

Family-Centred Maternity and Newborn Care:
National Guidelines

— CHAPTER 6 —

Early Postpartum Care of the Mother and Infant and Transition to the Community

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Introduction

The postpartum period is significant for the mother, baby, and family for two important reasons. First, it is a time of physiological adjustment for both mother and baby. Second, it is a period of important social and emotional adjustment for all players.

Thus, the goals of care during the postpartum period are to:

- promote the physical well-being of both mother and baby;
- support the developing relationship between the baby and his or her mother, father, and family;
- support the development of infant feeding skills;
- support and strengthen the mother's knowledge, as well as her confidence in herself and in her baby's health and well-being, thus enabling her to fulfil her mothering role within her particular family and cultural situation; and
- support the development of parenting skills.

The early days following childbirth are formative for the new mother, baby, and family. Certain fundamental needs and basic services are required for adjustment during the postpartum period, regardless of whether the birth venue has been the hospital, a birth centre, or home. These fundamental needs and basic services are:

- *rest* and recovery from the physical demands of pregnancy and the birth experience;
- assessment of the physiological *adaptation* of the mother and baby and prevention of problems;
- *support* of the mother, baby, and family during the period of adjustment (by family members, social contacts, and/or the community at large);
- *education* of the mother (and family members) in aspects relative to personal and baby care; and
- completion of specific prophylactic or *screening* procedures organized through the different programs of maternal and newborn care, such as vitamin K administration and eye prophylaxis, immunization (Rh, rubella, hepatitis B), testing (PKU/thyroid), prevention of Rh isoimmunization, and assessment of safety and security (e.g. car seats, potentially violent home situations, substance use).

Postpartum Care Immediately After Birth and During Early Postpartum

During the immediate postpartum period as well as the early days postpartum, care and support must be equally balanced among three critical areas: assessment, monitoring, and support of the baby's health and well-being; assessment, monitoring, and support of the mother's physiological and emotional adaptation following birth; and support of the developing mother-infant and family relationships. These three areas of care are equally important and the challenge is to accomplish all three. Facilitating the family's being together, while maintaining and promoting the health of the mother and baby, can be affected by applying the following principles of family-centred care:

- Women need to be cared for within the context of their families. Mothers and infants are to be cared for as a unit, and should not be separated unless absolutely necessary.
- Family-centred maternity and newborn care is based on research evidence, with technology to be used appropriately.
- Women and their families need knowledge about their care so they can make informed choices.

Maintaining Parent-Infant Contact

During the immediate postpartum period, the mother and newborn, within the context of their family or personal support, should be viewed as a unit. Whenever possible, disruption of the close parent-infant relationship during the crucial few hours following birth is to be avoided; meanwhile, direct physical contact between the baby, mother, and father is strongly encouraged. The parent-infant bond — the first step in the infant's subsequent attachments — is formative to a child's sense of security and has long-lasting effects. Indeed, the benefit to the parents should not be underestimated: this early physical contact with the baby affirms their sense of accomplishment and promotes their self-confidence as parents. Keeping babies and parents together should clearly be of the highest priority. Institutional policies can at times restrict this contact, so flexibility should be the guiding principle.

At the time of birth, certain policies and practices can help initiate the attachment process. For example, skin-to-skin contact between mother/father and baby should be encouraged; babies should be examined and cared for within the parents' range of vision; and babies should have the opportunity to breastfeed during the first hour after birth (see Chapter 7). Whereas continued contact between parents and baby is a positive predictor for successful breastfeeding, separation from parents after birth jeopardizes successful lactation. During the immediate postpartum period, parents need undisturbed time to inspect, explore, and begin to recognize their baby.

Assessment and Care of the Mother

In the vast majority of cases, the immediate postpartum period is a time of joyful celebration for the family. It is a time for the family and health care providers to share and celebrate their hard work and achievements. But it is also a time of significant physiological adaptation for both the mother and baby; as such, it is a period requiring careful assessment, monitoring, and, at times, intervention.

Women have unique and varied immediate responses after giving birth. Some feel excited, uplifted, and energetic. Others are exhausted and want to sleep. A woman's experience will depend on a number of factors: the length of her labour, its degree of difficulty, her experience of pain during labour, and whether or not she had an operative or cesarean birth. In addition, a determining factor will be the woman's actual experience of labour and birth compared with her expectations of these events.

As well, women experience significant physical adjustments in the immediate postpartum period; involving all of their body systems, they require a significant expenditure of energy. The adjustments include losses in circulating blood volume, diaphoresis, weight loss, and displacement of internal organs. Women's immediate care requirements often centre on the need for hydration, for food and rest, and for energy replenishing.

A woman can lose from 250 to 500 mL of blood at birth without undesirable effects because of the increased blood volume during pregnancy. However, excessive bleeding contributes to postpartum morbidity and can lead to maternal death. Early postpartum hemorrhage — defined as blood loss of 500 mL or more following separation and expulsion of the placenta within the first 24 hours after birth — occurs in four percent of all women giving birth. Clearly, a very careful evaluation of the uterine fundus height

and firmness, vital signs, and amount of vaginal bleeding postpartum is extremely important. Labour and birth units should have guidelines to manage postpartum hemorrhage.

A thorough, immediate, and ongoing physical assessment of the mother is guided by her unique history and situation. In all cases, however, it includes an assessment of:

- vital signs
- uterine tone
- lochia
- fundal height
- condition of perineum
- bladder function
- breasts and nipples
- bowel function
- physical comfort.

The findings of this assessment should be documented according to the clinical judgment of the caregiver or the policy of the institution. Appropriate action should be taken if abnormalities are detected.

Assessment and Care of the Baby

Immediately following birth, the baby's optimal transition to life outside the uterus will require the:

- establishment of effective respiration and circulation;
- maintenance of an adequate body temperature; and
- facilitation of contact between the baby, mother, and family.

It is a critical transition time for the baby. Assessment and monitoring are therefore crucial.

An initial examination of the baby in the birthing area is important to ensure that he or she is adapting appropriately to the extrauterine environment. This is also an opportune moment to examine the baby more completely, thereby reassuring the parents. Adaptation to the extrauterine life should be assessed by a careful examination of the baby's respiration, heart rate, perfusion, and colour. Axillary temperature, respiratory rate, and heart rate should be measured every hour for two hours (or longer if abnormal). Careful attention should be paid to the possibility of congenital abnormalities.

Temperature regulation is a critical part of the baby's transition to life outside the uterus. In utero, the unborn baby relies on placental blood flow for survival and on the mother for dissipation of excess heat and for thermal regulation. At birth, the infant is wet and the room temperature is lower than the intrauterine environmental temperature. Heat loss occurs rapidly through evaporation, radiation, convection, and conduction, with the body temperature decreasing at a rate of 0.2° to 1°C per minute. Glycogen and brown fat stores may become depleted in just a few hours. The adrenergic response to falling temperature may result in peripheral vasoconstriction, which may impair pulmonary gas exchange and cause tissue hypoxia and acidosis.

It is recommended that the following approaches to avoiding heat loss be used:

- maintain the birth area at 23° to 25°C, with a draft-free environment for the baby;
- dry the baby and remove wet linen to avoid evaporative and conductive heat loss;
- place the baby on the mother's abdomen or in her arms, with skin-to-skin contact, to enhance conductive heat transfer from mother to infant;
- bundle (cover the head as well) to prevent exposure to cold air as well as decreased convective and evaporative heat loss and to provide insulation and increased heat retention; and
- have an external radiant heat source on hand for use as required.

Assessment and support of infant feeding in the immediate and early postpartum period are also critical. See Chapter 7 for information regarding breastfeeding. Instruction should be given to women who are bottle feeding so that they can feed their babies confidently.

ASSESSMENT OF RISK IN THE NEWBORN

After the newborn infant is examined in the birth area, the history and physical findings should be reviewed to ascertain the likelihood of the infant being at increased risk for problems. This assessment is extremely important, not only in influencing the baby's future care but also in ensuring that the infant is observed in an appropriate setting. If after initial resuscitation the infant is not well or requires specialized observation, it may be necessary to arrange for transfer to an intermediate, special, or

intensive care area or to a tertiary care facility. Every birthing facility should have written guidelines for such transfers.

Individuals caring for babies immediately after birth should provide care in a way that recognizes the possibility of problems, even without obvious risk factors. Certain findings, however, have been linked to an increased risk of problems in babies. These are described in Appendix 1. The list should not be considered exhaustive. It should be noted, too, that institutions need guidelines for the newborn assessments required, and for the location of the baby when specialized newborn observation is required.

NEWBORN RESUSCITATION

Even after a healthy pregnancy, some infants, a few minutes after birth, may experience sudden, unexpected difficulties that require immediate intervention by skilled personnel. This situation is frightening for the woman and her family. It is crucial that health care providers provide support, offering the woman and her family information and explanations. It is critical, too, that personnel skilled in neonatal resuscitation and able to function as a team be available for every birth. Clearly, the size and composition of this team will vary with the birth rate and designated level of care of the birth location. This team may include nurses, family physicians, midwives, pediatricians, obstetricians, anesthetists, and respiratory therapists. Aside from the professional person responsible for the birth (i.e. the physician or midwife), a second professional should be present with primary responsibility for the baby. That second professional should be able to perform neonatal cardiopulmonary resuscitation (CPR), ventilation with a bag, and mask and chest compressions. If this person cannot perform more extensive resuscitation (using endotracheal intubation and medications), someone with these skills should be available in the facility to assist immediately when called.

Each birth area should define the risk factors indicating when two people dedicated to the baby's care are needed at the birth. In fact, until another member of the medical staff takes over, care of the infant remains the responsibility of the obstetrician/family physician/midwife who attends the birth. To effectively exercise this responsibility, the obstetrician/family physician/midwife should be registered as a current provider of neonatal resuscitation. Skills in neonatal resuscitation are obtained through the Neonatal Resuscitation Program (NRP) coordinated by the Canadian Paediatric Society (CPS) and the Canadian Heart and Stroke Foundation

(CHSF). Registration at either the provider or instructor level and periodical reregistration are essential for all personnel who may care for babies immediately after birth. Institutions should be supported in their efforts to provide on-site programs to achieve this goal. The requisite resuscitation equipment is described in the American Pediatric Association/American Heart Association *Textbook of Neonatal Resuscitation* (Bloom and Cropley, 1994). This equipment should be checked daily to ensure proper functioning; it should be rechecked before each birth as well.

SPECIFIC INTERVENTIONS

Vitamin K administered intramuscularly is the most effective method of preventing hemorrhagic disease of the newborn. The following dose should be administered intramuscularly within six hours of birth, following initial stabilization of the baby and an appropriate opportunity for mother (family)-baby interaction: 1.0 mg vitamin K₁ for babies greater than or equal to 1500 g birth weight; and 0.5 mg for those less than 1500 g birth weight. Oral administration of vitamin K is not recommended because it is less effective in preventing late hemorrhagic disease of the newborn (CPS, 1997). If parents refuse intramuscular administration for their baby, health care providers should recommend an oral dose of 2 mg of vitamin K₁ at the time of the first feeding. The parenteral form of vitamin K for oral administration is all that is currently available. This dose should be repeated at two to four weeks and at six to eight weeks of age. Parents should be advised of the importance of the baby receiving follow-up doses and be cautioned that their infants remain at increased risk for late hemorrhagic disease of the newborn (including the potential for intercranial hemorrhage) using this oral regimen (CPS and CFPC, 1998).

All babies should receive a prophylactic against ophthalmia neonatorum, except for those very premature babies whose lids are fused at the time of birth. (In some provinces, this procedure is mandated by law.) It is recommended that each eye be treated with a 1-cm ribbon of 0.5% erythromycin ointment. Erythromycin, which protects against gonococcal infection, may offer some protection against chlamydial conjunctivitis. Erythromycin may be less irritating to the eyes than silver nitrate and avoid the theoretical risks of tetracycline. The eyes should not be rinsed with saline. Treatment may be delayed for up to two hours after birth to enable parent-infant contact and initial stabilization of the baby.

If the mother is Rh negative, or known to be sensitized to other antigens, the Rh group of the cord blood and direct antiglobulin tests should be performed shortly after birth. At the time of birth, it is recommended that a segment of the cord be clamped and set aside to allow for umbilical artery and/or umbilical vein blood-gas analysis. Such information indicates the fetal-placental response to labour in terms of respiratory and metabolic function (SOGC, 1995).

Combined Mother/Baby Postpartum Care

After birth, if the mother and baby are stable, they need to be attended by the same designated health care provider until the first feed has been successfully completed. Thereafter, intermittent care in hospital, home or office visits will be provided in accordance with clinical judgment and program policies.

For hospital stays of longer than a few hours, whether or not the mother and baby remain in a labour/birth/postpartum/recovery area or are transferred to a postpartum unit, it is recommended that combined mother/baby postpartum nursing care be provided.

Combined mother/baby postpartum care involves one nurse who cares for both a postpartum mother and her newborn, and the presence of the baby and mother in the same room 24 hours a day. Combined mother/baby postpartum nursing care, also known as dyad care, is a nursing strategy that promotes the family's role as primary caregiver for the newborn. Both physiologically and psychologically, the newborn and postpartum mother are viewed as an interdependent couplet (Phillips, 1997). This type of nursing care combines the roles of nursery and postpartum nurses so that one nurse can give complete care to the mother/baby dyad. As well, mother/baby nursing provides infant care at the mother's bedside, guides and teaches parenting skills, attends to the mother's physiological and psychological needs, and integrates other family members into this care (Phillips, 1996). In other words, "combined mother/baby postpartum nursing can be defined as the provision of safe, quality health care which recognizes, focuses on, and adapts to the physical and psychosocial needs of the new mother, the family, and the newborn. The emphasis is on providing maternal and newborn care that fosters family unity while maintaining physical safety" (Phillips, 1996).

In the combined mother/baby postpartum nursing care model, health care providers examine babies at the mothers' bedsides. Parents are encouraged to ask questions freely and to discuss concerns with the physician, nurse, or other mothers. The health care team in mother/baby nursing strives to capitalize on opportunities for the mother to inspect, assess, and learn how to care for her own baby. The nurse functions as a resource person to the mother, providing guidance and suggestions, assistance when needed, and positive reinforcement. Neither the father (or main support person) or siblings are viewed as visitors and can therefore be with the mother and baby as desired (Phillips, 1996).

The key words when implementing mother/baby care are *attitude* and *flexibility*. Some staff members, fearing loss of control, may be anxious about the additional learning required. Indeed, successful implementation of mother/baby care will require staff members to perceive their roles somewhat differently. Instead of placing an emphasis on tasks to be completed by the nurse, the mother/baby nurse has to value caring for the family as a whole and to promote parent success with all caretaking activities (Phillips, 1996).

When hospitals provide combined mother/baby care, or when babies are cared for in a nursery because they have special needs, a written policy and plan should be in place. This will facilitate the newborn's security as well as describe staff procedures in case of problems.

The Mother's Continued Adaptation, Assessment, and Care

Researchers have commented on the general predictability of the phases experienced by mothers throughout the postpartum period. As a rule, these researchers are quick to point out that the postpartum period actually involves the fourth and fifth trimesters of the maternity process, and that to abandon a mother too soon, leaving her without the support of health professionals, can contribute to a multitude of psychological and physical problems (Rubin, 1961;1975; Hans, 1986; Health Canada, 1989). Since the postpartum period is an important transitional time for the new mother, her baby, and the family as a whole, being sensitive to the way a mother is dealing with these changes will help her and family members cope.

During the first two to three days following birth, the mother will “take in” her experiences of labour and birth by actively reviewing and discussing them. A large proportion of women indicate that they cannot remember certain events connected with their labour or birth, that they often find themselves thinking about what they cannot remember, and that they want information about what they cannot recall (Alfonso, 1977). In addition, two features of childbirth can make it potentially traumatizing: extreme pain, and a sense of loss of control. Potential deleterious long-term sequelae of these experiences are beginning to be recognized, and the evidence of a type of “post-traumatic stress disorder” following a traumatic birth is compelling (Reynolds, 1997). It is important, therefore, for health care providers to assess the possibility of a woman having difficulty adapting to her new role as a mother, and to provide the appropriate support, care, and referral. (See Reynolds, 1997, for specific care guidelines.)

Mothers move from the “taking in” phase to the “taking hold” phase over a few weeks. In this latter phase, they gradually move toward increased independence, taking charge of the new relationship as they care for the baby. Over the next several months, the mother moves through the phase of “letting go,” during which she develops more confidence and control and integrates her new baby, and her new role, into her everyday experience. Appendix 2 describes these phases and the woman’s needs as she moves through these developments.

As women and families progress through the phases of postpartum adaptation, they encounter many learning needs. To develop feelings of competence and confidence about the postpartum period, learn ways of coping with a new baby, develop the skills and knowledge required for their new parenting roles, and integrate the “new” baby and “new” mother into a “new” family — these become their new goals.

Health care providers can assist in this process by facilitating the necessary learning and development via a learner-centred approach. In such an approach, the emphasis is on health care providers as educators; by recognizing the validity of the background and experience of both the woman and her family, the providers help both parties feel able to handle their own situations. In this context of empowerment, the focus is on sharing control of both the content (what the clients should know) and the process (how they will learn it). This approach underscores interdependence in the learning situation. Health care providers should know where the

mother sees herself within the context of her postpartum experience. They should know how to work with her, by meeting her learning needs and thereby facilitate her development.

Five principles anchor the facilitation of a learner-centred approach. They are outlined in Table 6.1.

Table 6.1 Principles for Facilitating Postpartum Learning

Setting a comfortable climate for learning

The postpartum period is a time of both positive and negative stress. As a learner-centred facilitator, it is important to encourage clients, by whatever means, to feel comfortable during this intense time.

Sharing control of both the content and the process

Clients need to participate in making decisions about what they want to learn. If nurses recognize something that a particular person may need to know, but as yet remains unidentified, they should help make it easier for that individual to learn it.

Building self-esteem

A mother's progress through the postpartum phase is closely related to her own self-esteem. If she is feeling good about herself and her ability to handle the situation, she will likely move along well and become more independent. Nurses can encourage self-esteem in all family members by confirming that their responses to the entire birthing process are legitimate and that other people have experienced similar reactions.

Ensuring that what the parents learn applies to their home situation

To integrate new information into the context of their own situations, parents need to apply it, practically, in day-to-day life.

Encouraging self-responsibility

As a mother works through the phases of postpartum, she gradually becomes more responsible for her new status, her new baby, and the new family situation. One way to ease her move through these phases is to help her to feel comfortable with her present phase. Once she believes that she is "okay" and that her emotional and physical responses are within a normal range, she will find it much easier to think about taking on new tasks and responsibilities.

Source: Health Canada, *Postpartum Parent Support Program: Implementation Handbook*, 1989.

It is recommended that health care providers base their assessment of, and response to, the client's learning needs on an adult education approach. For assessing learning needs, the *Postpartum Parent Support Program: You and Your New Baby: A List of Questions* is recommended (Health Canada, 1995). The *Postpartum Parent Support Program: Reference Manual* provides support for staff members trying to respond to a family's questions (Health Canada, 1993). (See Companion Documents.)

The Infant's Continued Adaptation, Assessment, and Care

Observation of the Newborn

Transitional nurseries have existed in hospitals for many years. However, healthy newborn infants do not need observation in a transitional nursery. The goals of the transitional period of the newborn infant's life — stabilization and assessment — can be achieved at the mother's bedside. Staff with appropriate training will naturally be required.

Until discharge, the baby's temperature, respiratory rate, and heart rate should be recorded — at a minimum, daily. Some babies may require more frequent measurements. Voiding and stooling should also be assessed and recorded. Parents can be encouraged to assist in this process of observation and assessment.

It is important to assess the baby at least every six hours for appearance and behavioural states: skin colour, breathing, levels of activity and feeding. These observations should be made while the baby is with the parents, thus providing an opportunity for parental education.

The baby should have a complete physical examination within the first 24 hours of birth, as well as within 24 hours before discharge from hospital. In some situations, babies have very short hospital stays; this may mean that only one examination occurs in hospital. However, a second examination should occur within 48 hours of discharge from hospital by a qualified health care provider (CPS, 1996a). These examinations should be documented in the infant's chart. Physical examination of the newborn should include measurements of the head circumference, hips, length, and weight. It is recommended that the examination of the baby be conducted with parents present. This provides health care providers with an opportunity to reassure the parents as to the baby's normalcy, and to communicate any special needs or concerns requiring follow-up.

SKIN AND CORD CARE

Newborn babies are bathed primarily for esthetic reasons. Such bathing should thus be postponed until thermal and cardiorespiratory stability is ensured. The health care provider should bath the baby using lukewarm water and either no soap (especially soaps containing hexachlorophene) or a mild, non-medicated soap.

The literature suggests that tub bathing, as opposed to sponge bathing, can be done without significantly lowering the infant's temperature or increasing rates of cord infection (Henningsson et al., 1981; Anderson et al., 1995). One study found that babies who were tub bathed cried less. (These studies were conducted with babies whose temperature had stabilized for one hour.)

A tub bath should be used to help remove blood. Drying of the baby and removal of blood after birth may minimize the risk of infection caused by hepatitis B, the herpes virus, and the human immunodeficiency virus. Specific benefits of this practice remain unclear, however. Until the infant has been thoroughly bathed, universal precautions should be used when handling the newborn.

The relative values of triple dye, bacitracin ointment, alcohol, and natural drying vis-à-vis cord care are not clear enough to allow for a single recommendation to be made. Recent evidence indicates no difference in outcomes when the cord is cleaned with alcohol versus natural drying (Dore et al., 1998). It is essential, however, that the cord be initially cut with a sterile instrument. As well, the cord and surrounding skin area should subsequently be watched for potential omphalitis. Any agents used to clean the infant's skin or cord should be single-use, thereby preventing cross-contamination with other babies. Policies regarding cord care should be examined on the basis of emerging research.

CIRCUMCISION

Given the overall evidence that the benefits and harms of circumcision are so evenly balanced, the Canadian Paediatric Society decided not to recommend circumcision as a routine procedure for newborns (CPS, 1996b). The Society recommends that parents making a decision about circumcision should seek advice as to the current state of medical knowledge concerning its benefits and harms. The parents' decision may ultimately reflect their personal, religious, or cultural factors.

The evidence shows a strong need for pain control when circumcision is performed. Appropriate attention should therefore be paid to pain relief (CPS, 1996b).

After circumcision, it is important that parents understand how to care for and clean their baby's penis. They need to recognize the signs of healing, as well as the signs of complications such as bleeding or infection.

IMMUNIZATION

A baby whose mother is HBs Ag (hepatitis B surface antigen) positive should receive hepatitis B immunoglobulin (0.5 mL intramuscularly) as soon as possible after birth, followed by initiation of hepatitis B immunization. Even if the mother is HBs Ag negative, consideration should be given to vaccinating babies who may be at increased risk of exposure due to HBs Ag positive household members. Although not the current practice in Canada, routine initiation of hepatitis B immunization during the newborn period may be beneficial. BCG immunization should also be considered if exposure to communicable tuberculosis is expected in the home.

NEWBORN SCREENING

Each newborn baby should enter a neonatal screening program that includes, at a minimum, screening for hypothyroidism and phenylketonuria. Before birth, parents should be informed of the purpose of all anticipated screening tests. Screening programs are designed to ensure not only that all babies are screened in accordance with the current recommended practices and legislation, but also that normal, and especially abnormal, results are communicated appropriately to both health care providers and parents. Timely initiation for care of the baby and support for the families is thus ensured. In situations of early discharge from hospital, the screening should occur before discharge, unless such screening can be ensured after discharge within the necessary time limits.

Hearing loss is estimated to occur in 1.5 to 6.0 per 1000 live births. Babies who are at increased risk for hearing loss may have screening completed in their place of birth. Alternatively, appropriate arrangements should be made within the first three months of life. Factors associated with increased risk of hearing loss include:

- family history of childhood sensory hearing loss;
- congenital infections such as cytomegalovirus, rubella, syphilis, herpes, or toxoplasmosis;
- cranial facial anomalies with abnormalities of the pinnae or ear canal;
- birth weight less than 1500 g;
- hyperbilirubinemia requiring exchange transfusion;
- exposure to ototoxic medications, especially aminoglycosides used in multiple courses or in combination with loop diuretics;
- bacterial meningitis; and
- perinatal asphyxia with hypoxemic encephalopathy.

Current information does not support routine screening of blood pressure, blood glucose, or hematocrit for all newborn babies. However, babies at increased risk of abnormality should be appropriately screened. This could include screening for blood pressure shortly after birth, blood glucose, and/or hematocrit at three to four hours of age.

Examples of infants at risk include:

- infants of diabetic mothers and babies who are large for their gestational age;
- babies who are small for their gestational age;
- premature infants;
- infants with perinatal asphyxia or signs of encephalopathy;
- infants with cardiorespiratory distress;
- infants with possible sepsis;
- infants of multiple gestation; and
- infants born to isoimmunized mothers.

Assessment of Complications Related to the Mother

Postpartum Blues, Depression, and Psychosis

POSTPARTUM BLUES

Postpartum blues, or baby blues, are experienced by 45 to 80 percent of postpartum women (Misri, 1993). Common symptoms are insomnia, sadness, mood changes, tearfulness, fatigue, headaches, poor concentration, and confusion. These symptoms are usually transient: beginning on the third or fourth day after birth, they last one to two weeks and then disappear without treatment.

Women with postpartum blues frequently do not know why they feel depressed, will talk of feeling “silly,” and will laugh through their tears. As well, many are disappointed that they feel “fat,” tired, and generally unlike the beautiful, well-groomed new mothers on television or in the movies. These women think that they are failures because they are not perfect. Some feel disappointed that their labours and births did not go as planned. Inadequate emotional support received from their partners or extreme stress caused by new mothering responsibilities are other contributing factors.

These women need to talk, cry, and work through their feelings. Health care providers should explain the derivation of “the blues” and reassure these women. It is essential that women understand that other women experience postpartum blues, that perfect mothers exist only in fairy tales. Family members can help by showering the mother with attention. Unfortunately, it is not unusual to find them all admiring the baby, while the mother is left alone (Stewart and Robinson, 1993).

POSTPARTUM DEPRESSION

Ten to twenty percent of women experience postpartum depression during the first year after birth. Usually, it begins within two weeks to six months of birth. Although a form of clinical depression, it is not psychotic in nature. Common symptoms are periods of excessive crying, feelings of despondency and guilt, emotional lability, anorexia, insomnia, feelings of inadequacy, poor self-esteem, inability to cope, social withdrawal, and concern about “not loving the baby.” The many physical symptoms include impaired concentration, irritability, poor memory, and fatigue (Robinson and Stewart, 1986; Stewart and Robinson, 1993; Pearce, 1997).

Many women go to great lengths to conceal their postpartum depression from families and friends because they feel it is not “motherly” or socially acceptable. To date, no hormonal abnormality has been identified, despite long-standing beliefs that hormonal changes are responsible. At greater risk are women who have previously suffered from depression or who have had a difficult pregnancy with emotional problems. Poor family or marital relationships and upsetting life events may contribute as well. The literature reports on the usefulness of screening tools to help identify women who are at risk for, or actually suffering from, postpartum depression (Cox, 1989; McIntosh, 1993; Schaper et al., 1994; Beck, 1995b).

Referral to a mental health professional and the treatment of postpartum depression professionally are important care components. The impact of depression on both the mother and her developing relationship with her new baby can have serious, long-lasting effects (Beck, 1995a). Supportive treatments include self-help groups, respite care, home assistance, counselling, and coaching regarding interacting with her infant. As well, psychotherapy may help to resolve the woman’s conflicts about motherhood and her role. Some women may benefit from information about parenting; others may benefit from marriage counselling and homemaking

support. Often, severe depression that does not respond promptly to psychotherapy can be eased by antidepressant medication. The new antidepressants usually do not cause drowsiness, allowing women to participate fully in child care (Stewart and Robinson, 1993). Controversy, however, is linked to the use of antidepressants and breastfeeding, and most listings warn that they should be “used with caution.” (See CICH, *National Breastfeeding Guidelines for Health Care Providers*, 1996.)

The outcome of postpartum depression in women who are treated appropriately is good — approximately 65 percent recover within a year. Research indicates that postpartum depression is often not identified despite the frequent contact that women have with health care professionals during the first year postpartum (Cox et al., 1987; Misri 1993; Beck 1995b). It is recommended that health care professionals use screening tools, such as the Edinburgh Postpartum Depression Scale (Cox et al., 1987) to assist in identifying women at risk for postpartum depression (Schaper et al., 1994).

POSTPARTUM PSYCHOSIS

Postpartum psychosis, the most severe form of postpartum depression, may become apparent anywhere from two to three weeks after birth, to as long as six to twelve months thereafter. It is relatively uncommon, the incidence being estimated at one or two per 1000 women giving birth. However, it is a very dangerous psychosis, to both mother and baby, given the presence of both suicidal and infanticidal thoughts. The mother is out of touch with reality; she may have delusions and/or hallucinations, severe disorganization of her thinking, and difficulty coping with the care of her baby; she may also be confused and dreamy (Misri, 1993; Stewart and Robinson, 1993).

The illness often begins suddenly and may present as a profound depression, mania, schizophrenia, or severe confusion. Women who have had bipolar affective disorder, or have a close relative who has had this disorder, are at higher risk of developing postpartum psychosis. Despite numerous investigations, no hormonal abnormality has been found in women with postpartum psychosis.

Women with postpartum psychosis should be cared for under close supervision in hospital, preferably with their infants. However, because these women have impaired judgment, they should not be left alone with

their infants. The best treatment is usually a combination of psychosocial support and psychopharmacological therapy. With treatment, the outlook for women with postpartum depression is very good — 95 percent improve within three months.

Late Postpartum Hemorrhage

Although less common than early postpartum hemorrhage, late postpartum hemorrhage can occur in up to one percent of women giving birth. It appears after the first 24 hours following birth, usually at seven to fourteen days. The causes of late postpartum hemorrhage are retained fragments of the placenta or membranes, subinvolution of the uterus, and infection of the uterine lining. Women should be advised of the signs of hemorrhage, and asked to call their health care provider if vaginal bleeding increases significantly and/or they pass large clots. Treatment involves controlling the bleeding, usually with oxytocin, and blood replacement and surgical intervention as required.

Even a moderate blood loss at birth may result in anemia, commonly defined as a hemoglobin of less than 10 g. Most cases of anemia can be corrected with a course of oral iron. Women with anemia should be monitored by a health care professional.

Puerperal Infection/Endometritis

A puerperal infection is an infection of the reproductive tract that is associated with childbirth; it can occur any time from birth to six weeks postpartum. Endometritis, the most common infection, is limited to the uterine cavity but can spread. In mild endometritis, a woman will have discharge that is scant or profuse, bloody, and foul smelling. In more severe situations, she will have fever, chills, lower abdominal pain or uterine tenderness, anorexia, lethargy, and rapid pulse. Treatment includes rest and Fowler's position to promote drainage, a high fluid intake, administration of antibiotics, analgesia as needed, and administration of oxytocics to keep the uterus contracted (Phillips, 1996). Comfort measures are important to relieve the symptoms. Women should be advised to call their health care provider if they develop symptoms of puerperal infection such as fever, pain/tenderness, foul-smelling vaginal discharge, or difficulty urinating.

Assessment of Common Complications in the Newborn

Cardiorespiratory Distress

Cardiorespiratory distress in the newborn may occur in the birth area or later, during the hospital stay. All hospital personnel caring for newborn babies should be able to assess respiratory distress, cyanosis (detection possible on the mucus membranes of the lips and mouth), and skin perfusion. In an emergency, any caregiver should be able to improve oxygenation and provide adequate ventilation. Specific resuscitation procedures may follow neonatal resuscitation program guidelines after birth and/or be modified for use in other areas of the hospital. Each hospital should have an identified emergency-response team capable of initiating such procedures for newborn infants according to a defined protocol. (Chapter 2 of this document addresses attendance by a physician for further evaluation and care.)

Facilities providing supplemental oxygen to babies for periods of more than four hours should also have the capacity to monitor and regularly record environmental oxygen concentration and to assess oxygenation of a baby by means of pulse oximetry, transcutaneous PO₂, and/or arterial gases. As well, all centres should have personnel capable of initiating assisted ventilation, at least with manual ventilation techniques. The capacity to provide continued respiratory assistance usually requires a Level III service. Each facility caring for mothers and newborns should have a written policy related to initial care of the baby with respiratory distress and, if a Level I or II facility, a working relationship established with another referral centre to which the baby may be transferred for continuing care.

Hypoglycemia

Hypoglycemia in the newborn baby is defined as blood glucose of less than 2.2 mMol/L during the first 72 hours of life and less than 2.5 mMol/L thereafter. Babies at risk (see Appendix 1) should be screened for potential hypoglycemia via measurement of blood glucose prior to a feed, or as otherwise clinically indicated. Infants who are symptomatic or those with more severe hypoglycemia (blood glucose of less than 1.7 mMol/L) should receive an intravenous infusion of 2 mL/kg D10W over five minutes,

followed by an intravenous infusion of glucose at 6 to 8 mg/kg/min (e.g. D10W at 90 mL/kg/24hrs). Because indicator strips only approximate blood glucose levels, it is important to confirm the abnormal values determined with indicator strips by measuring blood glucose in the laboratory, using conventional methods. Treatment, however, should be initiated while awaiting results.

Fluid Balance

For the normal, healthy term baby, the ability to breastfeed should be assessed as described in Chapter 7. Supplemental feeds to minimize dehydration are not routinely required. Ninety-nine percent of babies will void in the first 24 hours of life. Failure to void adequately (at least three times daily during the first two days and six times per day subsequently) may indicate dehydration, which may be confirmed by identification of weight loss and examination of the anterior fontanelle, skin turgor, and skin perfusion. It is important that parents learn the signs of dehydration before leaving the hospital or birth centre (see Chapter 7).

Healthy term babies need not be routinely weighed on a daily basis. However, sick newborn and preterm infants would normally be cared for in a neonatal intensive-care unit where fluid balance should be monitored via measurements of fluid intake and output, daily weight, and biochemical measurements.

Jaundice

The most recent guidelines of the Canadian Pediatric Society (CPS), “Approach to the Management of Hyperbilirubinemia in Term Newborn Infants” (CPS, 1999) should be consulted for information on the clinical investigation and treatment of jaundice.

Hyperbilirubinemia in otherwise healthy newborn infants continues to evince a potential threat of bilirubin encephalopathy. However, careful assessment and judicious use of phototherapy will result in optimal outcomes. Phototherapy remains an effective therapeutic intervention that decreases bilirubin concentrations, thereby preventing bilirubin levels associated with permanent sequelae.

Table 6.2 outlines the tests for the investigation of a jaundiced infant. Figure 1 shows the levels of bilirubin at which phototherapy might be initiated in healthy term infants and those with risk factors. If the infant is

a healthy term newborn, phototherapy should be started as indicated in the upper curve of Figure 1. If the infant has one or more risk factors, a clinical decision may be made to initiate phototherapy at the level indicated by the lower curve.

Table 6.2 Laboratory Investigation for Hyperbilirubinemia in Term Newborn Infants

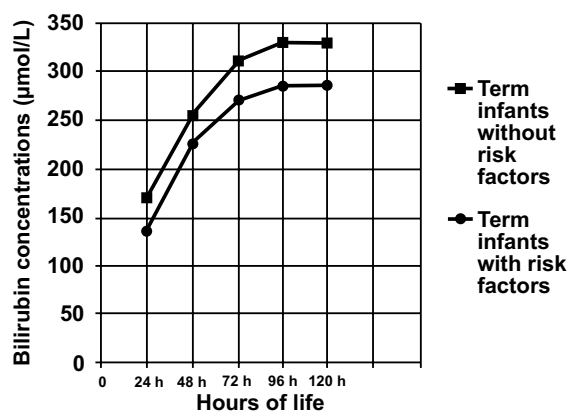
Indicated tests (if bilirubin concentrations reach phototherapy levels)

- Serum total or unconjugated bilirubin concentrations
- Serum conjugated bilirubin concentration
- Blood group with direct antibody test (Coombs)
- Hemoglobin and hematocrit determinations

Optional tests (in specific clinical circumstances)

- Complete blood count (CBC), including manual differential white cell count
- Blood smear for red cell morphology
- Reticulocyte count
- Glucose-6-phosphate dehydrogenase screen
- Serum electrolytes and albumin or protein concentrations

Figure 1 Revised Guidelines for Initiation of Phototherapy in Neonatal Hyperbilirubinemia in Term Infants with Risk Factors and in Healthy Term Infants



Some risk factors include a gestational age of fewer than 37 weeks, birth weight less than 2500 g, hemolysis, jaundice occurring at less than 24 hours of age, sepsis, and the need for resuscitation at birth.

Source: Canadian Paediatric Society (CPS). Approach to the management of hyperbilirubinemia in term newborn infants, *Paediatrics and Child Health*, 1999.

Dehydration contributes significantly to increased serum bilirubin levels and may be exacerbated by phototherapy. All jaundiced infants should be adequately hydrated before and during phototherapy. Breast-feeding is not contraindicated for the jaundiced infant undergoing phototherapy. In many cases, more frequent breastfeeding should be encouraged.

Health care providers are referred to the CPS guidelines for other aspects of caring for the infant undergoing phototherapy. Indications pertaining to consultation or consideration of exchange transfusions are included therein, as well.

If the baby is discharged home early, appropriate follow-up must be in place to monitor the bilirubin concentrations as required. Although home phototherapy may be available in some centres, readmission of healthy term infants with their mothers, to hospital, may be required.

The Newborn at Risk for Sepsis

Group B streptococcus is a leading cause of neonatal infection. It is recommended that the most current guidelines of national bodies, such as the CPS, the Society of Obstetricians and Gynaecologists of Canada (SOGC), and the Centers for Disease Control (CDC), be consulted when developing policies and protocols for management of the mother and baby.

For specific guidelines regarding other infections, health care providers are referred to the 1994 edition of the *Report of the Committee of Infectious Diseases*, American Academy of Pediatrics (Redbook). (See Companion Documents.)

Substance Use

Infants exposed to drugs, chemicals, and solvents in utero should be observed for signs of developmental anomalies and neonatal abstinence syndrome. This observation should most commonly occur while the baby is with the mother, although babies with demonstrable abstinence symptoms may require treatment and care in a specialized neonatal unit. These signs are often present at, or soon after, birth, but may not be evident for a few days. Assessment tools should be used to identify the common neonatal abstinence signs: sweating, tremulousness, irritability, and a high-pitched cry. Health care professionals should seek collaboration with

community agencies, public health units, and other child-serving organizations to provide safe, appropriate care and follow-up for the parents and infants after discharge from hospital.

Postpartum Assessment and Care After Cesarean Birth

Mothers and families who experienced a cesarean birth as an emergency, or after a long and difficult labour, have special needs. They may be experiencing depression, anxiety, guilt, loss of control, less satisfaction with the birth experience, and even loss of self-esteem. Mothers and families who undergo planned, scheduled cesarean births can sometimes use coping mechanisms to prepare for the surgery. Women undergoing an unplanned cesarean birth do not have this preparation time (Phillips, 1996).

Health care professionals can help the new mother and her family work through and resolve feelings about the operative birth, particularly if it was unplanned. Hospitals and other agencies need to develop support systems or support groups for women following an emergency cesarean birth.

For the entire hospital stay, in addition to regular postsurgical care, a daily postpartum assessment should be done. This includes assessment of the woman's breast and nipple condition, the amount and character of her lochia, and the height and consistency of the fundus; inspection of the abdominal incision and extremities; and assessment of her voiding. Cesarean birth does not preclude combined mother/baby care. Primarily because of discomfort, mothers may need extra help with breastfeeding, especially during the first few days. Family support is imperative after the operative birth. If the baby is kept in a special care nursery, the mother and father should go to the nursery whenever possible. Because unplanned separation from siblings remaining at home can be traumatic, they should be encouraged to visit. It is vital that women and families understand what to expect during the recovery period. They need to comprehend the importance of rest, fluids, and adequate diet for recovery. Most women will need extra help at home.

Transition to Home and Community

Introduction

Mothers face many common issues in the early days following birth. Isolation, fear or insecurity about infant care, breastfeeding, where to go for help, role adjustment, fatigue, coping with siblings or partners, body image, nutrition, and the need for peer support — all must be dealt with.

Programs, protocols, and procedures for maternal and newborn care in hospitals and communities are generally organized around these basic needs. Many variations exist, depending upon input from parents in the program-planning process, provider preferences, geographical settings (urban/rural, north/south, isolated areas), unique population variables, and available resources. Consumer, hospital, and community agency collaboration is vital to the success of a healthy transition to family life with the new baby.

While some prenatal childbirth preparation programs include an orientation to the postpartum period, not all mothers have access to, or attend, such sessions. With the focus of the prenatal period commonly centred on the birth itself, parents often find it difficult to take in information about the postpartum period. As a result, new parents may experience a certain amount of anxiety as they adjust to parenthood. Planning for the postpartum period should, however, begin during the prenatal period. Written documentation, discussions with caregivers, and prenatal classes should include the following information:

- description of community philosophy of care;
- outline of hospital facilities and practices;
- determination of length of hospital stay;
- listing of community resources for new parents: health agency visiting professionals, phone lines for new parents (“warmlines/hotlines”), breastfeeding support programs, parenting groups, library and recreation centre resources, shelters, foodbanks;
- description of ways in which families and friends can support the new family: preparing food in advance, initiating phone contact, assisting with the care of siblings, providing opportunities for rest;
- outline of special services for families at risk (health or social);

- summary of availability of financial resources and emergency support; and
- instructions about accessing help from available resources.

Community support services, both professional and peer, vary by region. While typically a function of resource allocation, values, and mandates of community services, the trend to shortened hospital stay has energized professionals and consumers. Strategies for community support programs have resulted — their goal being to assist in the prevention of postpartum problems and to enhance maternal and newborn adjustment.

Outcomes or Indicators of Postpartum Adjustment

Professionals have developed a number of methods — written standards of care, care plans, maps or paths, “managed” care, among others — to assure that maternal and newborn criteria for health and adjustment are observed during the early days postpartum, both in hospital and at home. Criteria, also called “indicators” or “outcomes,” include specifics about the mother, the neonate, and the social or home support system of the family. Certain outcomes will be achieved during the family’s hospital stay; others will be achieved at home.

MOTHER

Two sets of criteria — physiological and emotional — are used to judge the mother’s progress. The physiological outcomes include the following indicators:

- normal hemoglobin, no fainting or dizzy spells;
- satisfactory ambulation;
- decrease in colour and amount of lochia by day three to five, no foul odour or itchiness;
- firm, midline, contracted uterine fundus;
- at least one voiding prior to hospital discharge, bladder feels empty following voiding, no painful urination;
- resumption of normal bowel function: bowel movement by day two to three (vaginal birth) or day three to five (cesarean birth);
- vital signs within normal limits;
- healing of the perineum (i.e. no excessive redness, pain, induration, or swelling);
- well-approximated skin edges (from episiotomy, tear, incision);

- soft and supple nipples;
- breasts soft (day one to two) and filling (day three to four), fullness evident, engorgement controlled;
- lactation established; and
- pain controlled by oral medication.

The emotional adjustment includes the following outcomes. The mother:

- indicates knowledge of whom to call when in doubt or need (friends, family, community resources, health care professionals);
- has discussed the events of her birth experience;
- demonstrates the beginnings of confidence in basic baby care;
- demonstrates an attachment to the baby;
- has not expressed (or observed) feelings of profound unhappiness regarding the birth or her role;
- indicates that she feels safe when at home; and
- is able to sleep or rest between infant feeds.

NEWBORN

Two sets of criteria — physiological and safety — are used to judge the newborn's progress. The physiological outcomes include:

- vital, stable signs within normal limits;
- established feeding status: infant feeds at least eight times in 24 hours, is content and sleeps between most feeds. Prior to hospital discharge, at least two feeds have been managed independently (latched on, suckled well) or arrangements have been made for referral, support, and follow-up;
- no jaundice in the first 24 hours;
- meconium stool within the first 24 hours of life;
- functioning bowel movements (two to six per day);
- regular urination: one to two wet cloth diapers per day in the first three days (occasional brick red staining is normal); six or more wet cloth diapers per day by day four to six; urine is pale yellow and odourless;
- metabolic screening completed, or arrangements made to have it done; mechanism in place for reviewing results;
- if circumcision is to occur, mother knows who to call if neonate has not voided within eight hours of procedure, or if there is bleeding or signs and symptoms of infection; and
- no more than 7 percent loss of birth weight within the first week.

The safety outcomes include:

- indication by the parent that a regulation crib and car seat have been obtained (see Health Canada, 1998; Canadian Motor Vehicles Safety Standards [CMVSS], Transport Canada.). Car seat inspection at time of hospital discharge elicits a “CMVSS” sticker, indicating that the requisite safety standards have been met. (Referral should be made to local automobile associations for details, or to the Transport Canada information line at 1-800-333-0371.) The infant is seen to be dressed appropriately and appropriately harnessed and positioned in the car seat;
- demonstration by the parent of ability to feed, clothe and nurture the infant; and
- indication that referral or follow-up will identify the professionals’ concerns regarding potential parent isolation, lack of parental competence/confidence, violent home situation, or neglect.

MATERNAL AND NEWBORN SUPPORT OUTCOMES

The following indicators are used to assess the support available:

- evidence that the parent has a “fixed” address, or documentation of an address where the mother will be staying following hospital discharge;
- evidence of referral to community services for identified needs regarding breastfeeding, parent education, home safety issues, potential violent home situation, and parent social support;
- evidence that phone contact or a professional home visit has been arranged if hospital stay is less than 48 hours;
- evidence that the mother has arranged for follow-up assessment with a qualified health professional, both for the newborn (within one week) and herself (within six weeks);
- evidence that the mother knows how to obtain emergency help, support, and parent information (This could include written information. [See Appendix 3 for an example.] Chapter 7 has information for breastfeeding mothers.);
- evidence that family, friends, or other resources have been identified as support for the mother; and
- evidence of identification and follow-up for history of parental mental health problems, previous child abuse, and substance use.

Community Support Strategies

Increasingly, postpartum care and a successful transition to the community are being seen as central to promoting healthy new beginnings for the family and to preventing early maternal and newborn morbidity. Creative strategies have been developed to help the mother prepare herself and her home for the inevitable stresses after the birth. Although the strategies vary, the underlying issues relate to:

- infant feeding
- infant care and protection
- adequate rest
- obtaining help when needed
- education and learning
- social and financial needs.

The following listing elaborates on the strategies now considered by communities when planning for successful maternal and newborn transition to the community.

Prenatal Hospital “Visit” Programs. Modelled after preoperative ambulatory clinics, these programs are based on the belief that seeing mothers in the prenatal period can be of value in assisting them to plan for the birth and early postpartum periods. The prenatal visit can include learning about community resources; identification and documentation of needs for breastfeeding support, social work intervention, and/or care options during childbirth and postpartum; preparation of items for the newborn (regulation cribs and car seats); familiarization with the hospital environment; and development of a plan for postpartum learning. Documents are kept with the prenatal file at the hospital and used upon admission and for community referral, thus reducing duplication and enhancing continuity of care. Copies of the information and planning forms should be carried by the mother; she can then share them with health care providers and refer to them as necessary.

Phone Lines. Many communities have initiated special phone lines, often called “warmlines” or “hotlines,” with specific telephone access numbers for new parents. Parents can thus ask questions, day and night, about personal and infant health issues. Questions usually relate to breastfeeding, infant crying, coping at home, and community resources; general

reassurance is often needed. Phone lines can be connected to hospital postpartum wards or run under the auspices of public health units, parent organizations, La Leche League, or medical centres.

Professional Home Visits. A traditional follow-up component of maternal and newborn care is the home visit by either a nurse or midwife. The professionals traditionally organize their observations of the mother, newborn, and family around basic postpartum needs. The length and frequency of visits vary according to the needs of the family and the program specifications. Home visit referrals are made by the hospital or community liaison staff, or by the mother herself; often, they are governed by the “urgency” rating of the assessed need. In some areas, home visiting has been discontinued or replaced with options entailing visits by the mothers to a professional service. As well, some hospitals have initiated home follow-up by their childbirth staff for mothers in need, as identified by risk criteria or need for additional support. For mothers without a telephone, a visit within 48 hours of discharge is suggested. It is also recommended that mothers and babies who are discharged before 48 hours after birth should have a home visit by a qualified health care professional within 48 hours of discharge (CPS, 1996a).

Early Phone Follow-up. A phone call from public/community health nurses or hospital nurses to the mother, within 24 to 48 hours of hospital discharge, can ensure that the postpartum plan is in place and working well. Specific outcomes can be screened, relating to infant feeding and maternal and infant well-being. The telephone interview may result in a referral to a community service for intervention, such as a home visit.

Postpartum Clinics. Usually staffed by nurses, postpartum “clinics” are geared to mother/baby drop-ins or scheduled visits. The clinic program can be structured for health assessment, episodic problem solving, referral, support, or advice. All clinics should have easy access in terms of parking, with the requisite modifications for persons with disabilities. Areas are needed for family privacy.

Physician Follow-up. Follow-up assessment by the physician or other competent health care professional is recommended — within seven days of discharge for newborns, and within six weeks for mothers. Scheduling earlier visits to the physician will depend on general maternal and newborn

health; complications of pregnancy, birth, and the postpartum period; and available family/community supports.

Community Maps. As parents, people need to visualize their community with new eyes. A street map of the town — prominently displayed in postpartum areas and health care providers' offices, and liberally “dotted” with selected parent resources — is a popular, user-friendly aid. The map should be surrounded by phone numbers, grouped under such headings as breastfeeding services, legal services, food banks, libraries, parent groups, literacy resources, immigrant services, clothing exchange centres, public health units, home care agencies, and “warmlines.” Other resources unique to the area should be listed as well.

Breastfeeding Clinics or Centres. One of the new mother's most important needs relates to help with breastfeeding. Clinics provide skilled staff, often certified lactation consultants, to assist with problems and questions.

La Leche League. A non-professional support group for breastfeeding mothers, La Leche League (LLL) involves experienced mothers dedicated to helping others learn the art of breastfeeding. Most telephone books contain the telephone number of the local chapter. In some communities, a LLL representative will, upon request, make hospital visits.

Parenting Classes/Groups. As was the case in prenatal classes, some parents will benefit from group discussions of parenting concerns during the early postpartum period. Indeed, some prenatal classes will organize reunion classes to bring parents together again — this time with their babies.

Another successful initiative has been parent-to-parent support programs involving paid staff and/or volunteers. These have proved especially valuable for new immigrants, or for those having English or French as their second language, who may need help in accessing the health care system.

Electronic Communication/Information. Fax and electronic communication are useful tools for expediting referrals between agencies. As well, agencies should collaborate in developing parent information packages, accessible via the Internet or the community Freenet. These information packages are valuable to both professionals and parents. Some communities have well-advertised direct-dial telephone information messages for

common questions or problems experienced by parents in the early postpartum period. All resources should be developed at the appropriate literacy level and in the appropriate languages of the community.

Other Strategies. To fulfil the need for maternal rest, some community follow-up services have added homemaking and Meals-on-Wheels services to their package. These can be put in place with or without professional services, depending on the identified need of the mother. When available as an option, about 10 percent of mothers will request homemaking services.

Some public health units or home care agencies will send laboratory technicians or nurses into the home to perform blood tests (bilirubin, PKU/thyroid, hemoglobin). This strategy is especially effective in supporting programs requiring early hospital discharge. For example, home phototherapy programs can be initiated as an alternative to hospital readmission for hyperbilirubinemia. In many communities, rental depots for such items as car seats or breast pumps have proved successful.

Length of Hospital Stay

Over the past two decades, postpartum hospital stays for mothers and babies have seen a dramatic decline — going from four to five days in the 1970s to the current norm of one to two days. Reports of early discharge programs depict their evolution as a response to the philosophy of family-centred maternity care and mothers wishing to leave hospital sooner than usual. For well-supported mothers who fulfil specified criteria (generally a normal pregnancy and birth at term) and who desire a short hospital stay, a set of home services was coordinated, replacing hospital program activities pertaining to assessment, support, and parent education. Such hospital-community collaborative programs incorporate criteria checklists, care plans/maps/outcomes, written community referral forms, and an array of community-support strategies and parental evaluations.

Outcomes of community-supported “early discharge programs” have identified these programs as safe, satisfying, efficient, and economical for their users. Data have been positive on such variables as maternal and newborn physical health, adjustment, hospital readmission rates and breastfeeding (CICH 1996; CPS, 1996a; Dalby et al., 1996; PEPEO, 1996; SOGC, 1996a). The programs’ success rests on the following factors:

- parental choice/involvement in the decision concerning length of hospital stay;

- appropriate screening vis-à-vis defined criteria of health for the mother, the newborn, and the family support system;
- a strong community-support component for contact/follow-up, teaching, problem solving, and assessment; and
- professional staff, experienced in maternal and newborn care and in community health, working within the conceptual framework of family-centred maternity care.

Administrative mandates may give rise to a non-voluntary, short hospital stay. In this instance, concerns may relate to infant readmissions, breast-feeding failures, parental coping concerns, and maternal dissatisfaction. Clearly, it is important to emphasize coupling short stays with planned community support strategies and programs, as defined above.

It is the mother who should decide the length of hospital stay, based on her individual needs. In effect, there is “no place like home,” and the program for care should be flexible in attending to the new family’s needs and preferences.

Collaboration between hospital maternal and newborn committees, community agencies, and consumers in developing programs dealing with length of stay and follow-up is essential. Current guidelines for hospital discharge go beyond physical health parameters: evidence is needed of the family’s resources for postpartum support or of referrals based on individual need (see SOGC [1996a] and CPS [1996a] for criteria for discharge prior to 48 hours). A comprehensive program of early discharge/community support should include written information for parents, detailing signs of health and/or postpartum problems, where to access help, and surveillance of hospital readmissions. Materials must always be developed at appropriate literacy levels, using pictures as much as possible. As well, materials must be available in languages appropriate to the community. If programs involve discharge of mothers and babies fewer than 48 hours after birth, it is recommended that they be assessed by a skilled, knowledgeable professional within 24 to 48 hours after discharge. A personal assessment in the home is preferred for all mothers and babies, since travelling by new families to a clinic or office may pose undue difficulties (CPS, 1996a; SOGC, 1996a).

Hospitals and community health agencies should evaluate their post-partum services. Surveillance of hospital readmissions, client satisfaction, and data regarding breastfeeding are useful measures of program effectiveness.

Hospital to Community Referral

To ensure consistent and continuous care, use of check-off information sheets initiated by the hospital staff or liaison staff should be mandatory. The mother should be provided with a copy for use by the community professional; another copy can always be faxed to the agency office. Table 6.3 outlines the essential elements of the referral form.

Table 6.3 Essential Elements of Hospital/Community Referral Form

Identifying Data

- mother's full name, age, address, and phone number; partner's name (and relationship); temporary address, if applicable
- last name of the newborn if different from the mother's name
- family names — of partner, children, or others in the home
- language spoken and who, in the home, is available for translation if necessary
- specific cultural beliefs related to maternal and newborn care

Pregnancy/Birth Data

- history of previous pregnancies
- complications of pregnancy, labour, or birth
- type of birth
- condition of the perineum/abdominal incision

Maternal Information and Needs

- Rh immune globulin, if needed
- abnormal serologic tests (hepatitis B, HIV)
- current involvement with community agencies
- method of infant feeding (breastfeeding history if mother is multiparous)
- financial needs
- previous postpartum depression
- observation of parent handling of the newborn; concerns regarding competence and confidence
- needs for medical or nursing treatment (dressing changes, wound assessment, blood testing, IV administration)
- needs for support (homemaking, nursing visits, meals, community group, phone line)
- Rubella titre/vaccine, if indicated
- written information
- need for language-specific services

Newborn Information and Needs

- sex, gestational age, birth weight, Apgar scores
 - status of screening and specifically indicated procedures: PKU/thyroid and, if indicated, hepatitis B vaccine/immune globulin, Coombs test
 - feeding status: breast/formula; if breastfeeding, any concerns identified with latch, suck, lethargy
 - skin colour/jaundice
 - congenital or functional abnormalities
 - treatment needs/procedures (e.g. circumcision care, cord clamp removal)
 - follow-up plans with physician
 - discharge weight
 - safety issues (crib/car seat, potential or actual violent home situation)
-

The Infant with Special Needs

Infants, with and without special needs, share many of the same issues regarding transition to the community. Specific issues for the infant with special needs include:

- having multiple problems secondary to low and extremely low birth weight (bronchopulmonary dysplasia [BPD], retinopathy of prematurity, hearing deficit, abnormal tone, known intracranial pathology);
- having serious single or multiple congenital anomalies, metabolic disorders, and genetic diseases;
- being sent home for palliative care;
- being one of a set of twins, triplets, quads, and so on (especially if one member has died); and
- being born to HIV-positive mothers.

Specific guidelines should be established for these situations. Neonates in these categories might be discharged home and require ongoing specialized care (e.g. home oxygen, special feeding, management of acute/chronic pain, home monitoring, specific medications, and orthopedic devices). Follow-up may mean attention to tests that have been performed at birth but require a long time to be completed. Many will need special attention vis-à-vis psycho-socioeconomic factors; housing, family, and community support; and special arrangements for transport.

Some families will require assessment and assistance related to family violence, child abuse, and substance use. Others may require genetic counselling; bereavement follow-up; and referral to, or information about, community support groups for infants with special conditions (e.g. Down syndrome, group B streptococcus [GBS], cystic fibrosis) and early infant stimulation programs.

Parents will need education regarding the specific needs (bio-psycho-social) of their baby and family, including implications (if any) for future children. In most cases, care can be best coordinated by the primary physician working in cooperation with specialized follow-up programs and other community agencies.

Conclusion

Adapting to a new baby in the family is a long process. As the family members continue through their adaptation, both physically and psychosocially, it is critical that they have information regarding the accessible support services in the community.

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APPENDIX 1

Factors Associated with Increased Risk of Problems in the Newborn

Note: This list is not to be considered exhaustive. Nor does it imply a cause and effect relationship. Because specific numbers might be debatable, they have not been provided (e.g. high and low gestational ages).

Factor	Potential Problems
Gestation <37 weeks	Respiratory distress syndrome, temperature control problems, feeding difficulties, hypoglycemia, infections, intracranial hemorrhage, periventricular leukomalacia
Post-term ≥ 42 weeks	Meconium aspiration syndrome
Small for gestational age	Meconium aspiration syndrome, hypoglycemia, jaundice, polycythemia/hyperviscosity syndrome, congenital infections, developmental anomalies
Large for gestational age	Hypoglycemia, polycythemia/hyperviscosity syndrome
Need for prolonged resuscitation	Hypoxic-ischemic encephalopathy, seizures, hypoglycemia
Pregnancy-induced hypertension	Small for gestational age, thrombocytopenia, hypoglycemia, leukopenia
Risk factors for infections (see section on The Newborn at Risk for Sepsis)	Sepsis, meningitis, pneumonia
Hydramnios	Problems with swallowing such as esophageal atresia
Oligohydramnios	Renal dysplasia and agenesis, pulmonary hypoplasia
Isoimmunization	Neonatal jaundice, anemia, hydrops, thrombocytopenia
Maternal sedation	Respiratory and neurologic depression after birth, feeding difficulties
Maternal tobacco, alcohol, or other drug use	Small for gestational age, prematurity, drug withdrawal syndromes, fetal alcohol syndrome, neurologic abnormalities
Maternal medications	Neurologic depression at birth, hypoglycemia, developmental anomalies
Maternal diabetes	Large for gestational age, birth injury, hypoglycemia, polycythemia/hyperviscosity syndrome, developmental anomalies, respiratory distress, jaundice
Lack of prenatal care, social disadvantage	See Chapter 4.

APPENDIX 2

The Three Phases of the Postpartum Period

Phase	1. Taking in	2. Taking hold	3. Letting go*
Average time span	2 to 3 days	3 to 14 days	15 days to 6 months
Dependence continuum	Dependent: Help me, hold me.	Independent: I've got to help myself.	Interdependent: We're all in this together.
Body image	Massive physical changes in a short period of time: out of touch or cannot keep pace with many of the physical adaptations taking place.	Body image in transition: feelings swing from disbelief to beginnings of acceptance; concerns regarding sexuality.	Settling into the reality of a new physical self, increased acceptance of a changed body; still changing physical image.
Energy	Very low, need for additional sleep and food. May experience an artificial high during this period.	Tired but more alert, eager to get on with mothering. Stronger desire to take care of infant.	Still tired, but accepting new demands on the family. Adjusting priorities to accommodate the new situation.
Power and control	Needs to lean on experts and others who have experience and know-how. Has strong need to be mothered.	Needs to take charge of the new relationship. Recognizes the dependence of the baby and his/her need for mothering. Strong need for being mothered continues.	Onset of empowerment, more confident and controlled. Needs peer acceptance of style of mothering.
Communication	Very talkative: needs to discuss the birth experience in detail; often vague about certain aspects of birth; needs to fill in these missing pieces.	Needs to discuss expectations of birth and baby and how they compare with reality. Needs to discuss issues such as functions, infant care, sibling rivalry, etc.	Needs sensitive discussion of new role, expectations regarding work at and outside the home. Needs to know about resumption of sexual activity. Needs to understand changing sexual feelings and needs.
Emotional state	Vulnerable: feels a victim of her body and of changing circumstances and relationships.	Vulnerable to rejection, rapid and frequent mood swings. Large hormonal changes.	Integration of the new experience into everyday reality. Increased acceptance and appreciation of the new state of affairs. Has a feeling of being able to cope. Has improved self-esteem.

* The duration of the third phase is being redefined. The six-week physical recovery period is no longer recognized as valid. Instead, the literature refers to the "fourth trimester," or a minimum of three months, for physical and psychosocial recovery. Many writers describe Phase 3 as a year in length because of the time needed to integrate the new child into the family.

Source: Health Canada. *Postpartum Parent Support Program: Implementation Handbook*, 1989.

APPENDIX 3

When to Get Help?

Call 911 (or the emergency phone number in your area) or go to the nearest Emergency Department IMMEDIATELY if:

- **You have heavy vaginal bleeding.** You have bright red bleeding from the vaginal area (between your legs) that completely soaks one or more maxi-pads in two hours and does not slow or stop with rest.
- **You have trouble breathing or chest pain.**
- **Your baby has breathing problems.** Your baby is having trouble breathing, is choking, cannot get his or her breath, or has stopped breathing.
- **Your baby has blue skin colour.** Your baby's skin colour looks blue. If you are not sure, look inside his or her mouth for blueness (tongue, lips, gums).

Call your doctor right away if:

- **You pass many blood clots** that are larger than a dollar coin (“a loonie”), and your vaginal bleeding becomes heavier and does not slow or stop with rest.
- **You have a foul-smelling vaginal odour.**
- **You have red, sore breasts.** Your breasts are red, swollen, and painful. You may have a fever. You may feel as if you have the flu. You may continue to breastfeed your baby.
- **You have painful, swollen lower legs.**
- **You have pain when you pee.** You feel burning every time you pee. You find it hard to pee. You may have a fever.
- **You see changes in your c-section cut.** You see redness or a discharge coming from the cut on your lower tummy. You may have a fever.
- **Your baby has a body temperature of over 37.5° Celsius (99.5° Fahrenheit).**
- **Your baby is vomiting.** Your baby does not want to eat and is throwing up.
- **Your baby's behaviour changes.** Your baby has very little energy and is not moving much. He or she does not wake up on his or her own and is very sleepy when he or she is awake.
- **Your baby's umbilical cord has a bad or foul smell.**

