Inpatient Hospitalization for Postpartum Depression: Implications for Mother and Infant

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CASE HISTORY

A 28-year-old G1P1 woman with a complex childhood history of trauma and difficulties with attachment, but no significant medical or other psychiatric history, presented four weeks postpartum to the emergency department for assessment of postpartum depression at the suggestion of her therapist. Psychiatry was consulted. The patient described herself as seeking help because she felt that she was experiencing worsening postpartum depression and feared that, if her depressive symptoms continued to progress, she might lose control and become frustrated with her baby. She provided an example of possibly burping the baby too hard on one occasion and that her doing so may have made the baby cry. But she denied wanting to hurt her baby. She denied any psychotic symptoms, any hallucinations, or any odd or paranoid thoughts about the baby. Both the patient and her partner denied any concern that the patient wanted to harm herself. She reported feeling sad and overwhelmed, with difficulty bonding with her baby. She noted symptoms of decreased interest and motivation, but denied changes in appetite, concentration, or memory.

Review of history revealed an uncomplicated, planned pregnancy and vaginal delivery. Her labor process was significant for losing her epidural pain management while pushing. Although she had desired a child, she felt difficulty connecting with her baby even during pregnancy. In the immediate postpartum period, she found breastfeeding difficult, and overall felt overwhelmed with feeding her newborn every two to three hours. In her family and childhood history, the patient had a notable generational element of trauma and difficulty with attachment. Her own mother was 15 years old when she was born. Her upbringing included living at her grandparents' home because of the mother's active drug use at that time, and then moving back to reside with her mother after perceiving that her grandparents were tired of her.

The patient had been in a relationship with her partner for one-and-a-half years and denied any domestic safety concerns. She described her partner as very happy about the pregnancy and child. He had worked, however, every day since the baby was born. He did help feed the baby at night. Both partner and patient wished that he had more time away from work to assist the patient. The partner noted that the patient cried at night due to lack of sleep, had mood swings, and felt unhappy, and that the couple had arguments about his lack of time to help the patient. During evaluation, the baby was staying with the patient's mother. The patient had started seeing a therapist two weeks prior to this evaluation. She had not consumed alcohol since conceiving and otherwise denied the use of any other substances. She had completed three years of college and had been gainfully employed.

After thorough evaluation in the emergency room, patient was admitted to inpatient psychiatry. There she was started on sertraline 25 mg PO daily, which was up-titrated to 100 mg PO daily. At admission the patient was pumping expressed milk that her partner would obtain daily to feed the infant. With initiation of sertraline, the patient ultimately decided to stop breastfeeding and to opt for formula. She tapered her pumping as instructed by a lactation consultant and stopped breast pumping during psychiatric hospitalization. Her medication regimen during hospitalization also included diphenhydramine 50 mg PO nightly as needed for insomnia; she was noted to have difficulty initiating sleep.

Her hospital duration was 13 days, including a holiday. Since the inpatient psychiatry unit did not offer co-boarding of mothers and babies, the patient's infant stayed with the patient's partner and mother during the hospitalization. After several days in the hospital, the patient was allowed visits from her infant in the context of family daytime visits to the unit over a weekend, with the patient's partner bringing the baby one day and the patient's mother bringing the baby the next day. During her hospitalization the patient also

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requested and received photos of her infant from the mother. In spite of these visits, the patient expressed that she did not feel a connection with her daughter. She became tearful describing to the team that her baby had grown and that she felt she was missing out on being with the baby. Inpatient progress notes describe the patient voicing concern about her lack of connection with the baby and her guilt about having stopped breastfeeding. At discharge, Social Work documentation stated that the patient felt ready for discharge but that she became tearful when talking about her fears about the relationship with her daughter. The patient also voiced worry that she would never connect with the daughter. Aftercare plans included follow-up with an in-home therapist, leading to initiation of care with an outpatient psychiatrist—both new to the patient. She was also instructed to follow up with her existing primary care physician and obstetrician.

After discharge from the hospital, the patient provided verbal feedback about her experience of inpatient psychiatric hospitalization for postpartum depression and the aspects that were challenging for her. She noted that she was finding it difficult to coordinate childcare for her infant, given her partner's work schedule and the difficulty of advance planning because of her indeterminate date of discharge from the hospital—both of which contributed to her frustration in wanting to leave the hospital. She noted difficulties with breastfeeding because of her limited access to lactation support services. Previously, during her hospitalization, she had chosen to stop breastfeeding after being told that a small percentage of her antidepressant medication could transmit via breastmilk to her infant. When she decided to switch to formula nutrition, she noted additional stressors in not being able to obtain samples of formula or to coordinate these efforts at home. Overall, when reflecting on her inpatient psychiatric hospitalization for postpartum depression, the patient acknowledged that she was help seeking during that difficult time and benefited from care. But she also described frustration in the logistical challenges as noted above and in the limited ability to see her baby during her hospitalization, and sadness in how quickly her infant grew and changed during her absence.

This case outlines a myriad of important elements to consider. First, it highlights psychosocial stressors of a mother admitted to an inpatient psychiatric hospital without her infant. Complex logistical issues, including childcare constraints, the ability to enlist family or friends to watch the infant, or the partner's need to continue work for family income, have to be navigated on short notice and for unclear duration. These factors may add to a patient's overall illness burden and could even prohibit access to care. But these concerns also must be balanced against safety concerns and the patient's need for inpatient level of care.

This case highlights the logistical and physiological issues of mothers who have recently given birth and are trying to establish milk supply and breastfeeding. Unplanned hospitalization may mean, for example, that the woman arrives without supplies necessary for pumping. Psychiatric facilities may not have lactation support services or the infrastructure for breast milk, and in attempting to address these concerns, they also need to take into account the potential safety risks associated with pumping equipment. Overall, a decision whether to breastfeed is highly personal, and during a time of postpartum depression, and with logistical barriers or without adequate social support, these decisions may be even more complex.

This case also highlights the need for psychoeducation on medication-management options in the context of the desire to breastfeed, as well as difficulties that women may face when weighing the risks and benefits of continuing to breastfeed while taking prescribed medications. Care must be paid to how these conversations are navigated with patients, while also discussing the risk of untreated postpartum depression.

Importantly, postpartum presentations are a fragile time for establishing the bond between mother and baby. Classic attachment theory, such as the work by Bowlby, Ainsworth, and Winnicott, highlights the critical role of maternal–infant bonding and the impact of maternal care or maternal deprivation on attachment and the developing infant.[1,2] Therefore, consideration must be given to balancing the treatment and safety needs of the mother and the attachment and developmental needs of the child. In this case, the patient expressed emotional difficulty being separated from her infant while in the hospital, noted how her newborn had changed during that time, and felt remorse in not being present for those moments of development and bonding.

Furthermore, the presentation of postpartum depression may be part of a broader context of trauma or a traumatic birth experience. In a simplistic view, this case involves a mother and baby without significant obstetric or pediatric complications. However, even if no overt medical complications occurred during the delivery, women may experience childbirth as traumatizing from their own personal vantage point—a response that may be exacerbated by any deviations from how they may have expected or hoped that the experience would unfold. During this process, did the mother feel that her own needs were respected, that medical interventions were explained, that pain was managed, or that her body was treated with privacy? A mother's mood in the postpartum period may also be affected by her social support, obstetric recovery, or any prior traumatic birth experiences. Furthermore, an underlying trauma history unrelated to her obstetrical history may also be contributing to the presentation or to a mother's ability to bond and attach with an infant. Assessing these factors and the underlying trauma history in the postpartum period can be challenging but may be crucial to understanding the patient's psychiatric presentation.*

*The case history was prepared by Katherine Kosman, MD, MBA.

QUESTIONS TO THE CONSULTANTS

1. Can you discuss overall considerations, including both mother and infant safety, in the role of inpatient hospitalization for postpartum depression? (Dr. Almeida)
2. Can you discuss psychopharmacological options for postpartum depression, including psychoeducation on the transmission of these medications through breastmilk? (Dr. Teslyar)
3. Can you discuss the topic of traumatic birth experiences and suggestions for eliciting and exploring this history? How can we best explore if any negative perinatal, labor, or delivery experiences contributed to postpartum presentations or difficulty bonding with the baby? (Dr. Salama)
4. Can you discuss the topic of maternal–infant attachment and aspects of bonding during this critical postpartum and newborn period? (Dr. Salzman)

Marcela Almeda, MD

Postpartum depression is a common and serious complication of pregnancy. It is a public health concern that affects approximately one in nine women[3] and substantially contributes to health care costs. An additional 11% of postpartum women exhibit obsessive and compulsive symptoms[4] that may present as ruminative thoughts about harming the baby, accidentally or intentionally.[5]

Untreated maternal psychopathology is associated with numerous adverse consequences, including negative effects in bonding and attachment, as well as decreased responsiveness to the baby's needs, leading to diminished interaction between the mother and her newborn.[6] Children of untreated women also have a higher risk for behavioral and cognitive deficits,[7] negative feeding experiences,[8] and poorer medical[9] and psychiatric[10] outcomes.

Although the American College of Obstetricians and Gynecologists has issued guidelines recommending standardized and universal screening for depression in the perinatal period,[11] the majority of these cases (60%) go undiagnosed, and only about half of those with a clinical diagnosis receive any form of psychiatric treatment.[3]

Like pregnancy, the postpartum period represents a moment of high vulnerability for a mother, who is dealing with the intense emotional and physical demands that come with the birth of a child, such as hormonal flux, sleep deprivation, and changes in interpersonal roles and self-identity. Adding another layer of stress to these challenges, women now face additional responsibilities involving childcare while reconciling motherhood and career in an era of significant pressure to return to and excel at work—even though we know that women who return to work soon after the birth of a child are more likely to become depressed than those who have more time for maternity leave.[12,13]

The above issues are well evidenced in this case. From a biopsychosocial perspective, this patient had important contributors in all the three domains and insightfully reported feeling overwhelmed by fears of losing control, physical and mental exhaustion, marital discord, bonding difficulties, and feeding issues.

Treatment options in the postpartum period comprise different levels of care, including outpatient (pharmacological or nonpharmacological) management, partial hospitalization/day hospital, and inpatient admission. The decision must reflect a careful and individualized safety assessment that takes into consideration several factors, including severity of illness, availability of social and family support systems, degree of impairment, and attachment characteristics.

Traditional outpatient visits with a psychiatrist or psychotherapist are typically encouraged for milder cases of depression in which there are no imminent safety risks and in which the mother's insight, judgment, reality testing, and ability to care for herself and her newborn are intact. This approach allows for deeper bonding and attachment between the dyad while preserving the mother's ability to perform other important family, social, and occupational activities.

Moderate cases—such as when symptoms are more severe or debilitating and interfere with the mother's ability to perform her daily activities—usually require less sporadic encounters. In those situations, a partial hospitalization program can be a great option, particularly if it incorporates the infant into the mother's care. Even though this model has long been relatively common in the United Kingdom and Europe,[14] it remains incipient in the United States. This model offers several advantages to inpatient hospitalization: it removes the burden from separating a mother from her newborn child, facilitates breastfeeding, and allows the treatment team to observe the interaction between the pair and how the mother is adjusting to her new role.[15]

In cases of more severe symptoms or greater level of impairment, or when the mother is experiencing psychotic phenomena, inpatient treatment is warranted to ensure safety. Psychiatric inpatient units are perhaps the most restrictive treatment setting in all of medicine, and the decision to hospitalize a woman in the postpartum period is never easy (for the reasons discussed above). Additionally, there is often another child (or children) at home, with no available childcare; the stigma around psychiatric treatment remains strong, exacerbating the feelings of shame and guilt that may further contribute to the mother's negative emotions; and there are financial and personal costs, along with a scarcity of specialized resources.

Joint mother–baby inpatient psychiatry units do not exist in the United States (with one exception), and the separation of a mother and her child can be a difficult, and sometimes traumatic, experience. Therefore, before a puerperal woman is hospitalized, it is imperative that the risks and benefits for both the mother and her baby be carefully considered by her psychiatrist in close collaboration with the patient and her family.

This decision is particularly challenging in cases of involuntary treatment—when the clinician, but not the patient, believes there is no less restrictive alternative us available to ensure safety than separating a mother from her newborn. It is crucial to respect the same ethical pillars that apply to any

patient in any clinical setting: beneficence, nonmaleficence, autonomy, and justice, but with the additional considerations about the mother–baby dyad.[16]

When this analysis is carefully performed, and if the indications are relevant and reasonable—as in the case of safety concerns, either to the mother or the newborn, or when the mother does not have access to treatment resources in the community, or when a lower, less restrictive level of care is considered inappropriate or insufficient—psychiatric hospitalization remains a crucial and necessary part of the treatment apparatus toward attaining remission.

It is important that the unit be equipped with staff familiar with the unique and, at times, complex aspects of this population, both physical and emotional, in order to address important perinatal needs regarding both the mother and her offspring. Adjustments should be made, including the following: allowing and encouraging frequent and extended supervised visitations with the newborn; offering lactation consultation and a private space to pump and store breastmilk (if that is the mother's preference); and ensuring a close collaboration with obstetrical services.[17,18] Ideally, the treatment team should include a psychiatrist who specializes in women's mental health or reproductive psychiatry. If neither is available, the treatment team should be able to consult with a specialized service to better assist the mother in making decisions pertaining the choice of psychotropic medications during lactation[16] and to provide pertinent guidance in terms of psychotherapeutic or psychosocial strategies and behavioral modifications for this particular population.

Polina Teslyar, MD

Postpartum depression is commonly experienced by women after delivery and is a serious health concern. Suicide in the postpartum period accounts for about 20% of postpartum deaths in the United States.[19] The standard of care for moderate to severe postpartum depression is pharmacologic management with antidepressants. Of these, the selective serotonin reuptake inhibitors are most studied.[20] Which of these to choose depends on each patient's prior treatment experience and history of efficacy as well as the expected side-effect profile.

Many women choose to breastfeed their infants. A wide variety of professional organizations, including the American Academy of Pediatrics, American College of Obstetrics and Gynecology, American Diabetic Association, and World Health Organization/UNICEF, have all come out in support of breastfeeding as beneficial to the health of both mother and child.[21–24]

To weigh the risks and benefits of breastfeeding while on antidepressants, multiple factors must be considered. These factors include the need for the drug by the mother/patient, effects of the drug on lactation, the amount of the drug excreted into human milk, the extent of oral absorption by the infant, and potential adverse effects on the breastfeeding infant. The age of the infant is also a consideration, as adverse events are more likely to occur in neonates younger than two months and in premature infants.[25] Because neonates have immature liver and kidney function, clearance of compounds absorbed through breast milk is slowed. In some cases the mother may have a health condition (e.g., HIV+) that presents too high a risk for breastfeeding.[26]

The chemical properties of a drug—including lack of ionization, small molecular weight, low volume of distribution, low maternal serum protein binding, and high lipid solubility—facilitate drug excretion into human milk. Drugs with a long half-life are also more likely to accumulate in human milk, and drugs with high oral bioavailability are more easily absorbed by the infant.[27]

Generally, medication levels are measured as weight-adjusted maternal dose or as milk–plasma ratios. A percentage of maternal dose that approaches 10% or more is thought to be clinically significant. Several common psychiatric medications (bupropion, citalopram, diazepam, fluoxetine, lamotrigine, lithium, and venlafaxine) have been shown to reach that threshold.[28] If possible, medications with a percentage of maternal dose that is 2% or less, or with a milk–plasma ratio under 1, and also a short half-life should be selected to reduce risk of harm to the infant.

Additionally, one must also consider the direct safety profile of the drug itself and how that may relate to the infant. Certain medications may require collaboration with pediatrics for ongoing safety monitoring of the infant. For example, if a mother continues to be treated with lithium, the infant will require blood monitoring of levels. Lamotrigine therapy requires ongoing vigilance for rashes. Stimulants may affect infant sleep and appetite; the newborn may require weight checks to ensure healthy growth.[26]

In March 2019, the FDA approved brexanolone, a novel compound specifically for the treatment of postpartum depression. The drug is a positive allosteric modulator of the GABA-A receptor, mimicking endogenous steroids known as allopregnanolone. This medication is administered as a continuous 60-hour infusion and requires inpatient admission for continuous monitoring. Due to the high cost and logistical concerns with this method of administration, the treatment is not yet widely available.[29]

Ultimately, the choice to breastfeed or not is a highly personal and individual decision. Other than the chemical properties of any particular medication regimen, mothers with major mental illnesses may have other reasons not to breastfeed. Breastfeeding involves a large commitment in time and effort on the part of the mother. While it has tremendous benefits, breastfeeding can also lead, for example, to significant disruption in sleep, which may be dangerous for the patient's well-being and health. As clinicians, we need to be prepared to provide our postpartum patients with the most up-to-date data regarding their options and to identify the medication regimens that would be safe in breastfeeding. In doing so, we will enable our patients to make decisions that

are best for themselves, their babies, and their families. All physicians should familiarize themselves with tools for obtaining current, reliable information regarding the safety of specific medications in breastfeeding. Of special note in this context is the National Institutes of Health website LactMed, a ToxNet database at https://toxnet.nlm.nih.gov/newtoxnet/lactmed.htm.

Kate Salama, MD

Women can suffer from a range of psychological problems around the time of childbirth. Nearly half of women describe childbirth as traumatic in some way,[30] making them more vulnerable to postpartum mental health disorders, including anxiety, depression, and posttraumatic stress disorder (PTSD).[31]

Traumatic childbirth is sometimes narrowly defined as an "event occurring during the labor and delivery process that involves actual or threatened serious injury or death to the mother or her infant."[32] Other sources more broadly define traumatic birth to include events or care that causes deep distress or psychological disturbance, which may or may not involve physical injury.[33] Over the last ten years, the individual's perception of the event has become increasingly prioritized, with an understanding that a medically normal labor and delivery may still be associated with posttraumatic stress symptoms.[34]

While depression and anxiety remain the most common mental health sequelae of traumatic birth, increasing evidence also points to the development of posttraumatic symptoms.[31] One to seven percent of women in community samples[35] and upward of 15% in high-risk samples[36] meet criteria for PTSD following birth. Postpartum PTSD is highly comorbid with depression,[37] though unlike depression, it is not routinely screened for.

The diathesis–stress model is often used to understand the risk factors for developing childbirth-related PTSD.[31] This model incorporates vulnerability factors in pregnancy, risk factors during birth, and maintaining factors after birth.[38] Vulnerability factors include previous mental health history, history of trauma, depression during current pregnancy, fear of childbirth, and perception of low social support.[31] Birth risk factors include high level of medical intervention, medical complications, physical pain, poor support, perceived threat to mother or infant, and dissociation.[38] In qualitative studies, women also describe the experience of childbirth as traumatic when they feel uncared for, powerless or disrespected, stripped of their dignity, or not communicated with, or when there is a large mismatch between their expectations and experience.[32] These attributes may lead women to appraise their birth experience as traumatic in the absence of obstetric complications. Postpartum factors that may maintain PTSD symptoms include additional stressors, poor support, and use of maladaptive coping strategies.[38]

In the present case, the patient's trauma history, a vulnerability factor, combined with loss of epidural pain management, a birth risk factor, may have led her to appraise the birth as traumatic. Postpartum depression and poor support from the patient's husband had the effect of maintaining posttraumatic stress symptoms.

To understand whether a woman is at higher risk of perceiving her childbirth experience as traumatic, she should be assessed during pregnancy for depression, fears surrounding childbirth, prior traumatic deliveries, and any history of trauma or PTSD.[31] Women who have had a previous traumatic birth experience typically approach a subsequent pregnancy with a strong desire to avoid repeat trauma and to feel in control of their birth choices through early information gathering and planning.[39] By identifying high-risk women during pregnancy, steps can be taken to prevent traumatization, such as early delivery planning that aims to minimize obstetric interventions and that strategizes around relaxation and pain relief, and to set in place a continuous support system for delivery and early postpartum.[40]

During birth, women who have high rates of medical interventions, have many complications, or show signs of dissociation should be prioritized for close postpartum follow-up. After birth, women should be asked about their subjective birth experiences, pain, care received during labor and delivery, and obstetric procedures.[31] At a six-week postpartum visit, a woman can be screened for posttraumatic stress symptoms.[41] The Perinatal Post-traumatic Stress Disorder Questionnaire (PPSDQ)[42] and Traumatic Event Scale (TES)[43] are examples of instruments developed to assess PTSD symptoms related to childbirth. The PPSDQ is a 14-item self-report questionnaire in which a score of 19 or higher indicates clinically significant distress.[44] Clinical PTSD, along with depressive and anxiety disorders, should then be assessed by clinical interview.[38]

A PTSD diagnosis requires that, following exposure to a trauma, individuals have intrusion symptoms, avoidance of stimuli associated with the trauma, altered mood, and altered reactivity for at least one month.[45] PTSD symptoms related to childbirth may include the following: flashbacks and nightmares of the traumatic birth; feelings of numbness, detachment, anxiety, depression, or anger; a distancing from the newborn; avoidance of medical appointments; easy startle when the baby cries; insomnia; and dissociative experiences during breastfeeding or sexual intercourse. Women also describe an obsessive need to understand and make sense of what happened during their labor and deliveries.[41]

The literature describes a division of paths when it comes to the impact of traumatic birth on breastfeeding. Some women describe that breastfeeding helped them to prove themselves as mothers, to atone to their infant, or to heal mentally. Other women describe that breastfeeding was painful, made them feel detached or violated, or was a trigger for flashbacks. These differences highlight the need to ask women about their specific experience with breastfeeding, to provide one-on-one support for traumatized mothers as they establish breastfeeding, and to let women know they have the right to choose not to breastfeed.[46]

Long-term effects of childbirth-related PTSD include ongoing mental health problems, marital discord, loss of intimacy, lower rates of breastfeeding, fear of childbirth leading to the delay of, or decision against, a subsequent pregnancy, distress around the anniversary of birth, and distress when encountering reminders of the birth.[33]

The literature on traumatic childbirth and maternal attachment is limited and demonstrates mixed results. Some studies show that postpartum PTSD symptom severity is associated with problematic maternal attachment, whereas other studies have not found an association.[47] In one study, women described feeling initially detached and resentful toward their infants, with more positive feelings developing over time.[48] Another study demonstrated that following traumatic birth, women were more likely to develop anxious/overprotective or avoidant/rejecting attachment styles, though the subsequent consequences for the infant were unclear.[49]

While postpartum depression is now understood as relatively common, health care providers have only recently acknowledged PTSD as a disorder relevant to childbirth. It is important to recognize that there need not be a physical threat to mother or infant for a woman to be at risk. Feeling uncared for or powerless can cause women to view a medically normal delivery as traumatic. Vulnerable women should be routinely screened for postpartum PTSD, in addition to depression and anxiety, as these disorders potentially have long-term impacts on mothers and on their relationships with partners and infants.

Carl Salzman, MD

A large and growing literature addresses the psychology and neurobiology of infant attachment. All mammals show attachment behavior at the time of infant birth. Primates and humans show predictable behaviors that are similar, regardless of species, ethnicity, or geography. These behaviors include physical closeness, touching, eye contact, verbal utterings, and the overwhelming wish to be with the newborn. Some new mothers, however, have difficulty with attachment and need to be helped to attach during this phase. Mothers who cannot attach appropriately often have had impaired attachment from their own mothers as well as a history of trauma, loss, and shifting environments and caregivers.[50] Research shows that these mothers can be taught attachment behaviors.[51]

Neurobiologically, the peptide oxytocin in mothers (and vasopressin in fathers) is a significant facilitator of attachment: during the first several months of the infant's life, it is the mother's oxytocin function that regulates the infant's moods and interactions with the environment.[52,53] Consequences of low oxytocin and impaired infant attachment have been widely studied.[54] Data clearly show that impaired infant attachment can lead to a lifelong vulnerability to stress disorders, anxiety, and depression.[55] In subhuman mammals, impaired social and mating behaviors are seen when infant attachment is deficient.[56]

It is important, therefore, that every effort be made not to separate the postpartum mother from her newborn, even if she is suffering from a psychiatric or medical disorder.[57] When mother needs to be hospitalized for treatment, it is advisable for her to have her infant with her. Beginning in the 1960s, psychiatric hospitals would often admit the infant along with the mother and make it possible to keep them as close together as possible. This co-admission facilitated the teaching of appropriate attachment behaviors to the new mother, especially if attachment to her own mother was deficient. Interestingly, as mother learns attachment behaviors, her oxytocin level increases.

Nursing is an experience that facilitates attachment for both infant and mother. However, mothers who cannot nurse still can experience close attachment while feeding the infant. In this case, the patient's partner participated in the feeding, which can also facilitate attachment in the infant. Mothers who cannot nurse have to be helped not to feel guilty or deficient as mothers or attachment figures. Feeding the infant, changing the diaper, holding, touching, verbalizations, and eye contact are all normal components of early infant–caregiver (usually mother) attachment, and can be taught, learned, and promoted by health care personnel.

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