The Fourth Trimester of Pregnancy: Committing to Maternal Health and Well-Being Postpartum

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ABSTRACT

The postpartum period is a time of significant challenge and need as women adapt to hormonal and physical changes, recover from delivery, experience shifting family responsibilities, and endure sleep deprivation, all while caring for and nourishing their newborn.[1–4] It is also a period of significant maternal health risk. Recent data on U.S. maternal mortality indicate a shift in the timing of maternal deaths over the past 10 years, with the majority of maternal deaths now occurring postpartum, from one day to one year after delivery.[5,6] Postpartum care also marks a period of transition, as women shift from pregnancy-centered care to interpregnancy and primary care, yet current systems of care are marked by poor coordination of care between providers and patient care settings.[4,7] Suboptimal postpartum follow-up is particularly worrisome for women with chronic health conditions or pregnancy complications who face both short- and long-term health risks.[8,9] Given known challenges and medical risks, the single, 6-week postpartum visit women receive is woefully inadequate in addressing maternal health needs. Postpartum visits often fail to address the unique postpartum needs identified by mothers[1,3,4], inadequately connect women with primary care services, and have low attendance.[1,7] Recognition of these unmet needs of "the Fourth Trimester" have led national organizations, including the American College of Obstetricians and Gynecologists (ACOG), to call for a restructuring of postpartum care to reduce postpartum and long-term morbidity and improve postpartum well-being.[2,7,10] Rhode Island has several recent initiatives with the potential to improve outcomes for mother-baby dyads including the Baby Friendly Hospital Initiative (BFHI), the provision of long-acting reversible contraception (LARC) immediately postpartum, and the addition of HPV immunization postpartum. These initiatives remove barriers of access to care and provide vital women's health services prior to discharge. The Fourth Trimester provides a rich opportunity for maternal risk reduction and health promotion at a time when women are motivated and engaged with health care.

ADDRESSING MATERNAL RISK POSTPARTUM

Maternal mortality in the United States is increasing and more than doubled from 1982 to 2012.[5,6] Over this same period, the causes and timing of pregnancy-related deaths have shifted; deaths due to maternal hemorrhage and infection, which typically occur at the time of delivery, have proportionally decreased, while deaths from cardiovascular disease, which can result in more distant postpartum deaths, have increased.[11] Postpartum deaths, which includes deaths between 1 day and 1 year after birth, represent more than half of all maternal deaths, and underscore the significant health risks faced by postpartum women.[5,6] Though maternal deaths remain rare, 65,000 women experience severe maternal morbidity annually in United States, which increasingly occurs postpartum and is due to chronic medical conditions.[11] Both maternal morbidity and mortality affect minorities disproportionately; black women experience maternal mortality 3-4 times more frequently than white women and experience severe maternal morbidity two times more frequently.[5,12–14] Rising rates of postpartum morbidity suggest that women face significant unmet medical needs after delivery and has led to a renewed focus on care in the fourth trimester.[1,2,7,10,15]

A central role for postpartum care is maternal health risk reduction, both in the immediate postpartum period and long-term, yet the ability of current postpartum services to improve maternal outcomes is limited by only a single dedicated visit. Both providers and patients report that current postpartum visit schedules are inadequate.[1,3,4] Towards the end of pregnancy, women are routinely seen in the office weekly, and more often if the pregnancy is complicated. In contrast, most women are seen only once in the first-year postpartum and not until 6 weeks after delivery. This gap in care is not biologically logical nor practical from a public health perspective. Newborns are seen within days of discharge from the hospital because of the physiologic changes that occur in the first few weeks of life. Similar changes are occurring to the postpartum woman, yet no similar appointments occur. Furthermore, even the currently recommended appointments are not always used. While increasing attendance at postpartum visits is a goal of Healthy People 2020, between 10 and 40% of women do not attend a postpartum visit 4-12 weeks after delivery[7] with lower attendance rates reported among women in low-resource settings, contributing to health disparities.[8,9,16]

In a review of postpartum utilization, Chu et al describe the postpartum visit as an "opportunity to assess the physical and psychosocial well-being of the mother, counsel her on infant care and family planning, and detect and give appropriate referrals for preexisting or developing chronic conditions such as diabetes, hypertension or obesity."[17] Most postpartum women will become pregnant again, though many will not see an ob/gyn until the subsequent pregnancy. As such, preconception counseling is also a vital part of postpartum care. Women should be advised of evidence-based interventions to reduce complications in subsequent pregnancies, such as daily baby aspirin for hypertensive diseases of pregnancy and 17-hydroxyprogesterone for women with a history of preterm birth.[7] Medications which are appropriate to continue in pregnancy should be reviewed, and women should be encouraged to continue safe medications as prescribed. As is evident from the list above, postpartum care addresses immediate health needs and serves as the foundation for interconception health and well-woman care.

A central component of fourth trimester care is the need to arrange appropriate follow-up for chronic conditions and pregnancy complications and to communicate the implications of these risks to both the patient and the care providers who will be assuming their care.[7] Lack of consistent communication between providers may contribute to inadequate recognition and under emphasis of these risks.

Suboptimal postpartum follow-up is particularly troubling when pregnancies are complicated by common morbidities such as diabetes or hypertension. For women with chronic health conditions, the postpartum period often calls for changes in disease management and a coordinated transition from obstetric to primary care or subspecialty providers – a process which is often untimely and inadequate, with only 69.6% of women with preexisting diabetes and 57.0% of women with hypertensive disorders attending a primary care visits within 1 year of delivery.[7–9]

Pregnancy complications can serve as a "window to future health" due to their implications for the development of chronic disease. This is the case for hypertensive diseases of pregnancy (including gestational hypertension, preeclampsia, and eclampsia) and gestational diabetes (GDM), which both confer risks of future cardiovascular disease (CVD) and type 2 diabetes (T2DM). Preeclampsia remains a leading cause of maternal mortality and morbidity and ACOG recommends early postpartum follow-up for women with hypertensive disorders of pregnancy and counseling for recurrent preeclampsia in future pregnancies and long-term CVD risk. ACOG also recommends screening for diabetes 6 weeks and 1 year postpartum for women who had GDM (who are at risk for developing T2DM and CVD), yet a study of insurance claims data showed that only 56% of women with pregnancy complications attended primary care visits in the year following delivery.[9] A single-center study of women with gestational diabetes found that women were three times more likely to completed recommended postpartum screening if they attended a postpartum visit[9], yet even at an academic institution with high rates of postpartum primary care visits (>80%), pregnancy complications were not associated with a postpartum healthcare visit and nearly 20% of women with pregnancy complications were never seen in the year following delivery.[8]

For many women, pregnancy serves as the first encounter with the health care system in adulthood and as a result, obstetric providers may be the first provider to diagnose and address chronic health conditions such as hypertension, obesity, and substance dependence. While obstetric providers may manage pregnancy complications and chronic conditions independently during pregnancy, uncoordinated transitions from obstetric to primary care can result in women failing to receive care that may mitigate long-term risks for diabetes, hypertension, and cardiac disease.[8,9]

PROMOTING MATERNAL WELLBEING IN THE FOURTH TRIMESTER

It is critical that women's voices contribute to our understanding of postpartum health needs, voices.[1,3,4,18] Surveys and focus groups tell us that women feel unprepared for the emotional, biological, and social changes that occur postpartum and less than half of women report receiving adequate information regarding postpartum depression, nutrition, physical activity and weight loss, or changes in sexuality and emotional response.[1,3,7] A disconnect is described between the areas of concern for clinicians, such as signs of infection or bleeding, and those of mothers, who experience significant disruption in their daily lives from symptoms considered "normal" by providers, such as sleep deprivation, discomfort and pain, and emotional changes.[1,4] Considering this feedback is critical as we strive to improve health outcomes for women through a recommitment to maternal postpartum care. By listening to and anticipating women's needs, the patient-provider relationship is strengthened, increasing the likelihood of postpartum follow-up. This commitment to patient-centered care should improve both maternal health outcomes and maternal and infant wellbeing throughout the life course.

Anticipatory guidance on common postpartum problems can be provided antepartum, including information on urinary incontinence, sleep changes, emotional response and sexuality, expected weight loss, and recommendations for exercise and healthy eating.[3,4,10] As women are often uncomfortable broaching these topics themselves, providers should ask about common symptoms specifically during both postpartum and primary care visits during the first year. Written or multimedia aids like handouts, videos, or websites can provide women with postpartum resources that can be referred to after discharge, a request often voiced in focus groups.[3,4]

Prior to discharge from the hospital, all women should receive counseling on warning signs and symptoms postpartum that should prompt medical attention and written instructions should be provided on who to contact with common postpartum problems. In qualitative studies, women report being unsure who to contact with questions

or concerns, particularly when questions arise that overlap provider expertise, such as those pertaining to lactation and medication use.[1] The Association of Women's Health, Obstetric and Neonatal Nurses' (AWHONN) proposes a postpartum discharge education program which includes a patient handout with descriptions of warning signs and an education checklist for nurses to review with patients prior to discharge.[15] While the initiative has been well received by nurses, efficacy studies are pending.[10,15]

FORMULATING A POSTPARTUM CARE PLAN

While several studies document the unmet needs of postpartum women[1,3,4], few have established evidence-based approaches to improving maternal health outcomes. In their recent Committee Opinion on Optimizing Postpartum Care, ACOG recommended that patients and their obstetric providers formulate postpartum care plans during antepartum visits to identify, discuss, and plan for the postpartum transition period.[7] In addition to identifying the members of the postpartum care team and providing written information on the timing of postpartum visits, this plan should include discussions on infant feeding, reproductive life plans and contraceptive needs, mental health risks of the postpartum period, pregnancy complications, chronic health conditions, and anticipatory guidance on common postpartum problems.[7] When available, risk reduction strategies for future pregnancies should be reviewed with the patient and her primary-care provider. ACOG recommends early postpartum follow up for women with hypertensive disorders of pregnancy and those at high risk for complications. This includes first-time mothers and women with a history of depression and anxiety who are at higher risk for severe postpartum depression and may benefit from an early postpartum visit. Studies have also suggested that postpartum phone support can reduce depression scores.[7]

Women choosing to breastfeed should be provided with community support resources, such as WIC, Lactation Warm Lines, and local breastfeeding support groups. Additional resources should be provided as women prepare to return to work, including prescriptions for breast-pumps and education on frequency and methods of breastmilk expression.[7,19] While conditions suffered at higher rates by underserved women (like hypertension, hyperlipidemia, cardiovascular disease and type 2 diabetes) may improve with breastfeeding, those same women face the greatest barriers to sustained breastfeeding, including suboptimal social support and unpaid maternity leave which reduces the interval before returning to work.[20] Identifying these breastfeeding challenges antepartum can enable patients and their care team to plan appropriately and identify available resources.[7,19,20]

Formulated antepartum, the postpartum plan should be reviewed and updated prior to discharge and at subsequent postpartum visits. ACOG's recommendations above are derived largely from expert opinion and stakeholder working groups and while emphasizing anticipatory guidance, improved care coordination, and frequent and clear communication around a shared plan of care should serve postpartum needs, research is needed to identify effective postpartum care strategies that serve to reduce maternal health risks and promote long-term wellbeing.

LOCAL INITIATIVES

Several recent initiatives have improved postpartum services in Rhode Island. In 2015, Women & Infants Hospital (WIH) achieved 'Baby Friendly' hospital designation after meeting the Ten Steps to Successful Breastfeeding (http://www.womenandinfants.org/news/baby-friendly-designation.cfm). BFHI is sponsored by the WHO and the United Nations Children's Fund and recognizes hospitals that support breastfeeding mothers and promote evidenced-base feeding practice for babies. In some studies, regions served by Baby Friendly hospitals report higher rates of breastfeeding initiation, particularly among low-resource women, though data is conflicting.[21] Research is needed to determine if breastfeeding rates have increased in Rhode Island.

Rhode Island also recently secured approval from Neighborhood Health, a Medicaid insurance provider, to provide immediate postpartum LARC to patients in the hospital prior to discharge. Immediate postpartum LARC is highly effective at reducing unintended and short-interval pregnancies and ACOG strongly recommends that it be offered to women antepartum and provided immediately after delivery and prior to discharge.[7,22] Immediate postpartum LARC circumvents postpartum access barriers at a time when the patient has high motivation to prevent unintended pregnancy.[22] Furthermore, many women who planned to obtain an IUD postpartum, including those who do not return for a postpartum visit, never have it placed.[22] Immediate postpartum LARC has been shown to decrease unintended births without increasing contraception bias and is cost effective from a societal perspective.[1,22,23] This service is particularly important for populations at highest risk for short-interval pregnancies and least likely to receive postpartum care, like teenagers and low-resource women.

Finally, last year, WIH started an initiative to identify pregnant women eligible for the Human Papilloma Virus (HPV) vaccine series in order to offer women the first dose prior to discharge. HPV immunization prevents HPV infection and reduces rates of HPV-associated cervical cancer. At WIH, postpartum women are routinely assessed for MMR, Varicella, and pneumococcal vaccine eligibility, and offered appropriate immunizations prior to discharge. HPV vaccine is not recommended in pregnancy but identifying vaccine eligible women during pregnancy increases the likelihood that women will receive both recommended doses.

Each of these initiatives improves the quality of care provided to pregnant and postpartum women in Rhode Island; however, as is the case throughout the country, postpartum care remains fragmented and sub-optimally coordinated between care settings and among providers as patients shift from obstetric to primary care postpartum. Adoption of ACOG's proposal for Postpartum Care Planning may serve to minimize current gaps in care.

CONCLUSION

Pregnancy is a time of high health care utilization and strong health motivation for women, and women's regular interaction with the health care system during the antepartum period contrasts starkly with the fragmented maternal care provided postpartum. To sustain the opportunities for risk-reduction and health promotion identified prenatally, providers across all specialties must recommit to patient-centered care that reflects patient specific fourth trimester needs, supports the well-being of mothers and their infants and establishes care plans for management of chronic as well as pregnancy-related complications.

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