here is overwhelming evidence of the importance of healthy, maternal mental status for individuals and families. However, there is less clarity and much debate about how to best identify and support mothers and the family unit impacted by the most common maternal mental health disorder — depression. This document will provide public health nutritionists with basic information on maternal depression and guidance for practical first-steps to address maternal mental health (MMH).

The purpose of this brief is to:

- Increase awareness of maternal mental health among public health nutritionists
- Highlight programs that integrate maternal mental health screening and training
- Equip public health nutritionists to take a more active role in maternal mental health
- List examples of resources to use in screening and treatment for maternal depression

Public health nutritionists can strategically and positively influence outcomes of maternal mental health.



Maternal Depression

Major depression is very different from, but sometimes confused with "baby blues" — the common emotional swings experienced by many mothers shortly after childbirth.¹ Maternal depression is a broad term used to describe a complex and multifaceted array of symptomology surrounding pregnancy, including the time-period before, during and after pregnancy. Depression during pregnancy is also called antepartum or prenatal depression, and depression after pregnancy is called postpartum depression. Postpartum depression can begin anytime within the first year after childbirth. The cause is unclear. Hormonal and

physical changes after birth and the stress of caring for a new baby may play a role.

While the phrase "postpartum depression" is sometimes used to describe any MMH disorder, it is important to note that there is a range of separate and distinct disorders, including anxiety disorders. With reported rates as high as 20 percent, perinatal anxiety is nearly as prevalent as depression.² Maternal mental health disorders encompass a range of mental health conditions with varying severity and prevalence, including depression, anxiety disorders, and postpartum psychosis.^{2,3,4}



What Do Data Reveal?

Statistically, this issue cannot be ignored. One in seven mothers experience depression or anxiety during pregnancy or postpartum. In a study of 10,000 women:⁵

- 21% had postpartum depression;
- 26.5% exhibited episodes of depression before pregnancy with more chronic pattern;
- 33.4% of the episodes had their onset during pregnancy; and
- 40.1% of the episodes began during the postpartum period.

Additionally, every year, more than 400,000 infants are born nationwide to mothers who are depressed, making

perinatal depression the most under-diagnosed obstetric complication in America. $^{\rm 6}$

Data also show that women who have experienced depression prior to pregnancy are at higher risk.

Despite these data, The Diagnostic and Statistical Manual of Mental Disorders (DSM-5) does not recognize postpartum depression as a separate diagnosis; rather, patients must meet the criteria for a major depressive episode and the criteria for the peripartum-onset specifier. The definition is therefore a major depressive episode with an onset in pregnancy or within 4 weeks of delivery.⁷ One of the obvious challenges is that postpartum depression is often not identified within the 4-week time frame.



Risk Factors for Depression

The following list was taken directly from A Report from the California Task Force on the Status of Maternal Mental Health Care, April 2017

Although anyone can experience a MMH disorder, there are certain factors that increase the risk for depression within the general population, which also elevate risk among pregnant and postpartum women, including:

- Personal or family history of depression
- Major life changes, trauma, or stress
- Some physical illnesses and medications

In addition to these risk factors, the following risk factors place a woman at higher risk for developing depression, specifically during pregnancy (the prenatal period):

Risk Factors for Prenatal Depression

- Anxiety
- Lack of social support/isolation (family and friends

to share experiences with; practical support with life's challenges)

- Prior birth loss
- Unintended pregnancy
- Low socioeconomic status
- History of domestic violence (either as victim or perpetrator)
- Younger age (e.g., teen pregnancy)
- Older age (e.g., over age 40)
- History of premenstrual syndrome (PMS)
- Body dissatisfaction in the third trimester
- Untreated thyroid disorders
- Single relationship status and/or poor relationship quality
- Poor health status and chronic conditions prior to pregnancy, particularly for women of color

The same factors that place a woman at higher risk for prenatal depression also place her at risk for postpartum depression. Additional risk factors specific to the postpartum period or identified in research specific to the postpartum period include:

Risk Factors for Postpartum Depression

- Depression or anxiety during pregnancy
- Stressful life events
- Perfectionism/fear of making a mistake
- Traumatic birth experience
- Preterm birth/infant admission to neonatal intensive care unit
- Breastfeeding problems
- Multiple births
- Infants with colic/significant fuss patterns and sleep deprivation
- Living in a city/increased isolation

Although not included in the previous list, it is important to note that new research shows gestational diabetes appears to be an independent risk factor for postpartum depression (PPD) in first-time mothers. Results of several population-based studies showed that even in the absence of a history of depression, gestational diabetes and weight gain moderately increased the risk for PPD.^{8,9,10,11}



Who Is Impacted?

Healthy women make healthy mothers. Maternal depression, substance use, and physical health — topics routinely addressed in pediatrics — have a major impact on a child's health.¹² An article published in *Pediatrics* states "Preconceptional maternal health directly influences infant, child, and adult health. Considerable evidence demonstrates the impact of baseline maternal health (diabetes, cardiovascular diseases, depression) and behaviors (smoking, drug use, nutrition) on child and adult outcomes."13 Serious depression in parents and caregivers can affect far more than the adults who are ill. It also influences the well-being of the children in their care. Because chronic and severe maternal depression has potentially far-reaching harmful effects on families and children, its widespread occurrence can undermine the future prosperity and well-being of society as a whole.¹⁴



What Can Be Done?

Evidence suggests that effective treatment for women includes counseling, behavioral therapy, exercise, and medication. However, half or fewer of depressed women receive a diagnosis or treatment. Nutritionists can positively impact this by supporting screening and treatment processes and continuing to provide nutrition recommendations.

Before focusing on nutrition specific strategies, nutritionists should recognize the bigger picture with these important points of impact related to MMH:

- External Environments
- Policy
- Screening & Treatment



A Broader Lens to Include Environment

Pregnancy and postpartum clinic visits provide a window of opportunity for identifying and addressing potential depression in mothers. However, health professionals should address identification of and treatments for depression within the context of the complete life cycle. The overall discussion about the solution should include a theory of change — a myriad of human capacity building, multifaceted interventions that include the entire family and community should be considered. As part of the discussion, it would be important to identify examples of *toxic stress* — chronic exposure to early adverse experiences negatively

impacts brain development. Toxic stress distinguishes between stress responses that are time-limited and buffered by the presence of a supportive adult and those that are severe, chronic, and occur in the absence of adult support. It helps to explain why interventions that ameliorate exposure to severe adversity are critical to children's future health and development. If health professionals can identify "toxic stress" situations experienced by individuals within the family unit, and strengthen the capacity of adults in general, the trajectory of depression and lack of coping skills in adults could be greatly impacted.



Click here to play "Building Adult Capabilities to Improve Child Outcomes: A Theory of Change" by the Center on the Developing Child at Harvard University



Policy Impacts

One long-term solution for MMH issues is to embed national and state policies that not only support maternal mental health, but also support innovation, evaluation and continuous improvements that are needed to better understand what works for children, mothers and families. Policies that focus on replication and expansion of interventions to scale as well as innovative program models that focus on the needs of mothers and their children are paramount to future successes.⁴

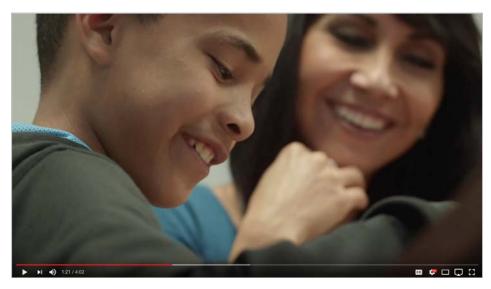
Example of a Suggested Policy Change

(2015 Maternal Child Health Journal, Commentary)

The Commentary highlights a key international breastfeeding promotion program (Baby Friendly Hospital Initiative – BFHI) and shows how considerations for maternal mental health could be incorporated into the initiative. Each of the Ten Steps contain examples of how critical mental health information could be disseminated, including assessments, staff training to include how to discuss mental health issues in a non-judgmental way, breastfeeding in the context of treatment for PPD, and many other practical tips.²⁰

Public Health Nutritionists can work with local Baby
Friendly Hospitals and lactation support groups to develop
ancillary material and trainings to include in each of
the Ten Steps. If there are no designated baby friendly
hospitals in the area, public health nutritionists can still
work with lactation support groups and clinical dieticians
to provide information and training to pediatric MDs, labor
and delivery unit staff, and Ob/Gyn MDs, etc.





Click here to play "Pregnancy Related Depression" by the Colorado Department of Health and Environment



The Community Preventive Services Task Force, which makes evidence-based recommendations on preventive services for community populations, also recommends collaborative care for the management of depressive disorders as part of a multicomponent, health care system-level intervention that uses case managers to link primary care providers, patients, and mental health specialists.²¹ Once these linkages occur, effective clinical guidelines and screening tools must be used.

Because all women are at risk for pregnancy-related depression, universal screening should occur during the

pregnant and postpartum time-period. It is important that the mother and infant be seen as a unit, particularly in the first few months of life, because what affects one inevitably affects the other. Thus, universal screening is recommended by the U.S. Preventive Services Task Force (USPSTF), American Congress of Obstetricians & Gynecologists (ACOG), American Academy of Family Physicians (AAFP), and American Academy of Pediatrics (AAP). Clinical practice guidelines provide an avenue for practitioners to access critically-evaluated evidence based recommendations for the care of their patients.

While only one international guideline from Australia covers routine postpartum care for the mother and infant,²² there is still an opportunity in the U.S. to saturate health care settings with the use of quality, evidence

based screening and referral systems. Many reports and guidance around MMH collectively agree on these basic, yet imperative steps (IART) on the road to increasing supportive measures for maternal mental health.

Suggested steps for the screening and referral process:23

For details within each of the following steps, please visit this link.



Facts

Understand the facts and background related to depression including protective factors and risk factors.

Dialog

Understand how to start the conversation.

Tools

Use appropriate screening tools, services and resources.

Follow-Up

Determine if further assessment is needed. Finding or creating a local referral system is key.

Treatment

Diagnose and treat (treatment planning).





Postpartum Support International (PSI) — An Example of Follow-Up and Referral Resources

PSI increases awareness among public and professional communities about the emotional changes that women experience during pregnancy and postpartum.

PSI is an example of a valuable resource for state and local PSI support coordinators, support groups, telephone support, and local events for women with perinatal mood and anxiety disorders and their families.

See Resources List on page 16 for more information about PSI.

Additional Opportunities for Public Health Nutritionists

There are many tools, reports and guidelines that provide details for practitioners and health care professionals to implement procedures to address maternal mental health.

What opportunities are unique to public health nutrition professionals?

The story of folic acid supplementation (a nutrition-based intervention) is a powerful example of how a preconception intervention influences child health. The educational campaign and fortification of grains led to a 26% decrease in the rate of neural tube defects."²⁴ The power of various preconception nutrition interventions has been documented. Yet the question remains, what can be done pre-conceptionally to effectively prevent or treat maternal depression? As nutrition professionals, it is important to

recognize the overall process to address maternal mental health issues. Current nutrition guidance provided as a standard of practice, as well as programs addressing food insecurity for women of child bearing age can assist in preventing several complications during pregnancy that can lead to depression. The combination of nutrition education and services provides a solid foundation to support both healthy minds and bodies.¹¹

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Nutritionists as Gatekeepers

The Academy of Nutrition and Dietetics, Women's Health Dietetic Practice Group Fall 2009 publication, identified the registered dietitian nutritionist (RDN) as the mental health "gatekeeper" and outlined ways nutrition professionals and mental health care specialists can collaborate for the participant's well-being.

While psychotherapy is certainly outside the expertise of the RDN, the dietitian may be in a unique position to identify potential patients that may benefit from psychotherapeutic support, and to build the rapport necessary to successfully refer clients to a qualified mental health specialist. While registered dietitians may not be able to treat, we can listen, gain their trust and



refer. RDNs can use client centered counseling strategies to help, such as "How do you think your depressed mood might affect your ability to eat well and have the best pregnancy outcome possible?" Furthermore, collaboration with the client's mental health specialist may help promote optimal nutrition care and support. 25 The informed public health nutritionist at the state or local level can strategically work with the clinical nutrition workforce to determine, clarify and promote the IART (see page 6 of the IART section) process specific to that area/ state. This combined effort across specialties can create a synergistic and proactive plan to identify and evaluate the overall MMH system and make recommendations for improvement.



Training and Development

The training and experience of public health nutritionists/ registered dietitian nutritionists make RDNs uniquely qualified to educate whole spectrums of populations, from lay persons to physicians. It is crucial that RDNs — the most experienced and educated professionals in food nutrition and overall wellness — play a role in educating staff in various settings. Nutritionists as training professionals

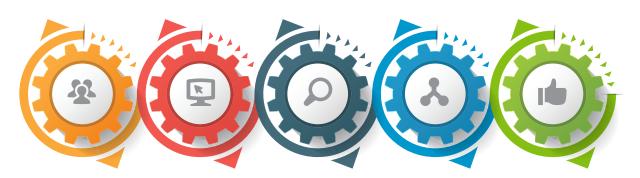
can connect quality education modalities with populations in need, such as women, children and families. RDNs can use evidence-based trainings in settings where training relationships already exist. Head Start is an example of a setting where nutrition and wellness education is already provided by public health nutritionists/RDNs, as a matter of policy.

Example — Georgetown's Center for Child and Human Development (GCCHD)

An example of policy, relationship, and training expertise in practice is Head Start and Georgetown's Center for Child and Human Development (GCCHD). GCCHD developed maternal mental health processes and resources used in Head Start. By providing in-services and training on Georgetown's list of action steps, RDNs can empower Head Start and other programs to reduce the impact of depression in the families they serve.

GCCHD's MMH Steps and Processes

Click here for Georgetown University's Center for Child and Human Development's training page for Maternal Depression & Head Start.



Identify Families

in need of support through validated screening tools

Train Staff

about depression warning signs and how to talk with families

Provide Reflective

Supervision for staff working with families who have mental health challenges

Connect Families

with communitybased treatment services

Reduce Stigma

by promoting awareness of depression as a common and treatable condition



Messaging and Public Awareness

Nutritionists can also work with state government, national and international organizations to create pregnancy-related depression and anxiety awareness campaigns. Building public awareness and education can effectively combat the stigma attached to pregnancy-related depression and anxiety by dispelling negative stereotypes, combatting discrimination, reducing personal shame, self-blame and guilt; and opening pathways for affected women to seek help and treatment.²⁶

KNOW A NEW MOM WHO'S FEELING DOWN?



Example — Colorado Department of Public Health and Environment

Over the years, increased knowledge of the prevalence, risk factors and impact of pregnancy-related depression and anxiety has compelled the public health sector to expand its role in screening, referral and treatment of affected women. As one of the state's Maternal and Child Health priorities for 2016-2020, Colorado aims to reduce stigma associated with pregnancy-related depression and anxiety through a public awareness digital campaign to increase the number of affected women who seek treatment. A pilot <u>Colorado</u> campaign began during the fall 2016 in three targeted

communities following a 2015 <u>market research study</u>. A full suite of digital creative campaign materials was developed alongside a marketing plan to broadly disseminate campaign messages and images through traditional media outlets and social media platforms. The campaign landing page is incorporated into the Colorado page of the <u>Postpartum Support International</u> website. In spring 2017, the campaign maintained and strengthened efforts in the three pilot communities while expanding resources and support to two additional communities.²⁷



Counseling Techniques

Nutritionists are uniquely qualified to assist the medical field in providing patient education with respect and dignity. There is a stigma associated with MMH. Women and other family members often feel guilt and shame related to struggles around depression. Current patient-centered counseling and motivational interviewing techniques are widely used by public health nutritionists. These counseling

approaches are already poised to allow women to share issues and honestly respond to screening questions without shame. State level and local level nutritionists can work together with mental health professionals to create trainings for staff within service based programs that include recognition and identification of MMH issues.

Examples of Some Key Messages and Questions

that could be provided to nutrition-related service providers and staff like CACFP, Head Start, WIC, etc.

(Adapted from Oregon WIC³³ and the Colorado Department of Health & Environment³⁴)

What message(s) are you trying to convey to mom's and their support system?

- You are not alone. You are not to blame. You can get help.
- Having a baby wasn't supposed to feel like this.
 - For women with pregnancy-related depression and anxiety, each day can be a struggle. Having a new baby is hard but we can help make it easier for you.
 - Overwhelmed? Sad? Hopeless? For women with pregnancy-related depression and anxiety, each day can be a struggle. It's okay to ask for help.
 - Feelings of guilt, frustration and withdrawal are common among new moms but you don't have to feel this way. Having a baby is hard but we can help make it easier for you.
- Pregnant and new mothers need love and support too.
- Encourage your loved one to get professional help.
 - 1 in 7 women suffer from pregnancy-related depression and anxiety making it the most common complication of pregnancy. New moms may find it hard to be honest about their feelings and accept help. Be patient and be available.
 - Pregnancy-related depression and anxiety is common. Reassure your loved one that she is not alone and she is not to blame.

 Pregnancy-related depression and anxiety is a medical condition, not just a bad mood.
 Understanding the illness is the first step in finding the best treatment for your loved one.

What questions might be used to screen for depression? Examples:

- How is your appetite? What have you been eating?
- How are you sleeping?
- What help do you have with taking care of the baby?
- How are you doing emotionally? What are your moods like?
- What is being a mother like for you? Is it what you expected?
- Who is a support for you?

What symptoms might a woman describe if she is depressed? Mom might report that she:

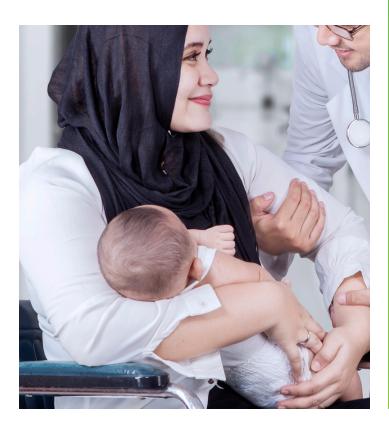
- Has little or no appetite
- Is experiencing insomnia, excessive or unusual fatigue
- Has little support, feels isolated, alone
- Feels fearful, anxious, has mood swings or irritability/anger, crying jags
- Feels uncomfortable with or detached from the baby
- Is overwhelmed by parenting



Women, Infants and Children

An obvious entry point is the work already being done within the Special Supplemental Program for Women, Infants and Children (WIC). WIC was established to safeguard the health of low-income women, infants, and children up to age 5 who are at nutritional risk. WIC benefits are not limited only to food. Participants have access to a number of resources, including health screening, nutrition and breastfeeding counseling, immunization screening and referral, substance abuse referral, and more.²⁸

The messages and education materials that exist within the WIC counseling structure already support lifestyles and habits that can decrease some risk factors for depression. Breastfeeding support, healthy eating for healthy weight gain, exercise and self-care methods all contribute to healthy minds and bodies.^{29,30}



WIC Examples of MMH Screening & Training

In California, the Alameda County WIC administrator, Behavioral Health Care Services, and local graduate nursing students provided support for the WIC program. A 2-day curriculum for WIC staff was developed by the lead PHN that included use of the Edinburgh Postnatal Depression Scale (EPDS), case scenarios, and practice screening. As of May 2014, more than 6000 women were screened at two WIC sites. Approximately 14% had positive test results, and 37% accepted referrals. Because of the protected nature of behavioural health care data, it is difficult to obtain a measure of client well-being, but local interdisciplinary collaboration can be successful. The program is expanding to additional WIC sites in the county.³¹

In 2015, Oregon WIC created an in-service and training around postpartum depression for their nutritionists to conduct with staff that included learning activities and patient information.³² (See Risk Criteria Update, January 2015: Perinatal Mood and Anxiety Disorders.)



Broader Spectrum of Interventions

Well Child Checks. Minnesota's Clinical Guidelines for Implementing Universal Post-Partum Depression (PPD) Screening for PPD in Well Child Checks states "Providers who deliver well child checks are likely to see the mothers more often and have an opportunity to screen for PPD during a wider range of dates. In addition, an infant is more likely to receive a 2 month well child check — 92% in Minnesota's Medicaid population in 2012 (Minnesota Department of Health, 2014) — than a mother is likely to receive a postpartum visit."35 Public health nutritionists should connect and partner with the state's American Academy of Pediatrics (AAP) chapter, Maternal and Child Health (MCH) Title V programs (including Bright Futures, a national initiative), and Centers for Medicare and Medicaid Services (CMS). Nutritionists can work with these partners to create materials and processes that easily fit into the Well Child model of care.



Click here for Clinical Guidelines for Implementing Universal Postpartum
Depression Screening in Well Child Checks.



Lifestyle Interventions for Prevention and Treatment

Research has demonstrated that addressing lifestyle factors can prevent and treat milder symptoms of depression. Encouraging women to eat healthy foods, get adequate exercise, establish good sleep routines, stay connected to social support systems and engage in mindfulness practices are all ways to naturally improve mental well-being. In addition, it is important to avoid substances including tobacco, marijuana, alcohol and other drugs.

During 2013, the Colorado Department of Public Health and Environment convened a group of over 65 partners from public health, mental health, medical, and pharmaceutical professions to review the research and develop guidance to address depression during and after pregnancy. The guidance was developed to support both lay professionals and medical professionals and outlined multiple treatment options, including lifestyle factors that are important for all women to prevent and improve depression, mental health services and medication.



Click here to learn more about this graphic from the Colorado Department of Public Health and Environment that stresses the importance of addressing lifestyle for prevention and treatment of pregnancy-related depression.



Nutrition and Other Recommendations

In addition to lifestyle interventions, there are also specific nutrition messages that can be promoted through education, public awareness, and training. For example, there are many nutrients that play a role in daily maintenance of cognitive activity. It is not necessarily the individual nutrients that are important to consider, but the collective impact of a high-quality diet and the need to provide it on a daily basis. This is crucial during the formative years from conception to age 3 when brain architecture is at risk. Nutrition has a powerful epigenetic effect on genes controlling brain function.⁴⁴





Public health nutritionists have unique skills to enhance the effort to address and treat MMH:

- Ability to recognize environmental factors that impact stress and behaviors
- Expertise and knowledge necessary for developing and advocating for MMH-friendly policies
- Develop and provide quality trainings and messaging to increase skills and awareness
- Expertise in effectively utilizing screening and referral models
- Counselling skills that are aligned with mental health counseling techniques
- Access to programs already engaging with vulnerable populations
- Rapport with pregnant and post-partum women
- Expertise in lifestyle interventions and nutrient-based recommendations for optimal health

Public health nutritionists can strategically and positively influence outcomes for maternal mental health. By focusing skills and partnering with other mental health and medical professionals, nutritionists will intentionally play a more active role in creating positive pathways for physically and mentally healthy individuals.

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Resources

The following list of resources is only a summary of the many tools, guides and research available. For additional listings of resources, follow the links provided.

Screening Tools, Guidelines & Key Information

- Training Modules for Maternal Mental Health. Safety Action Series – Council on Patient Safety in Women's Health Care and Alliance for Innovation on Maternal Health (AIM)
 - Perinatal Depression and Anxiety Patient Safety Bundle
 - Empowering Patients, Improving Outcomes
 - Enhancing Screening and Better Practices
 - MMH Complete List of Resources
- Pregnancy-related Depression Resources for Providers from the Colorado Department of Public Health and Environment
 - Pregnancy-Related Depression Guide
- Edinburgh Postnatal Depression Scale (EPDS)
- Patient Health Questionnaire (PHQ-9)
- Patient Health Questionnaire-2 (PHQ-2)
- SAMSHA SBIRT Screening for substance abuse and depression
- SAMHSA- Toolkit for Family Service Providers. Depression in Mothers: More than the Blues?
- Patient Health Questionnaire (10-Question, SAMSHSA & Pfitzer)
- Usage of the PHQ9 vs PHQ-4 and the WIC population (validation report & findings)
- NIHCM Identifying and Treating Maternal Depression: Strategies & Considerations for Health Plans. June 2010.
- National WIC Association. For additional WIC resources, contact www.nwica.org.
 - Procedure Manuals/361 Depression.pdf
- Home Visiting Collaborative Improvement and Innovation Network (Hv CoIIN) Toolkit.

Resources and Tips on How to Work with Women

- **Postpartum Progress.** Where to go to find referrals in your community. Community Services Locator: An online directory for finding the community services for children and families Postpartum Depression Treatment & Specialists List
- Postpartum Support International (PSI): Get Help. Find state and local PSI support coordinators, support groups, telephone support, and local events for women with perinatal mood and anxiety disorders and their families. Includes specialized contacts for dads, military families, and families who speak Spanish or Arabic.
- Maternal and Child Health Bureau (MCHB):
 Prenatal Services. Hotline number to help pregnant
 women and mothers with newborns find free or lowcost services in their state for themselves and their
 babies. Telephone: (800) 311-BABY (311-2229); (800)
 504-7081 (Spanish). (Scroll to the bottom and input your
 state for the correct number.)
- Dark Side of the Moon documentary. Dark Side of the Full Moon delves into the unseen world of maternal mental health in the U.S. It will uncover the disconnect within the medical community to effectively screen, refer, and treat the 1.3 million mothers affected each year, giving a face and voice to the countless women who have suffered in silence.
- NIH National Child & Maternal Health Education Program

— Notes —

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