Childbirth Education for Multiple Pregnancy

Part 2: Intrapartum and Postpartum Considerations

Kristen S. Montgomery, PhD, RN

Sabrina Cubera, BA

Christie Belcher

David Patrick

Heather Funderburk

Christa Melton

Michelle Fastenau

ABSTRACT

Women with a multiple pregnancy can expect a different labor and birth course than those with a singleton pregnancy. While the postpartum period is similar to that of families with a singleton, it is likely to be more hectic in families with multiple infants. In addition, a multiple pregnancy increases both maternal and neonatal risks; therefore, women with a multiple pregnancy may experience slight differences in care due to these potential risks, including additional monitoring and treatment. This article discusses the intrapartum and postpartum considerations families with a multiple pregnancy/birth may experience. This information is provided so that the childbirth educator can incorporate this content into courses, as appropriate, and assist families with a multiple pregnancy to anticipate a realistic birth and postpartum experience.

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Women with a multiple pregnancy have unique needs compared to women pregnant with a single fetus. The purpose of this paper is to discuss the differences in care women with a multiple pregnancy may experience, with a focus on the intrapartum and postpartum periods. The childbirth educator has a key role in assisting these families to un-

derstand their unique risks while maintaining a healthy balance on the likelihood of a safe delivery. Childbirth educators can also be instrumental

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Lamaze International has created an independent study based on this article. Please visit the Web site of Lamaze International (www.lamaze.org) for detailed instructions regarding completion and submission of this independent study for Lamaze contact hours.

in providing anticipatory guidance to assist families to cope with stressors in the transition to parenting and coping during the early postpartum period and when separation from the infants may occur.

The following review examines the usual medical recommendations for multiple births. The number of infants, their gestational age, and their position are some of the factors that determine the level of the importance of adhering to all of the following recommendations. Certainly, under some conditions, multiple births can approach more of a normal birth than is described here. Further, the mother should not be unduly frightened with all the recommended precautions. However, she should be familiar with safety issues and typical medical standards as a basis for talking with her care providers.

INTRAPARTUM CARE

Several important aspects of the intrapartum period will differ for the family with a multiple pregnancy. Knowledge of these differing aspects can be beneficial to the pregnant woman and her family and provide her with anticipatory knowledge of what to discuss and what to expect during labor and the birth of her infants.

Unit Admission

Hospital admission procedures are atypical for a woman with multiple gestation. Multiple gestations are at higher risk for complications and perinatal morbidity and mortality. Ultrasound is used to scan and assess the presentation and estimated weight of each fetus (Ramsey & Repke, 2003). A double setup, in which a cesarean section can be performed immediately, if needed, is a standard for all multiple births. "Double setup" refers to having all equipment and staff immediately available in the event that a cesarean needs to be performed. Extra personnel capable of performing advanced neonatal life support must be present at the birth. The team typically includes a neonatologist or neonatal nurse practitioner, a respiratory therapist, and a neonatal intensive care nurse. An expanded, complete team is mandatory for each infant because one group of professionals cannot provide critical care and/or resuscitation to all involved infants. Additionally, another nurse and physician should be available to provide care to the mother and family.

The expectant mother should be advised of these procedures early in the pregnancy so she knows

what she might expect at the time of birth. A woman with a multiple pregnancy is at high risk for premature birth; thus, it is imperative to provide helpful information early so that she is not caught unaware at the time of a crisis situation or emergency birth. The woman and her family should also be made aware that the birth will more likely occur in a traditional operating room rather than in a more modern birthing room. Prior to birth, it is also important for the woman and her family to know about the neonatal intensive care unit (NICU) policies, procedures, and location so they do not needlessly worry about being able to see their infants following birth, if they need special care.

Stages/Phases of Labor

The stages and phases of labor can be different for a woman with multiple gestation. In general, the first stage and active stage of labor are significantly slower (Ramsey & Repke, 2003). Dilation time in the active phase may lag by as much as half a centimeter or more, when compared to a singleton. Birth options for twins are contingent on many different factors. Fetal presentation of the first and second twin is most important and is readily determined by ultrasound. Another factor is the level of fetal distress or complications. In 90% of twins, the presenting twin is in a vertex position. In most instances, a vaginal birth of the first twin is attempted. Forty percent of twins are in the vertex/vertex position (Ramsey & Repke, 2003). These positions are ideal for vaginal birth of both twins. When the presenting infant is vertex and the other infant is non-vertex, other birth methods may be used, including breech delivery, internal version or allowing the fetus time to turn on its own for subsequent vaginal birth, and cesarean birth.

Chauhan and colleagues (1995) conducted a study evaluating the success rate of breech birth and external cephalic version involving 118 women that had vertex/nonvertex twins. In their study, breech birth had a 95% success rate while external cephalic version had a 58% success rate. Another study evaluated 84 vertex/nonvertex twins for neonatal outcomes and health-care cost (Mauldin, J., Newman, & Mauldin, P., 1998). According to this study, infants delivered by spontaneous vaginal birth and breech extraction had lower rates of respiratory problems, infection, and neonatal intensive care admission, in contrast to cesarean birth. These infants also had significantly lower hospital costs. All of these benefits speak to the advantage of

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normal birth, when feasible. However, because of the possibility of interlocking, cesarean birth should be conducted when the presenting twin is not vertex (Ramsey & Repke, 2003).

In addition, it is not always possible to accurately measure fetal weight in multiple gestation. When infants are extremely premature (≤ 28 weeks gestation), they should not undergo significant manipulation because of the risk of trauma (Ramsey & Repke, 2003). In this instance, the health-care team—including the perinatologist and the neonatologist, if available—should collaboratively determine the safest route for birth. Cesarean birth becomes the recommended choice if any complications arise, including umbilical cord prolapse, failure to progress, or poor fetal heart-rate tracing. The majority of triplets and higher will be delivered via cesarean birth due to the high incidence of prematurity and malpresentation (Ramsey & Repke, 2003); however, reports exist in the literature of triplets being born vaginally (Chitkara & Berkowitz, 2002).

These birth possibilities can be discussed with the expectant mother and family so that they have realistic expectations regarding the birth process with multiple fetuses. The childbirth educator can focus on the strengths of various options and on the issue of safety and positive birth outcomes for all infants and the mother herself.

Continuous Fetal Monitoring

Ramsey and Repke (2003) recommend continuous fetal-heart monitoring on all fetuses during labor in a woman with multiple gestation. With twins, the use of an internal electrode on the presenting twin and an external ultrasound transducer on the second twin can help to distinguish fetal heart rates. An internal fetal scalp electrode on the presenting fetus and external transducers on the other two fetuses may be used to monitor triplet gestations. However, as previously mentioned, the vast majority of triplet and higher-gestation pregnancies will be delivered via cesarean birth and, in the absence of ruptured membranes, they will be monitored externally prior to the surgery. Rupturing the membranes for internal monitor placement poses significant risks (including infection and cord prolapse) in a higher-order multiple pregnancy, particularly when premature. Women with a multiple pregnancy need to be aware of these risks and the possibility of these commonly recommended treatments (Ramsey & Repke, 2003).

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Anesthesia

A woman with a multiple gestation might wish to consult with an anesthesiologist to determine appropriate anesthesia choices. An early meeting allows the family to make decisions prior to the birth and gain adequate knowledge of policies and procedures regarding the different options for anesthesia, if desired. When anesthesia is chosen, epidural anesthesia is predominantly supported as the preferred method for labor and birth in women with multiple gestation. Epidural anesthesia provides adequate analgesia for external cephalic version, internal version, or cesarean birth, any of which may be needed with a multiple birth (Chitkara & Berkowitz, 2002). Spinal anesthesia is another option; however, this form of anesthesia can be associated with severe hypotension. Placental hypoperfusion may also be a problem, especially in higher-order multiple births. An emergency cesarean often requires the use of general anesthesia (Chitkara & Berkowitz, 2002).

Knowing this information prior to labor and birth can be particularly helpful to the expectant family who may be experiencing many emotions at this time. The childbirth educator has a key role in helping the expectant family understand these risks but also helps the family balance the likelihood of risks, normalcy, safety, and intervention.

POSTPARTUM CARE

New mothers of multiple infants face many of the same challenges as any new mother. Time management, finances, and lack of sleep are all major concerns. However, for the mother of multiples, several unique issues occur. These include possible separation from infants, feeding issues, increased fatigue, increased nutritional needs, maternal risks, and extensive discharge planning.

Separation from Infants

Generally, multiple gestation infants will require an extended hospital stay, particularly for triplets and higher. Separation from their infants following discharge is a significant concern such women will need to anticipate. It is emotionally difficult for women who are discharged prior to the infants. Most often, infants are hospitalized due to prematurity. Women

who are apprised of this possibility early in the pregnancy may be able to better cope with this separation than women who are unaware. The postpartum period is one of hormonal flux, and women may be prone to emotional stress from the significant life changes they are experiencing. Admission of one or more newborns to the intensive care unit can increase this stress for the new family.

Feeding

One of the most immediate concerns for the new mother of multiple infants is infant feeding. Particularly if one or more of the infants is hospitalized, a careful plan will need to be developed to allow parents to participate in the feeding process. Like all mothers, mothers of multiple infants should be encouraged to breastfeed. Breast milk is considered the optimal nutrition for all infants and contains particularly important properties that contribute to improved morbidity and mortality in premature infants (e.g., fewer incidences of infection). Breastfeeding education should begin early. A meeting with a nurse or lactation consultant with specialized knowledge in prematurity and multiple births is recommended. Reports in the literature detail women who have successfully breastfed quadruplets (Auer & Gromada, 1998; Mead, Chuffo, Lawlor-Klean, & Meier, 1992).

Fatigue

After the infants are discharged, the mother may quickly become fatigued and/or overwhelmed with caring for multiple infants, making each task seem difficult (Troy, 2003). However, the family may benefit from the often staggered discharge of their infants. Home-care services may be covered by insurance companies to help care for the infants. Families should also be assisted in arranging for family support. Advising women about resources, options, and the likelihood of fatigue during the postpartum period is an important step in ensuring a successful transition to the maternal role (Troy, 2003).

Continuing supplemental iron and prenatal vitamins is a strategy that can help alleviate fatigue and replenish maternal stores. Some authorities recommend continuing iron for at least one year after birth (Somer, 2002). Prenatal vitamins, in combination with a well-balanced diet and adequate rest, can be

instrumental in relieving postpartum fatigue. In addition, breastfeeding in the side-lying position has been found to reduce fatigue in a small sample of women (Milligan, Flenniken, & Pugh, 1996).

Families can also try strategies to decrease the amount of work after their multiple infants arrive home. Examples include making charts to monitor their infants' eating, sleeping, and elimination patterns; freezing meals for later use; and taking advantage of help and food offered by well-meaning friends and family. Women also need a significant amount of emotional support during this intensive life change (Beck, 2002).

Increased Nutritional Needs

While breastfeeding, women will need to consume additional nutrient-rich foods. Approximately 420–700 calories are consumed to produce breast milk for each infant (Somer, 2002). Thus, new mothers should plan to consume an additional 500 calories a day for each infant that is breastfed (e.g., 3,200 total calories per day for twins and 3,700 total calories per day for triplets) (Somer, 2002). Women should be encouraged to drink additional fluids and increase their intake of protein, calcium, trace minerals, and vitamins (Somer, 2002).

Maternal Risks

The mother who has given birth to multiple infants should be instructed that her needed care during the postpartum period will be similar to that of the needs of a singleton mother; however, more extensive assessment may be needed for the multiple-birth mother. The risk for the mother of multiple infants is increased due to the sheer trauma of multiple births. The uterine muscles may have been overstretched from the multiple fetuses and will have a decreased ability to contract postpartum (Somer, 2002). It may take the uterus longer to become firm following birth, and its involution may progress at a slower rate. Thus, women will need to be followed closely after birth to ensure their bleeding is within normal limits. Women should understand that the nursing staff may need to assess bleeding more frequently. While women who give birth to multiple infants may be at increased risk from bleeding because of uterine stretching, many women will have undergone cesarean birth, which often results in less bleeding because the uterus is manually evacuated.

Infection is a common complication in women who undergo cesarean birth. While prophylactic

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antibiotics are often administered to prevent infection following cesarean birth, women with multiple births often experience more manipulation during the cesarean procedure to accomplish the birth of all infants, which can contribute to higher rates of infection. During the prenatal period, women can be taught to recognize the signs and symptoms of infection so that they can remain alert to the symptoms following birth. Women can also be advised that their health-care providers will probably ask more questions about infection symptoms to be sure any infection is caught early. Postpartum infection of any type can impair the new mother's ability to care for the infants and can interfere with the healing process. Because the immediate postpartum period is often stressful, prenatal education in relaxation techniques can facilitate learning, particularly for mothers of multiple infants who may have problems at birth and are experiencing significant stress.

Many women with a multiple pregnancy will have been on strict bed rest for a significant period of time prior to birth. Previous research has shown that women on bed rest experience negative consequences following bed rest, including muscle atrophy and symptoms of cardiovascular deconditioning (Maloni et al., 1993). Women should be counseled regarding these potential complications and encouraged to resume activity slowly following birth. Women can be advised to limit stair climbing and to cluster activities, when possible, to reduce exhaustion. Arranging additional assistance at home can also be useful, particularly after all infants are discharged.

Discharge Planning

The mother of multiple infants will experience more physical, emotional, and financial strains than the mother of a singleton. For this reason, extensive discharge planning is needed. The mother and family should be encouraged to identify individuals in their support network who they can contact for assistance, as needed. Referrals to support groups for families with multiple infants can also be useful. In some situations, consultation with a social worker may also be useful to the new family and will give them an opportunity to ask questions and receive feedback on financial management, time management, and attachment or other issues. Meeting with a social worker will also provide the mother with a contact (and possibly emergency) person whom she may call from home should she have any problems.

Extensive resources will need to be provided for breastfeeding mothers. Ideally, a lactation consul-

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tant will work with the family during the prenatal period and postpartum hospitalization and will facilitate breast-pump rental to ensure adequate milk production for all infants after the woman is discharged. Again, referral to support groups for breastfeeding mothers and mothers of multiples can be useful. Women should also have contact information for immediate assistance with breastfeeding multiple infants.

NEWBORN CARE

Triplets and higher-order infants are at increased risk of cerebral palsy, nervous system complications, and mental retardation (Somer, 2002). Most of these complications are related to prematurity. Women should be provided information about potential complications that might develop during the newborn period, and instruction must be delivered in a manner that minimizes women becoming overly anxious. Health-care providers and childbirth educators can be instrumental in helping the new family identify what is normal and what is questionable for a newborn. Teaching the mother and her family how to identify the signs and symptoms of potential problems can help ensure that the family seeks care in a timely manner in order to promote the best outcomes. Consultation with staff in the NICU can be a valuable resource for childbirth educators working with these high-risk families.

Infants born prematurely have often not had adequate time to accumulate iron into their stores (Somer, 2002). Thus, they are more susceptible to anemia in their early days of life and may require iron supplementation. Mothers can be reassured that iron deficiency is not their fault; rather, it is an expected finding when an infant is born prematurely.

In addition to careful monitoring of newborn nutrition, families with multiple infants should be encouraged and assisted to find a system of organization to keep track of the individual babies. Many families have had success with using a specific color for each infant (e.g., Baby A is green, Baby B is purple, etc.). The color-coding system is also useful for eating utensils, which may help to prevent cross infection among the infants.

It is also important to be able to identify individual infants by significant marks on their body so that the infants do not get mixed up during bathing

or other clothing changes. For normal infants, this is less of a problem; however, for infants with health problems that require follow-up care, correct identification of individual infants is imperative. If identical infants do not have distinctive marks that allow them to be individually identified, different colors of nail polish can be used on the toenails to keep the infants separated. It is highly recommended that parents record and keep their color-coding system in a secure place. Given the high-stress and confusing environment that is likely to occur after all infants arrive home, the parents might forget their color-coding system if it is not written down.

Newer research has supported the use of cobedding to help multiple infants adjust to the extrauterine environment (Hayward, 2003). After infants are stable, cobedding offers a strategy that can be tried in the NICU environment or after the infants arrive home with their parents. Benefits include coregulation of body temperature, sleep/wake cycles, and state regulation, as well as the ability to self-console each other (Hayward, 2003).

CONCLUSION

Childbirth educators play a key role as members of the health care team in providing multiple-birth families with information needed to make a successful transition to parenting during the postpartum period (see Table). Apprising the expectant family of realistic goals and outcomes of the postpartum period can be tremendously helpful in this transi-

tion. Anticipatory management during pregnancy may contribute to a more successful transition later.

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TABLE
Summary of Educational Topics to Consider for Women with a Multiple Birth

Time	Educational Topics for Consideration
Intrapartum	Unit admission Stages/Phase of labor Continuous fetal monitoring Anesthesia
Postpartum	Separation from infants Feeding Fatigue Increased nutritional needs Maternal risks <ul style="list-style-type: none"> • Hemorrhage • Infection • Consequences of bed rest Discharge planning
Newborn	Increased health risks Organization Cobedding

KRISTEN MONTGOMERY is an assistant professor in the College of Nursing at the University of South Carolina in Columbia, South Carolina. SABRINA CUBERA is a BSN student in the College of Nursing at the University of South Carolina. She is also a nurse technician in the post-anesthesia care unit at Palmetto Health-Baptist in Columbia. CHRISTIE BELCHER, DAVID PATRICK, HEATHER FUNDERBURK, CHRISTA MELTON, and MICHELLE FASTENAU are BSN students in the College of Nursing at the University of South Carolina.