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Implementation of an Innovative Nurse-Delivered Depression Intervention for Mothers of NICU Infants

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Abstract

Depression affects approximately 19% of all postpartum women and mounting evidence indicates increased risk for mothers of preterm infants, with prevalence estimates ranging from 28% to 67%. The current approach to management of maternal symptoms related to postpartum depression in the Neonatal Intensive Care Unit (NICU) ranges from no intervention to depression screening and referral. For depressed mothers of NICU infants, obtaining treatment is especially difficult and usually becomes a secondary priority; thus, we looked to a nurse delivered counseling model. Listening Visits (LV) is an empirically supported nurse-delivered intervention that focuses on relationship building and exploration of a mother's problems through active reflective listening and collaborative problem solving. A LV open trial in the NICU has been conducted to evaluate the effectiveness of this intervention for mothers of hospitalized infants. Results indicate that LV is associated with a reduction in both maternal depressive and anxiety symptoms. This case study following the description of the intervention will demonstrate how the authors utilized the experiences from the NICU open trial in order to expand the application of LV to this new setting.

Keywords

Neonatal Intensive Care Unit; postpartum depression; Listening Visits; family-centered care

Infant hospitalization in the Neonatal Intensive Care Unit (NICU) is a stressful experience that significantly raises the risk for maternal postpartum depression (PPD) from approximately 19% postpartum women in community samples¹ to between 28 and 67% among NICU mothers.² While much of the research assesses the prevalence of this phenomenon, no studies of interventions that specifically target depressive and anxiety symptoms in mothers of hospitalized NICU infants were located. The current standard of care in the NICU either neglects mothers' mental health status altogether (mother is not the patient), or, in best-case scenarios, offers screening and referral to a mental-health professional. Screening for maternal depression, however, is only effective if there is adequate follow-up and management of a positive screen.³ Even when depressive symptoms are identified, several barriers prevent postpartum women from receiving treatment.^{4,5} In the

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United States, cost, lack of mental health services, social stigma, and mistrust represent some common barriers to treatment of maternal depression.

Obtaining treatment is especially difficult for mothers of NICU infants because much of their time is spent in the hospital and they often rank their own well-being as secondary to the needs of their infants. Implementation of LV in the NICU addresses an identified need and illuminates the importance of family-centered care provided by neonatal nurses. Listening Visits employs readily accessible and highly trusted healthcare professionals (nurses) to address maternal depressive symptoms. The authors will describe the implementation of LV in the NICU setting (as conducted in an open trial at a Level IV Midwest NICU), followed by a detailed case study from the trial, which illustrates the general trajectory of the LV sessions.

The Intervention: Listening Visits

Listening Visits (LV) is a nurse-delivered intervention based on the philosophy that expression of feelings and consistent social support helps reduce depression and anxiety symptoms in postpartum women.^{6,7} The intervention was collaboratively developed in the 1980's by Drs. Jeni Holden and John Cox, a British psychologist/psychiatrist team, as part of a program in which health visitors (equivalent to BSN-prepared nurses in the U.S.) were trained to identify and treat maternal depression in new mothers in the United Kingdom (U.K.). Clinical trials in the U.K. and Sweden have provided empirical support for the efficacy, feasibility, and acceptability of Listening Visits as delivered by public health nurses.⁸⁻¹¹ In the U.S., Listening Visits have been shown to be effective in reducing depression and improving life satisfaction with postpartum women in a community-based home visiting program,¹² as well as in the neonatal intensive care unit.¹³

The Innovation: Using Listening Visits on the NICU

To date, with the exception of the aforementioned open trial in the NICU, there have been no trials of Listening Visits in the hospital setting, either abroad or in the U.S. Drs. Siewert and Segre, experts in the fields of neonatal nursing and perinatal depression, respectively, partnered together to address this gap in care for at-risk mothers of NICU infants. Initial steps were taken to conduct a NICU open trial (see Figure 3), which demonstrated that Listening Visits are associated with a reduction in post-partum depression and anxiety, in addition to being well received by this specific population of women. Also worth noting is that Post-traumatic Stress Disorder (PTSD) has been shown to affect 21-23% of mothers with a child in either the NICU or PICU;¹⁴ and thus, PTSD has potential to interfere with a mother's ability to care for an infant/child as well, as a result of her impaired physical and emotional health.

Our team believed that neonatal nurses would be well suited to deliver LV in the NICU. Research has shown that the relationship that parents in the NICU developed with the bedside nurse was the most significant factor affecting their satisfaction with their NICU experience.¹⁵

The Implementation of Listening Visits on the NICU

Listening Visits are an extension of family-centered care in the NICU, with a unique focus on the mother. Just as health visitors in the U.K. are considered the most accessible health professionals to serve in such a capacity, this role in the NICU is fulfilled by neonatal nurses. We propose that LV be offered to mothers of NICU infants who are identified as having elevated depressive symptom (based on an Edinburgh Postnatal Depression Scale (EPDS) score of 12 or greater) and interested in receiving the intervention.

Qualifications of a Listening Visit Nurse

Any bachelor's prepared NICU nurse (equivalent to health visitors in the U.K.), would be able to deliver LV following the completion of the established LV training curriculum. In the U.S., nurse training consists of two didactic workshops followed by a simulation exercise which is used to evaluate key listening visit skills: empathy, collaboration, non-directiveness, and autonomy/support. To support the implementation of LV in the NICU, specifically, "The Listening Visits Companion Manual"¹⁶ was developed to guide neonatal nurses in delivering LV. We recognize, however, that not all NICU nurses would have a desire or even feel comfortable in the role as a LV nurse. Thus, due to the potential impact that the intervention can have on the mother and infant, it is critically important to have nurse participants who express a genuine interest and desire in addressing the mental health needs of mothers of NICU infants. Ideal characteristics of a LV nurse would encompass the following: good listener, genuine, respectful, non-judgmental, trustworthy, empathetic, and empowering. The LV nurse must also have a solid foundation of NICU knowledge and skills in order to address the mothers' specific questions and concerns related to their infant's hospitalization.

Listening Visits: Key Skills

Developing a therapeutic relationship with the NICU mother is central to the delivery of LV. Two specific techniques that facilitate the development of the therapeutic relationship includes active reflective listening and collaborative problem solving. Active reflective listening is a counseling technique to more fully understand a woman's current situation.

Next, after identification of the mother's specific problems or concerns through active reflective listening, the LV nurse conveys a collaborative partnership that focuses on utilizing the mother's personal strengths and empowering her to develop a course of action which addresses the identified problems or concerns. Egan emphasized collaboration, stating: "the function of helpers is not to remake their client's lives but to help them handle problems in living and refashion their lives according to their own values".^{6(p.12)} The LV problem solving steps are as follows: (1) generate a list of problems, (2) once identified, the mother is encouraged to rank the problems in order of importance, (3) the mother decides which problem she would like to address first, and (4) possible solutions are discussed, including the advantages and disadvantages of each. Once the preferred option is chosen, the mother's plan of action is developed.

Logistics of Implementing Listening Visits on the NICU

When introducing LV to the mother who has been identified with an elevated EPDS score and is interested in receiving the intervention, the LV nurse interprets the meaning of the depression screening results, describes the intervention, and explains what she can expect over the course of the sessions. In the NICU open trial, the LV intervention consisted of six sessions, each approximately 45-60 minutes in length. Scheduling visits every two to three days (or twice weekly) reflects the adaptation of the intervention to the NICU setting; the key is flexibility. The LV nurse will have to be flexible in order to accommodate the schedule of a NICU mother who may initially have an overwhelming feeling when trying to find time for one more thing in her life. Listening Visits can be delivered on the unit or in another private location within the hospital setting. Most importantly, the mother should choose a place that is comfortable to her. Regardless of location, it is the responsibility of the LV nurse to take precautions to ensure that any information shared during the visits is kept confidential in accordance with the Health Insurance Portability and Accountability Act (HIPAA) guidelines.¹⁷

The mother's health and safety is always the first priority. Emergency situations that could potentially occur during LV include, but are not limited to: suicidal ideation or expression of intent, clinical deterioration or change of behavior(s), involvement of Department of Human Services, or threat of harm to self, infant, and/or others. These situations are beyond the scope of LV and therefore, the mothers who manifest these problems would be referred for additional mental health services as appropriate.

Structure of a Single Listening Visit Session

The Listening Visits intervention is nondirective, in the sense that there is no preordained sequence or agenda, but rather the mother determines what will be discussed during a session. Nevertheless, the experience in the NICU open trial captured a general structure to each LV session. As more fully described in Figure 1 (as well as the case study), the structure of a single Listening Visit session includes: greeting, feedback, work agenda, summarize, and closure.

Trajectory of the 6 Listening Visits

During the open trial a general trajectory of the six sessions also emerged and is depicted in Figure 2. Listening Visits in the NICU is unique to other settings in that many of the mother's problems or concerns are related to the infant's status and therefore, the intervention may change focus from visit to visit. In other words, it is not surprising that the infant's medical status greatly affects the mother and the nature of the LV interactions as a result.

Case Study

To provide an illustration of LV in the NICU, the following case study has been recorded from the first author's experience as the LV nurse in the NICU open trial. The identities of individuals have been removed. In Table 1, we have linked the general trajectory of the six sessions to this real-life scenario.

Background—J.D. is a 28 year old, gravida 1, now para 1, female. Her pregnancy was complicated by severe hyperemesis and history of depression treated with an antidepressant medication. J.D. delivered a 25 and 4/7 week infant weighing 1040 grams. The infant was delivered at a local hospital and transported to a Level IV NICU for further evaluation and management. J.D. was separated from her infant for the next two days until she was discharged from her local hospital.

J.D. was given a Listening Visit (LV) study brochure during the first week of the infant's stay in the NICU. She was very interested in the LV study and returned her brochure immediately. She received the screening packet and scored > 12 on the EPDS, indicating the presence of elevated depressive symptom, though she did not have suicidal ideation. J.D. was willing to be part of the open trial evaluating LV on the NICU.

The LV nurse met with J.D. to go over the informed consent for her participation in the study and then set the date and time to meet for the first session.

Listening Visit Session #1—J.D. decided to have the first LV session in a private location off the unit. During the initial part of the first session, J.D. talked about the birth of her infant. She explained that her home environment was unstable at the time she went into premature labor. Additionally, she lacked social support as she was not speaking with any family members or the infant's father at this time. J.D. felt alone and very scared. Once the infant was born and stabilized by the transport team, J.D. got to briefly look at her infant before the NICU transport team left. Once at the Level IV NICU, J.D. was able to get temporary housing near the hospital. She was relieved to not only have a place to stay, but also to be able to see her baby very often.

The time spent during the first LV session passed quickly. J.D. spoke about how she did not always understand what was being said during medical rounds on the unit. She did not want to ask many questions for fear of bothering the staff or looking uneducated. This concern became the focus of the rest of the session. The nurse and J.D. worked on ways for her to be able to speak up and ask questions. Then, the next LV session was scheduled.

LV Session #2—J.D. and the LV nurse decided to go to the same private location for the LV session. J. D. reported that during the past week she had asked some questions during rounds, but still felt like a burden to the staff. Most of the second visit was therefore spent discussing the infant's medical problems, of which the LV nurse was able to help clarify. J.D. described how overwhelmed she felt in handling such a small baby. Additionally, she talked about how quickly things changed in the plan-of -care during critical times. The LV nurse highlighted many of the infant's positive gains; for example, gaining weight and growing appropriately, weaning off the ventilator support, and occasionally sucking on the pacifier. J.D. expressed an interest in wanting to take a more active role in her infant's care. The discussion led to ways in which she could do this and that became the goal before the next visit.

LV Session #3—J.D. was very sad at the third LV session because she realized that she would be a single mother. The infant's father made it clear that he was not going to

participate in care for the infant. As previously mentioned, she was not close with her family and thus had no social support in the form of a relationship, friends, or family. Knowing her history of depression, the LV nurse and J.D. discussed seeing her primary care provider (PCP) to restart an antidepressant medication. J.D. was going to think about these options and confirm what she wanted to do by the next visit. The fourth session was then scheduled.

LV Session #4—J.D. decided to restart an antidepressant medication and felt that it was helping her stabilize her emotions. She was feeling less sad and depressed and was able to focus more on her baby and the small improvements each day. The focus of the 4th session was primarily on J.D.'s financial concerns and plans for when the baby is discharged from the hospital. J.D. wanted to be able to provide a more stable living environment for her baby than what she had prior to. She was confident that she could find a job because she had always worked at least 1 or 2 jobs. Because J.D.'s concerns were regarding financial issues, the LV nurse recommended that she meet with a NICU social worker. J.D. agreed to contact the social worker before the next session.

LV Session #5—J.D. was eager to share that after working with the social worker, she was able to get an apartment in a nearby town for when the baby was discharged. The social worker had also helped her get in contact with an agency that would assist her in getting child support for her infant. J.D. was much more self-assured during the 5th visit. She spoke with excitement about taking her baby home. Her voice and demeanor had significantly changed for the better. She spoke of how the nurses were encouraging and reassured her that she was doing a great job at caring for her baby. At this point, J.D. had become very proficient in feeding and caring for her infant. The session was wrapped up with preparing for the sixth and final listening visit session. The LV nurse and J.D. discussed how the LV would come to a close, but they would still be able to touch base with one another informally on the unit.

LV Session #6—J.D. shared how all the discharge plans for her infant were being finalized. She was pleased with her apartment, which had all the important necessities. She also demonstrated confidence in her abilities to care for her baby. J.D. was sad that this was the last LV; however, she verbalized how helpful she thought they were and was most thankful for the support provided during such a critical time.

Follow Up—J.D. and her infant are thriving: J.D. demonstrates complete competence and confidence in the care of her infant. She has moved to a larger apartment and found a job that will allow her to also spend time with the baby. Her baby has grown to be a happy, healthy child. J.D. has found new friends and social support in her community. J.D. has expressed that her experience with LV changed her life and that she has been able to maintain her skills and strengths that were revealed to her through this intervention. J.D. had serious adversities in her life that led to her depression; however, by providing a listening ear and positive reinforcement, she has discovered a number of internal strengths that she did not even realize she possessed.

Conclusion: Lessons Learned

Listening Visits are not a substitute for maternal or mental health services; rather, the intervention serves as an adjunct therapy. Listening Visits bridge the gap in treatment services for postpartum women identified with elevated depressive symptoms by providing an effective and accessible intervention at the infant's point-of-care. A LV nurse may be the first person to notice that the mother's depression is escalating and would be the one to assist the mother in obtaining additional mental health services. As the literature has shown, there is significant need for addressing postpartum depression in NICU mothers, specifically. Listening Visits serve just that purpose. Whereas NICU mothers tend to be the most vulnerable to depression and anxiety symptoms in the postpartum period, they are unfortunately the ones that are most neglected. The case study presented is just one example demonstrating how the open trial was critical in order to evaluate the effectiveness, feasibility, and acceptance of LV by the NICU medical and nursing staff, and also by the mothers who participated. A few mother's comments regarding LV included: "Just talking to someone who is so caring, not only about my baby but about me too was very helpful"; "Made me feel better, more reassured"; and "It was so nice to have the listening visits right here in my baby's room so I didn't have to go anywhere and leave him". Mothers in the NICU open trial were from all different socioeconomic and social situations. Despite these differences, all mothers benefited from LV.

Listening Visits are an innovative depression intervention. When carried out by accessible and trusted professionals (neonatal nurses), LV have the potential to help ensure that mothers of NICU infants have access to an effective and non-stigmatizing form of treatment for postpartum depression.

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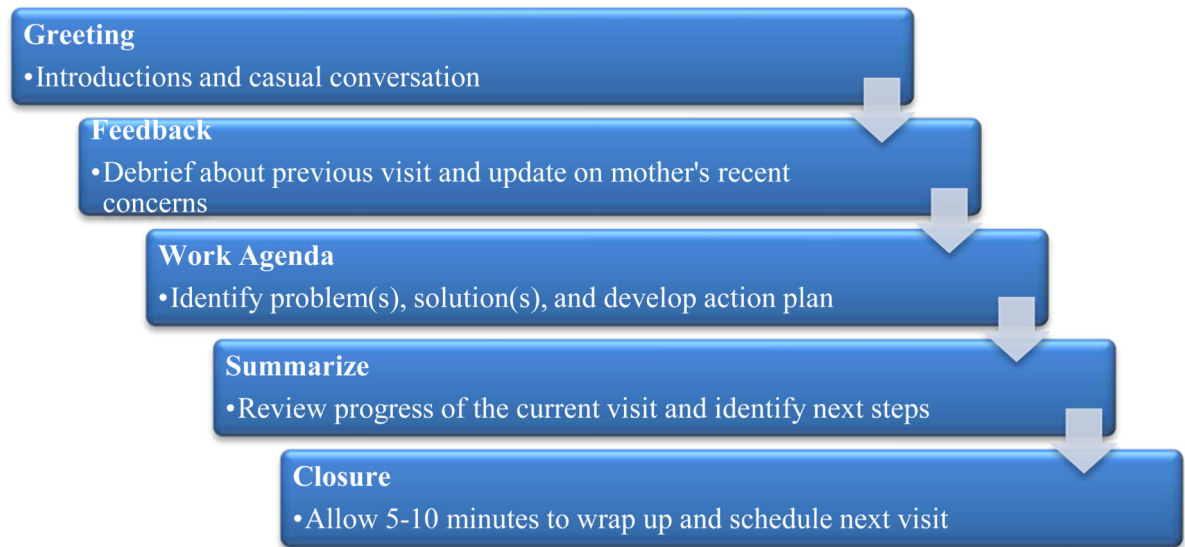


Figure 1.
Structure of a Single Listening Visit Session

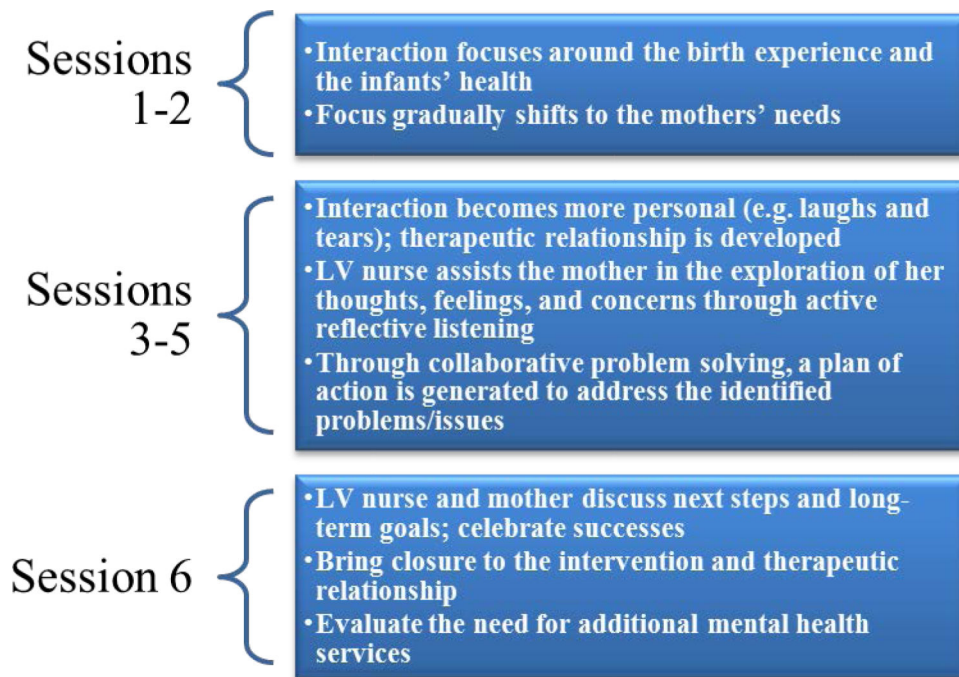


Figure 2.
Trajectory of the 6 Listening Visit Sessions

Pre-Screen: Procedures and Measures

Recruitment	Screen Measures	Open Trial Eligibility Criteria
<ul style="list-style-type: none"> • At infant admission, all English speaking mothers 18 years and above received a recruitment brochure 	<ul style="list-style-type: none"> • Demographics • EPDS • Prams Anxiety and Depression Scale • Inventory of Depression & Anxiety Symptoms • Parental Worry Scale • Beck Anxiety Inventory • View of Nurse Delivered Counseling Survey 	<ul style="list-style-type: none"> • Elevated EPDS –12 or above • Not in counseling • Infant gestational age < 32 weeks • or having disorder requiring 6 weeks hospitalization

Note: Screening for postpartum depression, using the EPDS, was completed at baseline (pre-LV), 0-4 weeks (during LV), 4 weeks (post-LV), and 8 weeks (follow-up). The intervention consisted of LV every 2 to 3 days, depending on the mother's schedule, for a total of six sessions.

Figure 3.
Listening Visits NICU Open Trial



Figure 4.
Photo of Mother with her twins in the NICU

Table 1

Case Study Mapped on the Trajectory of Six Session Guidelines

Session (#)	General Trajectory/Common Themes	Case Study
1-2	Birth story; questions related to infant and NICU environment	LV #1: Discussed birth story and background information, such as living situation and lack of social support; mother expressed difficulty communicating with infant's health care team, LV nurse provided reassurance and helped identify ways to ask questions in order to advocate for her infant.
	Focus shifts to mother	LV #2: Evaluated progress on asking questions during rounds; discussed infant's status in easy-to-understand terms, highlighting milestones; also discussed ways the mother can be more involved in infant's care at the bedside.
3-5	Interaction becomes more personal (ie. laughs and tears)	LV #3: Mother started to open up and revealed more personal concerns; discussed potential options for further counseling and/or treatment and the LV nurse planned to follow-up with mother's decision at the next visit.
	Start to encourage mother to focus on one specific problem/issue, while brainstorming problem solving techniques	LV #4: Mother had contacted her physician and restarted antidepressant therapy, with noticeable improvement; mother's focus shifted from self to infant; discussed financial concerns and mother planned to contact social worker to address this issue.
	Mother will decide on a solution to address her problem/concern and begins preparing action plan; start preparing for termination of intervention	LV #5: Mother made significant progress with social worker and mood was more positive; LV nurse prepared mother that their next visit would be the final LV session.
6	Action plan reviewed and/or evaluated; time allowed for debriefing and identifying present position	LV #6: Reviewed progress made over the course of LV and mother felt more confident in being able to care for her own needs as well as those of her infant.