

A Developmentally Supportive Care Approach: Intervention Strategies for the Infant with Deafblindness

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Background Information

As the infant with deafblindness communicates his needs and strengths, the caregiver needs to respond with sensitive interventions that support existing abilities and promote mastery of developing competencies. Communication attempts are especially crucial to interpret since it is likely visual and auditory engagement will be secondary to tactile and other movement cues, however subtle: raising of eyebrow, quieting, general body orientation towards parents, placing feet on body, for examples.

Families, as primary caregivers and interventionists, need to be encouraged to find the behavioral characteristics of their child that will lead to communicative understanding. Then they need to be assisted in using developmentally supportive techniques that can maximize development. The golden rule is to provide enough support to enhance the infant's behavioral organization but not to give too much support that might obstruct the infant's efforts to regulate himself. If the caregiver provides too much support, it will inhibit the infant's development of self-regulation and the infant will then continue to be reliant on the caregiver's support for longer than is necessary. The caregiver's role is to first soothe, support, and validate. Then it is to stimulate, challenge and encourage the baby onto mastery and developmental achievement within the realm of a trusting attachment.

Supportive Environments

- √ During interactions try to eliminate background conversations and noise. Attending to the impact of background sound, light and activity on the infant usually reveals that a quiet, soothing, low-lit background promotes best backdrop for organization and quiet-alerting, e.g., turn off radio/TV, do not lay baby down under fluorescent light fixture.
- √ Provide the supports that help the infant organize, e.g. pacifier, swaddling, finger or cloth to grasp, support to brace feet against.
- √ Give the caregiver a comfortable position and environment without distractions (rocking chair, low lights). The emphasis needs to be on infant and infant-caregiver communication.
- √ Offer only one sensory-modality stimuli at a time. Multiple input can be too overwhelming and complex to understand and process (e.g. humming close to baby's head out of visual field, then addition of humming in front of baby's face; smiling face in front of baby that can be fixed on, then followed, then voice can be added; slowly rocking baby held against chest firm, then adding humming for vibratory input).

- √ The mother/caregiver's face is probably the most potent source of visual stimulation. It serves as a visual imprinting stimulus for the infant's developing nervous system. When vision is partially accessible or absent, proximity of mother's face for tactile, vibratory, auditory, olfactory, and other more subtle sensory cues is necessary.
- √ Avoid overwhelming or strong visual stimuli like black/white patterns and bull's eyes if infant becomes hyper-alert when they are placed on his field of vision. If and when strong visual stimuli is presented, do so for only a short period of time; do not place it where baby cannot avert gaze.
- √ Usually faces and visual stimulation items should be presented 18-24" from baby's face. However, with many visual impairments a clearer visual impression is made when face or item is presented as close as six inches from baby's face while interaction is taking place.
- √ Consistency and predictability of interactions provide stability and establishment of trust for the infant with deafblindness especially. The provision of a predictable framework and routine allows the infant to anticipate interaction and utilize his own competencies for the interaction. Limit number of caregivers as much as possible; parents and family members are preferable. Use similar interventions across situations and caregivers. Develop a daily schedule.
- √ Provide clear orientation points for the baby with visual and auditory deficits (e.g., a night light close to head of crib; a heated pack at foot of crib could provide a warm point of reference to locate with the feet).

Pacing And Timing

- √ Infants are often overwhelmed by too fast an approach or too much happening at once. Pacing interactions is necessary so that the infant can reserve energy to participate in an interaction and recover quickly.
- √ Time interactions to the baby's behavioral state, not the caregiver's schedule.
- √ If cues begin to show disorganization, slow down the input or give a brief time out.
- √ With the infant with deafblindness it is important to allow extra time to become familiar with the presenter of the stimuli before offering the stimuli. Allow quiet time for baby to get used to position, smell, proximity and touch of caregiver before beginning interaction.
- √ Let the infant set the "rules" for the interaction and imitate the baby's actions (e.g., when the baby looks away, caregiver does not look at baby; when infant directs gaze at caregiver, caregiver remains stationary and quietly gazes back).
- √ Give the infant with deafblindness extra time to respond before intervening or repeating action. It takes a longer time for the baby to process input and then express a reaction to it. Sometimes it is helpful to count silently to ten before intervening or repeating action.

- √ The baby may not have enough energy to sustain the interaction after it has begun well. Very short but appropriate interactions can be made; gradually extend length of engagement over days and weeks.
- √ If infant shows disorganization, modify and support the interaction so he can re-organize on his own terms. Give a rest break and then give the infant a chance to return to activity rather than interpret state as overwhelming rejection of activity.

Transition Support

- √ It is often difficult for the infant to adapt to new situations, environments and caregivers. Disorganized infants will be helped to move from one position to another and from state to state by moving slowly.
- √ Slow the pace and provide a familiar form of reference (e.g., one hand constantly held on infant so presence of caregiver is always assured).
- √ When a new experience is introduced be sure that environmental background is optimally quiet and low-lit.
- √ Support the baby's head, body and extremities so that they are tucked and flexed and in good upright alignment. If necessary use swaddling.
- √ Carrying infant close to caregiver's body surrounded by an arm can provide needed support, as can carrying baby on shoulder which provides good support to chest and abdomen and promotes visual engagement when stabilized posture is attained. Feet can be supported with one hand for bracing during transition.
- √ Provide the baby with some tangible idea of what is going to happen next (e.g.. let him feel caregiver's hand under his arms for a count of 10 each time before lifting up).

Supportive Movement, Handling And Positioning

- √ Usually the semi-upright position with the infant's body, arms, legs and head supported will be the optimal one for social interaction. Remember that the distance from caregiver's face may need to be closer than the usual 18" for best mutual exchange in the infant with visual impairment. For the infant with dual sensory impairment it will be important to hold the baby close to body for vibratory and other tactile, olfactory, and sensory engagement.
- √ Infants may not be able to engage in a social interaction if there is movement involved in the activity. On the other hand, some babies with deafblindness are observed to require some rhythmic background movement for best engagement.
- √ Be aware of the effect on the infant of tactile input not related directly to the activity of intent. For example, patting, stroking, or massaging face may elicit rooting reflex which diverts the infant's attention from the social interaction intended.

- √ Use supportive bedding and rolls to enhance infant's self-regulation and ability to maintain good positioning. Use swaddling, pacifier, propping in "cubbies" against crib boards as aids as appropriate for individual baby.
- √ Handle the infant so that he can have the opportunity to participate in anticipated portions of the activity (e.g., baby is held with head support but not restricted so that baby can turn head or lean towards mother's voice).
- √ Slow, rhythmical, vertical movement, much like side-to-side rocking, may be calming and organizing for the infant with deafblindness.

Supporting Sleep Wake Cycles And State Organization

- √ Often the infant with deafblindness has not yet established a sleep wake cycle upon discharge from the hospital. Neurological immaturity or insult compounds the problems as does the inability to fully appreciate visually the light and dark cycles of night and day. Additionally, auditory deficits prevent appreciation of the quiet/active sound periods of the cycle. Clearly mark sleep-wake cycles by darkening environment and timing caregiver interactions to avoid those periods when sleep should occur.
- √ Remove sensory stimulation objects from the baby's bed, especially visual ones as they may be overwhelming when sleep state is being moved into by infant. Many babies cannot avert their gaze from potent visual stimuli especially when tired.
- √ Provide a piece of mother's clothing that smells pleasant to the infant to cue him that sleep period is coming.
- √ Since the sleep wake system is the last to become organized during early development, transition from sleep to an awake state is particularly difficult and can easily be disrupted by environmental input and interventions. A caregiver should be careful in prioritizing need for intervention over disrupting needed sleep and rearrange interventions accordingly.
- √ When the infant is too aroused or agitated and needs to be calmed try decreasing input, talking, stroking, and rapid movement. The infant with deafblindness may calm to gentle rocking, patting or jiggling. Provide a pacifier. Swaddle and contain the agitated infant with hands or blanket. Put infant in bed with containment so contact and intervention is decreased.