Intrauterine Drug Exposure: A Model for Assessment and Intervention Focus

Kaitlyn Stangl – Creighton University
Kathryn Kreuger OTD, OTR/L, Tara Carroll OTR/L, and Connie Coltrane

Creighton UNIVERSITY
School of Pharmacy and Health Professions
Department of Occupational Therapy

BACKGROUND

The effects of intrauterine drug exposure have been well researched. Despite the growing body of evidence, each year an estimated 15% of infants born are impacted by drug exposure[1]. In 2018, 5.4% of surveyed pregnant women used illicit drugs, 11.4% used tobacco, 9.9% used alcohol, and 4.7% used marijuana[2]. In Omaha, drug use continues to be an issue as the city is ranked in the top 10 states with the highest drug use[3]. With this growing problem comes the need for education, proper assessment, and effective monitoring for developmental delays in this vulnerable population of infants and toddlers that were exposed to drugs in utero. As a primary service providers in the NICU and early intervention, OT practitioners are well-equipped to address these needs in this at-risk population.

PROGRAM DETAILS

The programing developed focused on the vulnerable population of infants and children who were exposed to drugs in utero. Currently, the state of Nebraska requires all infants who test positive for drugs at birth be referred to Early Development Network for a developmental assessment. The program developed focused on further supporting and advancing this program in the following areas:

- Strengthened the process of evaluation
- Developed resources for families/caregivers
- Created models of intervention for the various common outcomes of drug exposure in utero

FOCUSED QUESTION

What are common developmental outcomes of drug exposed infants and children and what tools can be created to better evaluate and treat this population?

METHODS

Phase I: Needs Assessment

- Held a 40-minute meeting with the therapy director and site occupational therapists to establish three points of needs for the population: assessment, monitoring, and education.
- Surveyed staff on the following: comfortability with assessing this population, need for additional assessment tools, and the need for education on in utero drug exposure outcomes.
- Maintained 5-minute weekly meetings with occupational therapists on progress and findings. Maintained open communication with the therapy director on progress and findings as well as programming ideas as the development progressed.
- Researched drug exposure programming. Held a 60-minute interview with the Drug Endangered Children Clinic to identify their programming structure.

Phase II: Literature Review:

- Completed an in-depth literature search for short and long-term developmental outcomes of infants exposed to drugs in utero.
  - The following data bases were searched: Medline, CINAHL, Academic Search Premier, ERIC, Google Scholar, AJOT, and Psychology and Behavioral Sciences Collection.
  - Search terms included: “drug” OR “drug exposure” OR “infant” OR “child” OR “in utero” OR “intrauterine” OR “drug outcomes” OR “meth” OR “cocaine” OR “heroin”.
  - 41 articles were analyzed.

Phase III: Assessment Development

- Analyzed the developmental assessment used to determine qualification of services (DAYC-2). Cross referenced assessment areas of the DAYC-2 with research of developmental outcomes of infants exposed to drugs in utero. Identified areas of need for further assessment.
- Developed a sensory checklist and behavioral checklist to be completed during the evaluation of infants with drug exposure in utero based on research.
- Developed a resource for caretakers to utilize if the child does not qualify for services.
- Developed supplemental intervention handouts for therapist to use with common developmental outcomes found in this population.

Phase IV: Dissemination of Findings

- Educated staff on drug exposure outcomes, new assessment tools, and interventions through two PowerPoint audio presentations.

RESULTS

- The results from this program were the development of 4 assessments, a monitoring checklist for caregivers, resources for caregivers, and intervention strategies as seen below:
- Quick Sensory Checklist for Infants: CAPTA
  - 16 questions with a focus on sensory processing development at the infant level.
- Quick Sensory Checklist for Toddlers: CAPTA
  - 17 questions separated into sensory categories at the toddler level.
- Additional Questions and Considerations for CAPTA Evaluations: Infant
  - 6 questions pertaining to common developmental and behavioral outcomes for infants who were exposed to drugs in utero.
- Additional Questions and Considerations for CAPTA Evaluations: Toddler
  - 11 questions pertaining to common developmental outcomes seen in this population.
- Monitoring Checklist for your Child
  - Developed for caregivers of infants that did not qualify for service and currently have no concerns for the infant. Assists the caregiver recognize the need for services.
- Intervention Strategies for Infants/Toddlers Exposed to Drugs In Utero and Resources for Caregivers
  - Handouts were created on the following: common outcomes and recommendations for intervention, bathing interventions, sleep interventions, resources for caregivers, and information on infant massage.

BOTTOM LINE FOR OT

Occupational therapy is well suited for practice in the Early Intervention setting to assess, monitor, and complete interventions for infants and toddlers who have had a history of intrauterine drug exposure. Occupational therapists have the skill set to assess and treat motor development, visual processing, self-regulation, executive functioning, and sensory processing. All of these factors can be impacted by intrauterine drug exposure [4-7]. For these infants and children, it is essential that they receive early intervention services to help capitalize on neuroplasticity and help the child manage or prevent the various short and long-term outcomes of in utero drug exposure [6,8].

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