular resistance can take three months to return to a pre-pregnancy state (Franklin, Benton, & Parekh, 2011).

Physiologic Changes During Labor and Delivery

The normal cardiac physiology of the mother is capable of adjusting to the many changes that occur during pregnancy, labor, and delivery. Pregnancy cardiac changes occur over time whereas changes during labor and delivery are abrupt and dramatic. Acute pain can further exacerbate labor and delivery changes increasing blood pressure and heart rate. In addition to normal physiological changes, the psychological state of the mother also influences cardiovascular system changes in labor and delivery. These emotional changes include anxiety and fear for some. It is important for the care provider to be familiar with these changes in order to manage them and prevent potential complications.

Hemodynamic changes during labor and delivery include an increase of up to 500 ml in the circulating volume of the mother with each contraction. This change causes an increase in cardiac output and blood pressure. Changes include a 50% increase above baseline in the second stage of labor and this percent could be even higher through to the infant's delivery (Robson, Dunlop, Boys, & Hunter, 1987). At the time of delivery there is an abrupt loss of blood. This blood loss can be up to 400 ml for a vaginal delivery and 800 ml for a cesarean section delivery (Naderi, 2014). Following delivery there is an autotransfusion that occurs from the uterus and increased blood return to the heart due to the fact that the infant is no longer compressing the inferior vena cava and reducing blood flow. These increased intravascular volumes abruptly increase blood return and thus stroke volume and cardiac output.

Early Cardiac Problem Detection

Care provider and self-care management are two key components for early problem detection and prevention of

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Table 1. Changes in Physiology during Pregnancy

Evaluation Parameter	Change in Normal Pregnancy	Additional Information
Cardiac output	By 30% – 50%	Grade II systolic flow murmur Peaks at 18 – 24 weeks
Heart rate	By 15% (10 – 20 beats per minute) in a resting state	 3rd trimester
Stroke volume	Early pregnancy Late pregnancy	1st & 2nd trimester 3rd trimester
Blood pressure		1st & 2nd trimester
Systemic Vascular Resistance	By approximately 20%	Early in pregnancy
Preload		Due to compression of the inferior vena cava – as early as 20 weeks
Electrocardiography	Left axis deviation Flattened T wave ST depression Ectopic	
Chest radiography	Pulmonary vasculature Slight cardiomegaly	Due to increased plasma volume

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complications. On each visit, observations and assessments should contain components to detect signs of infection, cardiac arrhythmias, cardiac decompensation, and pulmonary congestion.

Infections in pregnancy can include vaginal infections such as bacterial vaginosis, toxoplasmosis from handling cat feces, urinary tract infections, listeriosis, and sexually transmitted diseases (i.e., human papillomavirus infection, genital herpes, chlamydia, gonorrhea and syphilis) (Smith, & Nevins, 2014). Assessment parameters include good history taking for potential risks and evaluation for increased signs and symptoms, which include physiological measures that indicate infection (i.e., increased temperature, discomforts such as burning and itching, etc.).

Pregnancy can precipitate arrhythmias of cardiac origin in women who have had no previous history of rhythm irregularities. These include those of ventricular and atrial origin. Arrhythmia origins include electrophysiological effects of hormones, hypokalemia, autonomic tome changes, preexisting cardiac disease and changes in hemodynamic components. Preexisting conditions that can promote electrical alterations and resulting arrhythmias include cardiomyopathy, valvular disease, and congenital physiological alterations (Gowda, Khan, Mehta, Vasavada, & Sacchi, 2003).

Cardiac decompensation can result from mechanical or acquired cardiovascular conditions (Anthony, & Sliwa, 2016). Cardiac failures result from conditions that create increased vascular resistance and conditions that result in heart disease itself such as ventricular failure or congenital heart disease. Pre-eclampsia, peripartum cardiomyopathy, and embolism from amniotic fluid result are direct pregnancy related causes of heart failure. Ventricular dysfunction can lead to peripheral and pulmonary edema. In cardiac failure, the ventricle poorly tolerates the increased circulatory load from pregnancy and is unable to negate the rising ventricular filling pressure.

Pulmonary congestion directly results from cardiac decompensation with resulting ventricular dysfunction. In pregnant women with known heart disease, pulmonary congestion is most often caused by mitral valve stenosis. Movement of the increased blood volume through a narrow valve opening further increases left atrial pressure. There is a subsequent increase in pulmonary venous and pulmonary capillary pressure. This combination leads to transudation of fluid. The resulting congestion can result in pulmonary edema. Pulmonary congestion can result from mitral stenosis, which results from outflow obstruction or left ventricular failure. The etiology of this edema differentiation must be distinguished, as it affects treatment options.

Misleading Symptoms of Cardiac Disease in Pregnancy

Pregnancy can present symptoms that are misleading and present challenges to client management. They can result from normal physiological changes that occur from increased circulating volume, changes in systemic vascular resistance and pressure on the inferior vena cava from increasing fetal size. With the normal increase in heart rate, even minimal activity can result in tachycardia. Circulating blood volume affects other assessment components. There can be engorged neck veins (jugular venous distension), enlargement of the liver and spleen as well as weight gain with generalized edema. Assessment findings may appear as dyspnea, tachycardia, bounding or collapsing pulse, a third heart sound, systolic ejection murmur, and ectopic electrical activity on electrocardiography.

Management by Avoidance

The best way to manage symptoms is by prevention. It is important to teach preventive care. Education should include teaching avoidance for three specific components for the pregnant woman: (a) avoid excessive weight gain and edema, (b) avoid strenuous exercise, and (c) avoid anemia. Avoiding excessive weight gain can be promoted by dietary management and consumption of fruits and vegetables. Edema can be reduced by managing dietary intake of sodium with a low sodium diet. Excessive standing should be avoided and compression hose may be recommended if there are no other cardiovascular contraindications. Exercise should be encouraged in moderation. Avoiding strenuous exercise reduces the probability of injury from falling or abdominal injury. Exercises that involve lying supine, backbends, hot yoga, and extended abdominal moves are not to be promoted during pregnancy. Avoiding anemia requires paying special attention to dietary intake and ingestion of any supplements such as prenatal vitamins to complement the high need for iron or other nutrients. Types of anemia include iron-deficiency, folate-deficiency, and vitamin B12 deficiency. Preventing anemia can also be accomplished by ingesting iron rich foods in three servings a day and eating foods high in vitamin C to promote iron absorption (i.e., citrus fruits, tomatoes, strawberries, kiwi, etc.).

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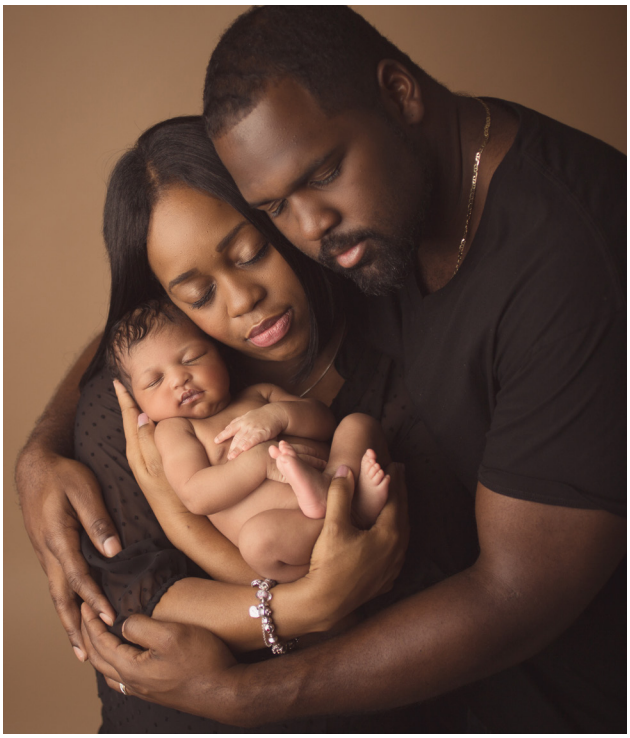
Provider Assessment and Management

Provider management should be geared to the antepartum, intrapartum, and postpartum periods. This allows cardiac care to be directed towards areas of emphasis needed based on fetal development and specific cardiac needs. Physiological and psychological support is required to promote the best outcomes for mother and infant.

Antepartum care for the woman with cardiovascular disease requires more frequent appointments to the obstetrician or nurse practitioner. The pregnant woman should sleep at least 10 hours each night and rest a minimum of 30 minutes after each meal. Diet should include moderate sodium restriction of 2 – 4g per day to reduce edema. Measures should be taken to reduce infections with special emphasis on dental and pulmonary health.

Intrapartum care for the woman with cardiovascular disease requires education regarding positioning for optimum circulation to both mother and fetus. When supine, a semi-recumbent position should be assumed to prevent undue pressure on the diaphragm and other vital organs. A left lateral position is best for sleeping to avoid vena-caval compression (Park, & Hidaka, 1991). This allows optimum blood flow to the placenta.

Postpartum care for the woman with cardiovascular disease requires support for return to pre-pregnancy physiological conditions. Breastfeeding should be encouraged if not contraindicated by a cardiovascular condition. Advantages of breastfeeding include protection against developing breast cancer (Beral, 2002). Hormonal changes associated with breastfeeding also benefit maternal health after childbirth recovery as well as suppress fertility (Rea, 2004; Labbok, 2001). Breastfeeding benefits to the infant include reduced incidence of otitis media, diarrhea, and urinary tract infections (Allen & Hector, 2005). Post-partum care includes care of both mother and infant in order to promote long-term benefits.



Bianca Hubble, Axsys Design

Summary

Provider management is key to best outcomes for mother and newborn. Childbirth educators play a pivotal role as they work to improve knowledge of both parents related to cardiovascular disease and its potential impact. They must also work to promote health and wellness through awareness and use of teaching strategies from one-on-one education to promotion of appropriate online information. It is imperative that the provider and child birth educator are knowledgeable regarding up-to-date guidelines and protocols. The following can be added to their library of information in order to facilitate best outcomes for mother and newborn regarding cardiovascular disease and pregnancy:

- Cardiovascular Diseases during Pregnancy (Management of) located at http://www.escardio.org/Guidelines-&-Education/Clinical-Practice-Guidelines/Cardiovascular-Diseases-during-Pregnancy-Management-of contains full text, webcasts and guidelines available as a publication, pocket reference, APP download and slide-set.
- Cardiovascular Disease and Pregnancy located at http://emedicine.medscape.com/article/162004-overview contains information on physiological changes, patient evaluation, congenital heart disease, cardiomyopathy and CAD.
- Cardiac Disease and Pregnancy article from the Texas Institute located at http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3066821/ with information related to prosthetic heart valves, acquired heart disease, congenital heart disease, high risk pregnancy states, and peripartum cardiomyopathy.
- Heart Disease and Pregnancy Resources located at http://www.heartdiseaseandpregnancy.com/guidelines.html which includes guidelines from Canada, the United States, and Europe as well as suggested review papers on the topic.

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Women's Health Behaviors with Unintended Pregnancy and Births

by Lee M. Stadtlander, PhD

Abstract: There appear to be differences in the health behaviors of women with intended versus unintended pregnancy/birth. This article advocates that it is beneficial for childbirth professionals to ask clients whether the pregnancy was intended. With a negative response, additional issues should be closely monitored and explored: prenatal care, smoking, use of alcohol, and illegal drugs. Women with unintended births are more at risk for preterm and low birthweight infants, and postpartum depression. Postpartum they are more likely to not breastfeed and to plan poorly for parenthood, so education on these topics is recommended.

Keywords: unintended birth, unwanted birth, intended birth, health behavior

Three women are in the first trimester of their pregnancy: Marilyn is 32 years old, married and excited about her long awaited pregnancy. Cindy is 19, has been living with her boyfriend, and indicates that her pregnancy "happened by accident." Eileen is 41, married with five other children; she states she does not want another child, but does not believe in abortion and feels she must carry it to term. What differences may be present in how they approach their pregnancies? How may their health care needs differ? This article examines the current research on health care behaviors with unintended pregnancies and births and how they tend to differ from intended ones.

The unintended pregnancy rate in the United States has declined recently from 54 per 1,000 women ages 15 to 44 in 2008, to 45 in 2011 (Finer & Zolna 2014; Finer & Zolna 2016; Henshaw 1998; Kost & Lindberg, 2015). It is estimated that 29% of all pregnancies are mistimed (i.e., pregnancy happened earlier than planned) and 19% are unwanted (Finer & Zolna, 2011). Forty-two percent of unintended pregnancies ended in abortion in 2011 (last year for which data are available), a decline from 47% in 2001. In 2011, the unintended birth rate was 21 per 1,000 women aged 15 to 44 years (Finer & Zolna, 2016).

Differences: Intended vs. Unintended Births

There are a number of differences between intended and unintended births. Mothers of intended births are more often married and older than mothers of mistimed or unwanted births. Interestingly, births described as mistimed by less than two years tended to be similar in marital status and age to intended births. Researchers (Kost & Lindberg, 2015) have speculated that the reason for the similarity may be that women, who identify their desired timing of fertility in such specific terms of time, may have engaged in a process of planning similar to that of women with intended births. Additionally, women in the intended pregnancy group tended to be of higher economic status, probably allowing more access to contraception and control of their fertility (Kost & Lindberg, 2015).

Greatly mistimed births tend to have mothers who are younger and in less stable relationships than births in the other three groups (Kost & Lindberg, 2015). Unwanted births occur more often among older women and women with larger numbers of children, and are likely at a stage of life in which desired fertility is complete. In contrast, women in the two year mistimed pregnancy groups showed similar demographic and socioeconomic characteristics to unwanted births, with fewer married or white mothers, and more who had a delivery paid by Medicaid, as desirability of the birth decreased (Kost & Lindberg, 2015).

Unintended births, whether mistimed by less than two years, mistimed by two or more years, or unwanted, are significantly less likely than intended births to be recognized early in pregnancy and to receive early prenatal care (Kost & Lindberg, 2015). Births mistimed by two or more years and unwanted births are less likely than intended births to result in breastfeeding. Among babies who are breastfed,

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unwanted births are less likely to be exclusively breastfed for the first six months of life. Unwanted births tend to have a higher percentage of infants born preterm and with low birth weight, than intended births (Kost & Lindberg, 2015).

Cohabiting women tend to exhibit very high unintended pregnancy and unintended birth rates (Finer & Zolna, 2011). Like married women, cohabiting women are regularly sexually active, but are less likely than married women are to desire pregnancy, and therefore are at a very high risk for unintended pregnancy. They are, however, less likely to abort and to carry a pregnancy, including an unintended pregnancy, to term than unmarried non-cohabiting women, perhaps because they have more partner support (Finer & Zolna, 2011).

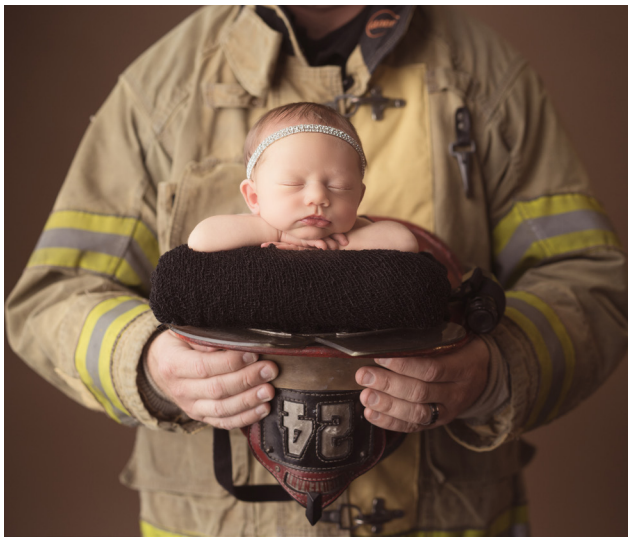
Women's characteristics predict beneficial maternal behaviors, such as prenatal care, and the health of the infant at birth. Births to mothers who are young, unmarried, and of lower educational level are the least likely to receive prenatal care and have the highest levels of poor health at birth; they are most likely to have unintended pregnancies (Kost & Lindberg, 2015). Women with no religious affiliation report the highest unintended pregnancy rate, followed by Catholics, Protestants, and women with other affiliations (Finer & Zolna, 2011).

Poor and low-income women experience some of the highest rates of unintended pregnancy. This finding is consistent with numerous studies that document the association between disadvantage and higher risk for unintended pregnancy due to risky sexual behavior, including less regular use of contraceptives (Finer & Zolna, 2011; Frost & Darroch, 2008; Frost, Singh, & Finer, 2007).

Consequences of Unintended Pregnancy and Birth

Lack of Prenatal Care

A woman with an unintended pregnancy may not receive adequate prenatal care for several reasons. Her ambivalence toward the pregnancy may result in delaying prenatal care; or the woman may not recognize the signs and symptoms of pregnancy. Enrollment in prenatal care may be difficult due to the woman's youth or finances. The lack of prenatal care may result in a lack of awareness of problems such as pregnancy induced hypertension or diabetes, less support for practicing healthy behaviors such as smoking cessation, and less preparation for parenthood (Brown & Eisenberg, 1995).



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Behavioral Risks

Women with mistimed or unwanted pregnancy are at high risk of smoking and alcohol use during pregnancy (Brown & Eisenberg, 1995). It is probable that these women are also at risk for illicit drug use, weight gain during pregnancy, and lack of use of vitamin supplements, although these have not been researched.

Depression

There is a strong relationship between unintended pregnancy and postpartum depression. The increased risk is highest at 12 months postpartum, when women with unintended pregnancy have a three-fold increased risk of depression and women with an unwanted pregnancy have five times the risk of depression (Mercier, Garrett, Thorp, & Siega-Riz, 2013). These findings suggest that providers should consider asking about pregnancy intention at early prenatal visits to screen for unintended pregnancy. Women who report that their pregnancy was unintended or unwanted may benefit from earlier or more targeted screening for depression both during and following pregnancy (Mercier et al., 2013).

Implications for Childbirth Professionals

It is clear that it would benefit childbirth professionals to ask clients whether the pregnancy was intended. With a negative response, additional issues should be closely monitored and explored: prenatal care, smoking, use of alcohol, and illegal drugs. These women are more at risk for preterm and low birthweight infants, and postpartum depression. Also, keep in mind that they are more likely to not breastfeed and to plan poorly for parenthood, so education on these topics is recommended.

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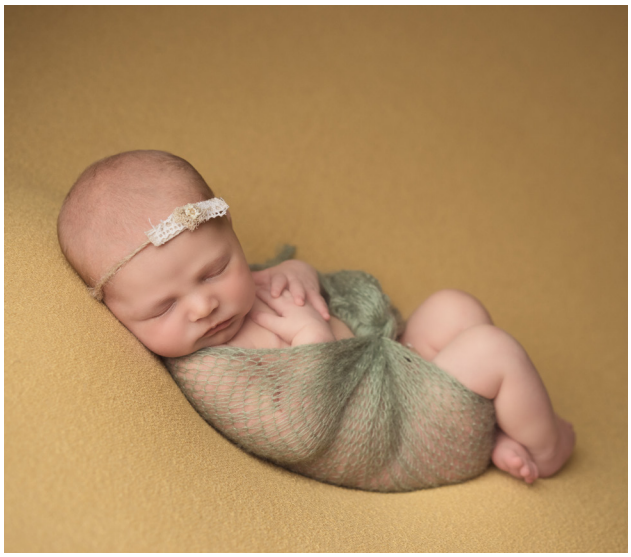

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Expectant Fathers in Training: Effective Educational Approaches for Use by Childbirth Educators

by Patti P. Urso, PhD APRN ANP-BC FNP CNE

Abstract: Evidence continues to support that the involvement of the father in the antenatal period has long lasting implications on the health outcomes for the triad of father, mother, and child. Challenges to start the transition early for the father has received worldwide attention and implementation has created a movement that affects childbirth education. The purpose of this article is to provide childbirth educators information that can be used to enhance the quality of childbirth education by promoting the healthy father role. Programmatic design and referrals to gender specific workshops that meet the psychological needs of fathers are suggested.

Keywords: fatherhood, training, childbirth education, fatherhood forum

The transition to fatherhood is a difficult time for men (Deave & Johnson, 2008) and the support of childbirth educators is of vital importance during this period. Fatherhood brings the greatest developmental change to a man's life, which is the Western cultural expectations of participation, but comes without an instruction manual. Understanding their needs and incorporating approaches that address them throughout the childbirth experience are skills that are essential in order to have successful health outcomes. The purpose of this article is to review the psychological challenges that the father role encompasses and suggest approaches that can provide help.

…traditions have been changing and the spotlight is now on the father

Men in Childbirth

According to Fletcher, Vimpan, Russell and Sibbritt (as cited in Wilson, Reid, Midmer , Biringer, Carroll & Stewart, 1996) adverse postnatal outcomes have been linked to the lack of support during the childbirth process. The World Health Organization Fatherhood and Health Outcomes in Europe Report (2007) summarized among its many findings that the involvement of men in fatherhood decreases pain, panic and exhaustion during delivery, reduces the labor and the need for epidural blockade, and reduces the chances of low birth weights. Support for the mother during this difficult period has traditionally been provided by other women, but traditions have been changing and the spotlight is now on the father. Alio, Lewis, Scarborough, Harris and Fiscella (2008) described the key characteristics of the biological or male partner as being "present, accessible, available, and [an] active participant during the pregnancy" (paragraph 3). These expectations carry a high emotional burden for an individual who may feel unprepared. Johansson, Rubertsson, Radestad and Hildingsson (2012) report men stating contradictory feelings about the father role during the antenatal period, but also the same men reported that they changed to positive feelings when they felt supported by a health professional. Johansson, Fenwick, and Premberg (2015) (as cited in Steen, Downe, Bamford & Edozien, 2012) write that a meta-synthesis identified "risk, uncertainty, exclusion, support, and the reality of fatherhood" (p. 10) as major themes in 23 qualitative studies that addressed the father role during the childbirth experience.

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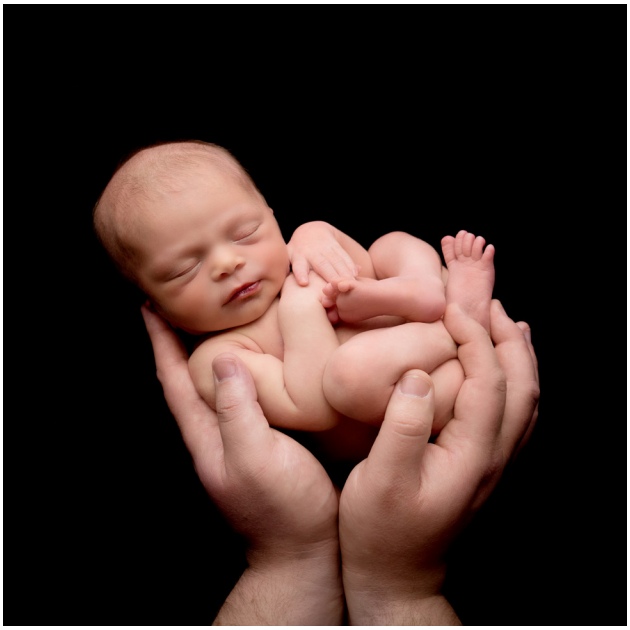
Opportunities for Transition

Fathers need time and opportunities to transition. It is important for the childbirth educator to promote the use of inclusive language to avoid marginalizing the father when speaking to the couple regarding the pregnancy. However, inclusion does not negate the need to design childbirth educational program that contain gender specific forums for fathers. Providing a psychologically safe environment, a forum for male counterparts that is led by a knowledgeable and experienced health professional of the same gender, is necessary to attend the psychological needs of the father. The aim of the forum should to assist the expectant father to cope with the fears that will most likely not be expressed in the presence of the pregnant partner. The class can be structured so that the father's forum is routinely held prior to the time scheduled for the couple.

Learning coping skills for dealing with changing roles and emotions takes time, but is practicable with the proper help. It can be difficult for some men to acknowledge emotions in a co-ed group.

Opportunities for creating networks with the more experienced fathers for first time fathers are paramount. Advantages gained from these relationships are self-evident and cannot be supplanted by the childbirth education classes, since experienced fathers can relate their unique guidance and support which will ease transition. Models exist for conducting forums for fathers. These models promote fostering a non-judgmental and inclusive atmosphere where topics can be discussed openly. Some suggested topics are "the father role, making and coping with change, relationships, communication and miscellaneous topics" (Friedwald, Fletcher & Fairbairn, 2005, p. 15). The subject of fear of the childbirth itself is a delicate topic to address with men, but it has been suggested that it may be diminished when the father or male counterpart serves as a trained childbirth coach (Bergstrome, Rudman, & Waldenstrome, 2013).



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More on Expectant Fathers' Fear

Childbirth is not the only fear experienced by expectant fathers. Shapiro (2014) categorized unspeakable fears that are not usually discussed by men into four categories: performance fears, security fears, relationship fears, and existential fears. He describes performance fears as the fear evoked by childbirth act itself as it relates to meeting the expectations of the father role during the birth and the responsibility it entails. Safety fears refers to the fear felt due to the lack of information about the obstetrical and gynecological world with the belief that it is a more comfortable subject for women. Relationship fears refer to the fears of being replaced by the child and lastly existential fears referring to life and death issues (Shapiro, 2014). Being aware of these fears will help childbirth educators understand with greater meaning the origin of a father's anxiety.

Gender Specific Help: Dad's Camps

The alleviation of fear and parental preparedness can be accomplished in a well-run program such as Boot Camps for New Dads (aka Daddy Boot Camp) operated by New Fathers Foundation, Inc. This innovative approach has male appeal while incorporating its own brand of preparedness for the role of the father. This community based approach is accessible to all ages, cultural backgrounds and economic levels. It is considered as best practices by many well recognized organizations, and many camps are held at military bases throughout the United States. Conceptually the program is an intervention for ultimately resolving the social ills of communities through workshops which address questions and provide parental skills needed by the new father. The concept of training fathers as coaches who help other fathers is popular and effective. New Dads are "rookies" and attend these workshops which are structured with trained facilitators with "veteran Dads" in attendance with their babies. Tools are provided in the website to develop new boot camps. The program has made available its logic model online and the results of a 2013 survey demonstrates "New Dad Boot Camp" as a confidence booster. In addition to being a confidence builder, this program inspires fatherhood

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pride while teaching the skills needed for a man to care for his newborn safely at home, provide antenatal support that will expand through the birth, and cement the bond of parental attachment (Capuozzo, Sheppard & Uba, 2010). More information about how to start a program is available at this website http://www.bootcampfornewdads.org/.

Another type of boot camp for fathers that is nicknamed "gender boot camp" and has been on the move in 53 countries. Originating in South Korea in 1995 by the Duranno Bible College, the Father School Training takes place in community settings such as churches, prisons, and schools for the purpose of changing traditional father roles of authoritarianism and family hierarchy for a healthier father and husband role. A realigning of masculinity roles with more contemporary form of fatherhood which are seen as "feministic." Transition to a more emotional and empathetic father is the goal.

Asset Based Fatherhood Movement

The "Healthy Fathering Collaborative" is a joint venture where private and public agencies join to support initiatives which develop the assets that fathers bring to children as nurturers, caregivers, and providers. A clear definition is given for a healthy father with a well-developed model for fathering over a lifespan. Also, the organization website contains a wealth of resources for fathers and serves as a search engine for programs that support fathers nationwide (Healthy Fathering Collaborative, n.d.) A variety of organizations spawned from the "Asset Based Fatherhood Movement" and a list can be found at this website http://www.summitfathers.org/tips.php.

Conclusion

There is ample support for the need to include a father's presence both physically and emotionally before, during, and after the birth of a child. Attention to the emotional needs of the father is the responsibility of the childbirth educator when planning and delivering classes. Unique fears are the most prominent emotion during this time for the father, which need to be addressed in order for a healthy father role to develop. The "Asset Based Fatherhood Movement" has spawned a variety of gender-specific resources and programs, which address all demographics and economic levels, and when a childbirth educator is unable to address the gender specific needs of the father, referral is the best practice.

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Breast Cancer during the Childbearing Years

by Debra Wise, BSN RN, and Deborah Weatherspoon, PhD MSN BSN RN CRNA COI

Abstract: Women in the prime of their childbearing years are at risk for breast cancer. Three percent of all breast cancer occurs in women under the age of 40. A missed diagnosis of breast cancer is one of the most frequent causes of malpractice claims in the United States. Treatment options during pregnancy are based on the type of breast cancer, clinical staging and pathology, the physicians, and the mother. The effects of cancer treatment can potentially affect fertility and breastfeeding. The cost of copays and incidental expenses can burden families for life. Diagnosis can affect communication, intimacy, and sexual relationships. The childbirth educator needs to know their local fertility, oncology, and social support systems.

Keywords: breast, cancer, screening, fertility, breastfeeding

Breast cancer does not discriminate for age. Unfortunately, even women in the prime of their childbearing years are at risk for this frightening disease. As childbirth educators, we are aware of the risks and teach regular self-breast exams. However, it is hard to imagine a young woman of childbearing age being diagnosed with breast cancer. Childbirth educators often have close relationships with their clients and provide information on how this diagnosis may affect a current or future pregnancy. It is important for all childbirth educators to have a basic understanding of appropriate responses and support of the women and their families. This article provides information about breast cancer screening recommendations, current practices for diagnosis and treatment, and information regarding what to expect when a new diagnosis occurs during pregnancy. Potential fertility and breastfeeding concerns are explored with recommendations for how the childbirth educator may provide support.

Breast Cancer Screening

The United States Preventive Services Task Force (USPSTF, 2016) recommends mammography screening for women 50 to 74 years of age, every other year. Women who have had chest radiation at a young age or have a genetic predisposition may benefit from screening mammograms from age 40-49 (Siu, 2016). The American College of Obstetricians and Gynecologists (ACOG, 2015) recommends that women from the age of 29-39 have a clinical exam by their provider every one to three years. In addition, women should have breast self-awareness that focuses on knowing the normal shape and feel of their own breast, and contacting their provider about any changes (ACOG, 2015). The American Cancer Society recommends mammography every year for women ages 45 to 54 years and every other year for women age 55 years and older. They advise that women between the ages of 40 and 44 may begin screening based on individual needs and those who are high risk should be identified (DeSantis et al., 2016).

These three credible resources do not recommend routine mammography for younger women, and yet a reported 3% of all breast cancer occurs in women under the age of 40 (DeSantis, 2016). Meneses and Holland (2014) report that 6% of invasive breast cancer affects women under the age of 40. Women experience many changes in the breast tissue during pregnancy, breastfeeding, and monthly cycles. Hormonal changes or clogged milk ducts are frequently the cause for breast lumps and often the provider defers screening. From the woman's point of view, a lump is frightening and should be addressed quickly.

A missed diagnosis of breast cancer is one of the most frequent causes of malpractice claims in the United States (Physician Insurers Association of America, 2002; Singh,

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Sethi, Raber & Petersen, 2007). Breasts of younger women are more likely to be generally nodular, or to have a transient lump but current management of a palpable breast mass begins with a history, physical examination, and radiographic imaging.

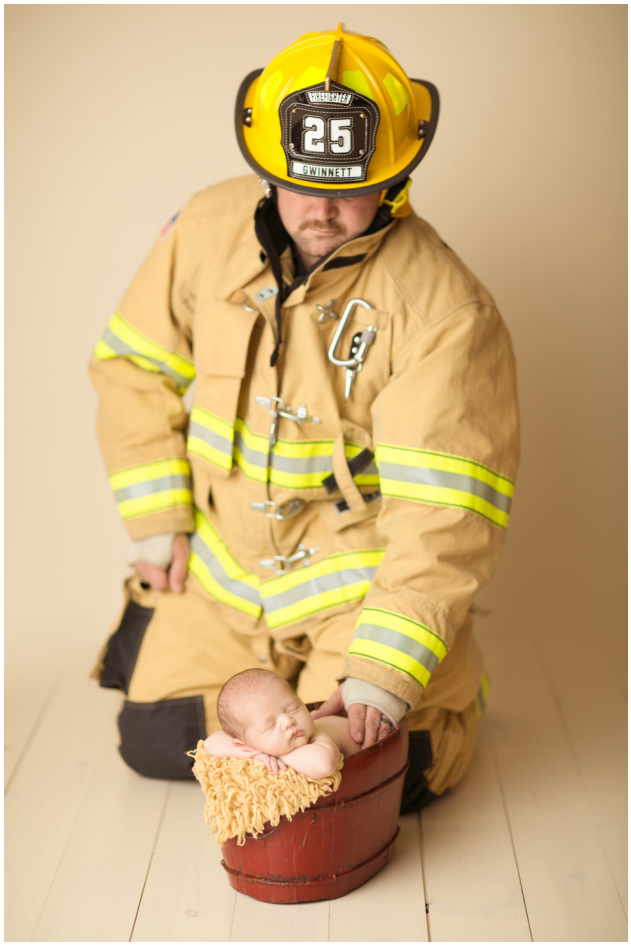
The history begins with when the lump was found. Is it tender, have there been any changes in the skin, or discharge from the nipple? Has there been any incident that could cause trauma, such as a car accident with seat belt or being hit with a hard object? During the physical examination, the palpable breast mass is examined for density and described as soft, firm, or hard; noting if it is mobile or fixed to the chest wall or skin; and if it is tender or non-tender. The skin is examined for bruising, redness, ulceration, or peau d'orange (an orange peel look). The nipple is observed for retraction or discharge. A history of menstrual cycle should also be obtained as benign cysts tend to enlarge premenstrually and then decrease in size. Following careful inspection of the breasts, the lymph nodes are checked for enlargement.

Based on these findings the provider may discuss options with the patient including mammography. Providers may be reluctant to order mammograms immediately because breasts are hypersensitive to radiation exposure for women under age 30 years (Wang et al., 2012). An ultrasound is another option that will show if the mass is solid or cystic and if there is a prominent vascular supply. Ultrasound is generally used if the woman is lactating or pregnant.

Diagnosis During Pregnancy

Although it is rare for young women to be diagnosed with breast cancer during pregnancy, it occurs at a rate of 1:3000 (Harrison, 2013). The physical and psychological impact on women and their families may feel overwhelming. Harrison (2013) reports that women not only fear for their own lives, but also fear for the wellbeing of the fetus. They may choose to delay treatment to facilitate a safe and timely delivery of the baby, but express concerns that the baby may also have cancer.

Abenhaim et al. (2012) studied breast cancer diagnoses during pregnancy over a ten-year period and reported an incidence of 6.5 per 100,000 births. More women are waiting to start their families until later in life, and there is a higher incidence of breast cancer in women age 35 and over. Pregnancy outcomes were similar to the control group, except indicating a higher incidence of induction and cesarean section (Abenhaim et al., 2012).



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Treatment options during pregnancy are based on the type of breast cancer, clinical staging and pathology, the physicians, and the mother.

Treatment options during pregnancy are based on the type of breast cancer, clinical staging and pathology, the physicians, and the mother. Chemotherapy agents can affect the fetus, particularly if administered during the first trimester. Delaying treatment due to the pregnancy can negatively impact the health of the mother (Azim et al., 2012). Cancer treatment continues to evolve with clinical trials and targeted therapies contributing to improved outcomes. The knowledge and expertise of the cancer care team should be leveraged through collaboration with the woman's obstetrician.

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Fertility and Breastfeeding Considerations

The effects of cancer treatment can potentially affect fertility and breastfeeding. One woman reported feeling terrified that cancer would not only take her breasts, but also the third child that she and her husband so desperately wanted. Women deserve optimal fertility treatment choices that occur before chemotherapy begins or after completion of all phases of cancer care. Many are so devastated by the diagnosis that they do not think to ask about fertility prior to treatment. It is the responsibility of the care team, including the childbirth educator, to help women negotiate the system to meet these needs (Meneses & Holland, 2014).

Breastfeeding is an important aspect of parenting to many new mothers. The anatomic and hormonal ability to lactate is dependent on chemotherapy, radiation, and surgical procedures that previously occurred. The cancer care team can provide data regarding the therapies utilized for treatment. Hermann and Nolson (2012) concluded that 3% of women develop breast cancer while breastfeeding. Although this percentage is low, it is essential that breast lumps occurring during lactation be evaluated. The childbirth educator has a unique relationship with the women they teach and can advocate for swift evaluation as indicated. If cancer is confirmed, women have a multitude of treatment decisions to make. Many times this includes the need to quickly stop breastfeeding. A lactation specialist can facilitate this transition in the least traumatic way to the mother and the baby (Hermann & Nolson, 2012).

Social Support and Impact on Family

It is really difficult to imagine the depth of the impact that breast cancer has on young families. They are in need of a tremendous amount of financial, psychological, and healthcare related support. Even with excellent insurance, the cost of copays and incidental expenses can burden these families for life. Miller, Foley, and Russell (2014) argue that cost is not even a consideration for most with a cancer diagnosis. However, in reality when the dust settles, there are often large bills to pay.

Social support needs to include both the woman and her partner. Studies indicate that psychological interventions improve the general well-being, level of depression, and marital concerns. Brandão, Schulz, and Matos (2014) report that women and their partners benefit from education about the cancer, the selected treatment and expected side effects, encouragement to voice concerns and exhibit emotions, and promoting the practice of finding a good and meaningful life after treatment. If left unchecked, psychological anguish can negatively impact the quality of life, the rate of long-term survival, and reduced resistance to illness (Badger, Segrin, Pasvogel, & Lopez, 2013).

Most cancer treatment centers include a component dedicated to counseling and social services. The social workers are experts at negotiating the terrain that accompanies this diagnosis. The social worker can make referrals to a psychotherapist or psychiatrist as needed, and connect women to alternative resources in the community. Susan G. Komen is a reliable resource that is available in many communities and online. Resources and education materials are easily accessible to everyone via the website (Susan G. Komen, n.d.).

Implications for Childbirth Educators

A breast cancer diagnosis can affect communication, intimacy, and sexual relationships between the woman and her partner, contributing to the importance of support strategies. Studies have indicated that no matter what type of therapy or counseling a woman receives, the most important component is a relationship with the person providing the therapy (Brandão, Schulz, & Matos, 2014) Childbirth educators have a unique relationship with childbearing families and are positioned to collaborate with the medical team regarding sensitive topics and how to best support the family. Most women have breastfeeding and newborn care questions, and want to learn about pre-term labor (Chastain & Lipke, 2014). These issues are magnified in the women who were previously treated for breast cancer or newly diagnosed.

Women with breast cancer reportedly confide in their partners most often, but also discuss their health concerns with close family or friends and others with whom they have a close relationship. Studies indicate least helpful comments to include "be strong, to keep my chin up, or that I shouldn't let it bother me," or "someone said I should look on the bright side," or "someone didn't seem to know what to say, or seemed afraid of saying/doing the 'wrong thing'" (Figueiredo, Fries, & Ingram, 2004, p. 5). Unsupportive interactions as discussed by Figuerirdo, Fries, and Ingram (2004) include distancing, awkward comments or behavior, downplaying the worries or forcing positive thoughts.

Open communication between the childbirth educator and the patient is the best way to support women and their partners. Harrison (2013, p. 5) states "the goal is to provide holistic, individualized care and effective support to assist patients and families with their decision-making throughout the pregnancy and cancer process." The childbirth educator

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should focus on support, offering to assist making contacts, and providing resource information. The childbirth educator needs to know their local fertility, oncology, and social support systems.

Summary

Breast cancer in young women is a rare occurrence, but it is important for childbirth educators to be aware that it does happen. Breast awareness, self-exams, and mammography should be supported and encouraged as indicated by those who have influence in the lives of young women. It is imperative to advocate for early fertility considerations with a new diagnosis and connect women to oncologists who include holistic support on the care team. Community, state, and national resources are available to these young families, and it is essential to bring this awareness to the women who we know through childbirth education.

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Reducing Stress in Infants: *Kangaroo Care*

by Meredith Baker-Rush, MS CCC-SLP/L

Abstract: Labor, delivery, and the care immediately following birth create stress on infants. Kangaroo Care (KC), or skin-to-skin contact between the parent and infant, aids in parental bonding and infant calming. Biological and psychological benefits for the infant using KC include, yet are not limited to, regulation of temperature, heart rate, oxygen, sleep-wake cycles, and a reduction in pain and crying time. Doulas and midwives can educate mothers of the benefits of KC, utilize KC to calm infants, and increase the social bond between parent and infant.

Keywords: Infant, baby, Kangaroo Care, sensory, touch, sound, calming, midwife, doula

Stress can be defined as a biological and psychological response to a given action or situation (Contrada, 2011). Many factors may produce a biological or psychological response and the presence of ongoing stress may result in disease or illness (Cohen, Kessler, & Gordon, 1997). However, most empirical literature emphasizes that stress is when an action or situation exceeds the ability to adapt to or to find balance (Contrada, 2011). In the matter of labor, delivery, and post-delivery, infants are exposed to many different types of stressors including but are not limited to the burden of labor, environment (internal or external), and/or medical needs. The burden of labor includes length and intensity of the labor, the mother's physical abilities or limitations, and the fetal development of the baby. The environment may include the mother's physical changes in labor (e.g., contractions), pushing, visceral changes (e.g., blood pressure, heart rate, oxygenation), or stress hormone changes. After delivery, the environment may include medical procedures immediately performed on the infant, lights and sounds in the room, or the separation from the mother. These factors occur in healthy "normal" births as well as in births with complications or illness. Stress on the infant will be present in all situations regardless of the health of the infant. In matters of premature, ill, or complicated deliveries, the stressors will exceed the "average." Therefore, it is important to incorporate anti-stress methods in efforts to calm an infant, one such natural method, and the subject of this article, is known as Kangaroo Care (KC).

KC is a technique in which the clothing of the infant is removed (except the diaper) allowing their body, legs, arms, and face to have direct skin contact to the parent's bare chest or torso.

KC is a technique in which the clothing of the infant is removed (except the diaper) allowing their body, legs, arms, and face to have direct skin contact to the parent's bare chest or torso. The term "parent" regarding direct skin contact refers to maternal, paternal, and surrogate (Ludington-Hoe, 2011). The skin-to-skin contact of chest to chest (a.k.a., ventral contact) has been found to increase the release of oxytocin, a neuronal hormone that reduces stress, increases bonding, and trust (Gianaros & O'Connor, 2011; Klaus, 1998; Uvnäs-Moberg, 1998) and has been reported to have pain-relieving effects in infants (Klaus, 1998; Ludington-Hoe & Hosseini, 2005). In addition, oxytocin has been found to decrease the stress hormone cortisol, and stimulate the Vagus Nerve, which connects with various organs and muscles in the body (Klaus, 1998).

KC incorporates multisensory aspects including but not limited to touch and proprioception (the body's ability to feel the parent holding the infant), hearing (exposure to the sound of the parent's heartbeat), positioning (laying against the chest and skin of the parent), movement or vestibular (feel of the rhythmic breathing of the parent), and thermal or temperature (Cong, Ludington-Hoe, & Walsh, 2011). KC is a natural behavioral technique (e.g., placing the infant on the parent via skin-to-skin), found to aid in parent bonding and infant calming rather than administering medicine or the need for invasive procedures.

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History of KC

KC, or skin-to-skin contact, was originally studied in 1970 (Ludington-Hoe, 2011). The initial research included the mother and full-term infant focusing on the mother's behaviors toward the infant and parent-child attachment (Barnett, Leiderman, Grobstein, & Klaus, 1970; M. H. Klaus, Kennell, Plumb, & Zuehlke, 1970; Ludington-Hoe, 2011). The research resulted in a positive change in healthcare by creating rooming-in (i.e., the infant sleeping in the same room as the parent) with the focus on child-parent attachment; however, the element and potential for physical benefits of skin-to-skin were disregarded (Ludington-Hoe, 2011). In 1983, researchers from Colombia began investigating skin-to-skin contact between pre-term infants and maternal parents which resulted in an increase in research by European and Scandinavian neonatal specialists (Ludington-Hoe, 2011). Through this expanded research, by 2011, KC was endorsed by the American Academy of Pediatrics, American Heart Association, American College of Obstetricians and Gynecologists, Association of Women's Health, Obstetric and Neonatal Nurses, as well as the United States Centers of Disease Control for full term infants (Ludington-Hoe, 2011).

Benefits of KC

The benefits of KC include biological and psychological elements for both the parent and infant. For the parent, gains center on eight themes in the research literature: confidence, physical effects on the parent and infant, bonding, constructing parental role, information and communication between parents and nurses, support of family/partner, parents' physical needs, and the NICU environment (Gabriels, Brouwer, Maat, & van den Hoogen, 2015). Ultimately, the primary gains were identified as increased parent involvement in the care of the infant, increased confidence of the parent, a sense of purpose and role as a primary caregiver, and "special" connections between the parent and infant (Gabriels et al., 2015).

More striking are the benefits for the infant. These are noted in the physiological and biological changes such as temperature, heart rate, sleep-wake cycles, reduction of pain, and oxytocin release (Bystrova et al., 2003; Cong et al., 2011; Feldman, Gordon, Schneiderman, Weisman, & Zagoory-Sharon, 2010; Feldman, Weller, Sirota, & Eidelman, 2002; Ludington-Hoe, 2011; McCain, Ludington-Hoe, Swinth, & Hadeed, 2005).

Temperature

Bystrova et al. (2003) evaluated full term infants maintaining or increasing body temperature given either KC (skin-to-skin), mother's arms (infant clothed but in the mother's arms), or in the nursery (clothed and in a bassinet or swaddled in a bassinet). The infants who were in the skin-to-skin group demonstrated a higher temperature rectally as well as in the feet. The feet temperatures remained throughout the hospitalization in the skin-to-skin group while in other groups, temperatures were lower (Bystrova et al., 2003). The authors speculated that the sensory system was activated by the skin-to-skin contact through the proprioceptive aspects of KC, which resulted in temperature regulation (Bystrova et al., 2003). In other words, the way the infant's body interpreted the sensations in KC created a neurological chain reaction resulting in benefits of regulating and maintaining the infant's body temperature. Even with preterm infants (e.g., birth prior to 36 weeks), skin-to-skin contact resulted in temperature elevation (Bauer et al., 1997). In addition, Bauer et al. (1997) noted that the change in air temperature during the transition from the nursery to the skin-to-skin contact did not affect the rise in the infant's temperature elevation when skin-to-skin on the parent. In both full-term and preterm infants, the use of skin-to-skin contact resulted in a rise in the infant's body temperature, maintenance of the temperature, and positively influenced distal blood flow to the extremities (i.e., arms and legs).

Heart Rate, Sleep-Wake Cycle, and Oxygenation

The measurement of the heart rate provides the healthcare team with information related to the heart contraction rate over a set period of time (e.g., a minute). Physiologically, with each breath, a neurological signal is sent to the heart to increase or decrease the rate of contraction (i.e., pumping). The nervous system is regulated by two competing systems, one that excites (i.e., speeds up) and one that depresses (i.e., slows) activity. The heart works together with the respiratory system through the nervous system signals by means of the excitation system (i.e., sympathetic) and depressive (i.e., parasympathetic) system (Feld & Eidelman, 2003; McCain et al., 2005). Few studies have looked at the benefits of KC on heart rate variability (HRV), yet the results are consistent. Infants who used KC demonstrated better neurodevelopmental growth as demonstrated by improved HRV (Feld & Eidelman, 2003; McCain et al., 2005). Additional study is warranted, however; current results of KC research indicate significant positive outcomes as it relates to decreasing stress and improving HRV.

Infants have a series of "states," or levels of consciousness (Gottesman, 1999; White, Simon, & Bryan, 2002). These

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include quiet sleep, active sleep, drowsiness, quiet alert, active alert, and crying (Gottesman, 1999). The sleep states, including quiet and active sleep, typically last 60 minutes in length and transition to drowsiness prior to the infant awakening (Gottesman, 1999; White et al., 2002). A conscious/awake infant can also move through the alert states (e.g., quiet alert, active alert, and crying) and transition to drowsiness then into the sleep states. These states and the progression between states is normal infant behavior. However, environmental stimuli can alter or rapidly change an infant's state (e.g., heel stick, bright lights, and loud sounds) which can create additional stress and a disruption in the infant's ability to regulate sleep-wake cycles as they relate to state.

Several studies have found that the use of skin-to-skin contact aided in calming a crying or excited infant (Bohnhorst, Heyne, Peter, & Poets, 2001; Feldman et al., 2010; Feldman et al., 2002; McCain et al., 2005). For example, a stressed infant in a crying state was placed skin-to-skin to the mother resulting in a change in the infant's respiratory and heart rate (within 30 seconds) and the infant was able to maintain a calm resting state for 40 minutes (McCain et al., 2005). Feldman et al. (2002) assessed premature infants and the impact of KC on the sleep-wake cycle. Results found those infants who experienced KC demonstrated an improved rhythm of sleep wake cycle and those with a medical risk showed a greater benefit overall in which the infant was able to stay awake and rest in the normal sleep wake patterns. These findings support the infant's ability to improve his or her regulation of sleep and periods of wakefulness. In contrast to many studies related to heart rate, oxygen consumption, and temperature, Bohnhorst et al. (2001) noted that in preterm infants (e.g., ages 24-31 weeks), bradycardia (i.e., slow heart rate) and hypoxemia (i.e., low oxygen intake) with less regular breathing was noted. Considerations of infant head positioning and placement on the parent was a noted limitation, however, for purposes of infant safety, heart rates and oxygen saturations are recommended to be monitored on preterm infants when engaging in KC.

Reduction of Pain and Crying Time

Infants are likely to undergo various procedures to ensure health after birth and while in the hospital. The most common is a heel stick for purposes of obtaining blood. The use of KC for pain regulation or remediation was studied in both preterm and full-term infants. Ludington-Hoe and Hosseini (2005) assessed the impact of KC on preterm infants (aged 37 weeks) during heel sticks. Heart rates, states of alertness and duration of crying was noted throughout the study (Ludington-Hoe & Hosseini, 2005). Results indicated that given the use of KC, infants demonstrated reduced heart rates and crying duration (Ludington-Hoe & Hosseini, 2005). In addition, several infants in a deep sleep state did not cry at all despite the needle stick (Ludington-Hoe & Hosseini, 2005). However, the timing of the KC prior to the heel stick is important. Using KC within 30 minutes prior to the heel stick has demonstrated the greatest results in decreasing pain (Cong et al., 2011).

The theory that skin-to-skin contact between the infant and parent provides pain-relieving methods continues to be explored in infant populations with disorders, difficulties, or discomfort. Infants with colic (i.e., fussiness and crying in otherwise healthy infants) are another group in which KC may provide comfort or calming of symptoms (Rad et al., 2015). In a quasi-experimental study, infants aged 15-60 days were evaluated with KC and the potential impact on their crying duration and fussiness (Rad et al., 2015). Prior to initiating KC, colicky infants presented with an average crying duration of 2.21 ± 1.54 hours per day. After the use of KC, crying durations decreased to 1.16 ±1.3 hours per day (Rad et al., 2015). Similar to the work of Bystrova et al. (2003), the theory of sensory system activation due to skin-to-skin contact through the proprioceptive aspects of KC, warrant ongoing study.

Summary

KC is relatively new in the literature. The impact on temperature, heart rate, sleep-wake cycle, and oxygenation, and pain reduction is being universally studied. Despite being fairly new to study, KC has consistently demonstrated positive calming effects on the full-term and preterm infant. The benefits extend far beyond the parent child bonding, and researchers have hypothesized KC may positively influence the neurological system and aid in cognitive and physical development. Additional research is needed in this area, however, based on the literature to date and the overall positive results of KC over the past 40 years of research, doulas, and midwives can quickly teach parents how to use KC and explain the general benefits with very few contraindications found in current literature.

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Let's Talk About It: Finding Peace with Death and Dying in Everyday Life

by Rose, L.

Melbourne, Australia: Michelle Anderson Publishing (2014). 232 pp. US $19.99 paperback

reviewed by Kathy Martin, PhD RN CNE

Let's Talk About It: Dealing with Death and Dying in Everyday Life addresses the process of dying and the experience of death with deep conviction and compassion from a variety of perspectives. The information is presented in such a way as to be beneficial to individuals and loved ones experiencing the dying process, the care giver or care giver team, and the health practitioner. Written from the educational end experiential life lessons as articulated by Lea Rose as an experienced clinical counselor, the book is written within the context of the health care system and support resources in Australia, with ready transferability to many different countries and cultures.

Author Lea Rose begins the book by sharing a collection of very moving and insightful stories as experienced from within her professional practice and conveyed by clients in her supportive care. These very helpful glimpses into the personal experience of the death and dying journey provide the reader an opportunity to envision the process from an experiential retelling perspective. The second part of the book focuses on the physiological and psychological processes experienced by the dying individual and provides the care giver(s) a calming narrative of what to expect, and recommendations for how the care giver or care giving team may best support and provide comfort to the dying individual. The final portion of the book addresses several of the key processes involved in the dying process such as writing one's will and preparing to meet the dying individual's last wishes and funeral requests.

In addition to providing meaningful insight into the death and dying process, this book provides a wealth of resources which may be helpful at various points in this transitional journey. The reader may find such knowledge provides a calming and quiet confidence about a process that each of us experience, however, few of us are truly prepared for in supporting both the dying individual and the related care givers

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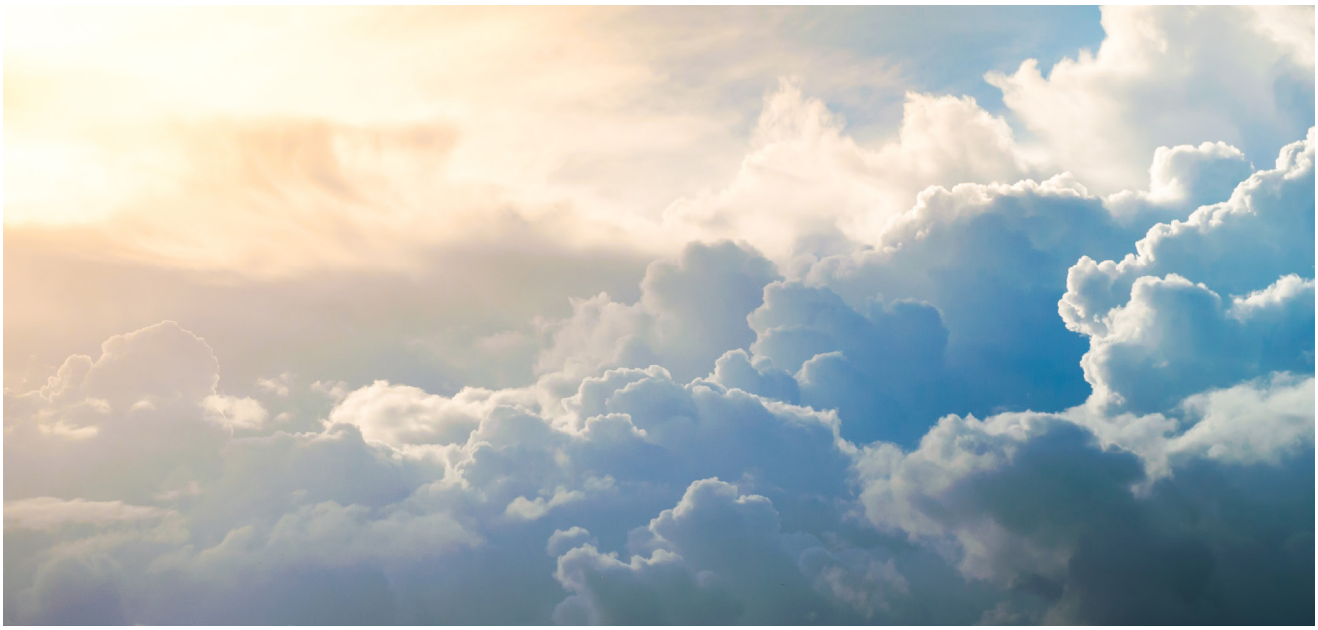

Cut It Out: The C-Section Epidemic in America

by Morris, T.

New York University Press, Washington Square NY. (2013). 245 pages. Hardcover $30. Kindle $9.99

reviewed by Connie Livingston, RN BS FACCE LCCE ICCE

There is no denying the epidemic of cesarean sections in America. Theresa Morris, a professor of sociology, understands this. She also understands the epidemic of all interventions, as well as the catastrophic impact on maternal morbidity and mortality and infant morbidity and mortality. She gets it. And anyone who reads her book will get it also.

Morris examines the U.S. cesarean rate of 33% and compares it to other nations. At the time of the books writing in 2013, only Brazil and Italy had higher cesarean rates. Comparatively, France had a cesarean rate of 19%, Japan 17% and 16% in Finland. Quite logically, Morris identifies not only medical differences in maternity care but also societal differences in maternity care as part of the differentiation.

Also on Morris' radar is the unprecedented litigation in the U.S., which is one of the catalysts for the trend of physicians practicing defensive medicine. Other causes for radical differences in medical practice include organizational differences (teaching hospitals and HMOs have lower cesarean rates), ACOG (American College of Obstetricians and Gynecologists) suggesting that physicians practice defensively to avoid lawsuits, and the "tyranny of the rules" as set by hospitals' risk management departments. This translates into the fact that if an expectant mother has done her homework and learned all she can about the options she has for care during labor and birth, it will be all for naught if the maternity care providers feel they must strictly follow hospital policies, procedures and practice guidelines to protect themselves and the hospital from potential lawsuits. "ACOG's Ethics Committee suggests that using the informative model of decision making, in which physicians strictly provide information to the patient but the patient makes medical decisions, 'raises concerns about physicians' protecting themselves rather than working in the best interest of their patients.'" Morris also points out that expectant mothers today lack evidence-based labor and birth information. Rather, their information comes from skewed televisions shows (that often depict women as weak and dependent), biased friends and family members, and hospital-based childbirth education classes that are geared more toward what to expect at that facility and what can go wrong.

The way in which maternity care providers are taught and trained is also a factor. If the only tool you have is a hammer, said Abraham Maslow, then you'll treat everything as if it were a nail. In maternity care, "few physicians are currently trained in the use of forceps, and even those physicians who are trained in forceps delivery tend to shy away from using them because c-sections are quicker and more predictable."

In her conclusion, Morris methodically creates a roadmap for change that will have any childbirth educator or doula cheering. By identifying the four routes for change on the map (expectant women, maternity care providers, organizations, and societal reform), the very first solution is for women to take independent childbirth education classes (and yes, ICEA is one of the recommended organizations through which to find an educator!). Other woman-based solutions include using evidence from independent childbirth education classes to make informed decisions and to also hire doulas. Maternity care providers are urged to be "up front" with women about all aspects of labor and birth, while voicing their concerns to ACOG about the increasing cesarean rate and non-evidence based protocols. Organizations such as medical schools should train evidence-based, providing training on VBACs, vaginal twin births, etc. Hospital should welcome and/or employ doulas and more nurses to ensure 1-1 nursing care. Hospitals should also mandate that every cesarean birth be reviewed (this has already enabled many hospitals to dramatically reduce overall cesarean birth rates and increase patient satisfaction and outcomes.) And finally for society, Morris urges malpractice reform.

There is no doubt that with the increased use of interventions, and in particular cesarean sections, the maternal/infant morbidity and mortality rates in the U.S. are also rising. We have a true disconnect between evidence-based information and medical practice. In the light of the May 2016 ACOG debate on induction of all women at 39 week, I find this book (albeit 3 years old) a must read for everyone.

Connie Livingston, BS, RN, LCCE, FACCE, ICCE is the President of ICEA (2015-2016). She has 40 years of experience in maternity care, 36 of those as a childbirth educator and doula. Connie has worked in a variety of settings including hospitals, colleges, military installations and in private practice. She is currently writing her third book for Praeclaus Press.

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