

Project Title: Developmental Trajectories of Children in Foster Care

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I. Specific Aims and Hypotheses:

Aim 1: To characterize the developmental profile of children in foster care and compare differences in developmental trajectory to general pediatric population.

Hypothesis: Children entering foster care will have delays across developmental domains and have a slower developmental trajectory.

Aim 2: Evaluate association between and therapeutic supports and developmental trajectory.

Hypothesis: Children who do not receive therapy will have suboptimal developmental trajectory.

II. Background and Significance:

Per the 2019 Adoption and Foster Care Analysis and Reporting System, there were 423,997 children in foster care in the United States with >40% entering care between ages of 0-5 years (1). These early years mark a critical period in child development. Inadequate surveillance, referral, and intervention during these formative years may negatively impact long-term outcomes. Children in foster care are at greater risk for developmental delay compared to the general pediatric population. There is limited information characterizing the developmental profiles of children in foster care or their trajectory with and without adequate intervention and supports.

III. Preliminary Studies: In progress

IV. Research Methods

A. Outcome Measure(s):

1. Developmental profile as determined by Ages and Stages (ASQ) developmental screener scores in five domains: communication, gross motor, fine motor, problem solving, and personal-social. Numerical score in each domain falls into a category of “delayed”, “borderline”, or “normal” development.
2. Developmental Trajectory: determined through measuring progress across five developmental domains from two different points in time over a 6-to-12-month time interval.

B. Description of Population to be Enrolled:

Retrospective chart review of children age 6 months to 24 months seen from 2016-2020 at the Connection for Kids Clinic, a medical home for children in foster care. This clinic follows American Academy of Pediatrics AAP Guidelines for Health Oversight and Coordination upon entry to child welfare system. Children seen at the General Pediatrics Clinic will also be sampled for comparison of developmental screening to children seen in the foster care clinic.

C. Study Design and Research Methods

Retrospective data analysis and chart review of previously mentioned populations. Data will be matched for age, sex, race, and ethnicity. Developmental profile will be determined by ASQ scores in five domains: Communication, Gross Motor, Fine Motor, Problem Solving, and Personal-Social. Quantitative value is assigned on scale of 0-60. Numerical value for each domain falls in one of the following categories: Delayed, Borderline, or Normal development. Developmental Trajectory will be determined through measuring progress across five developmental domains from at least two different points in time

D. Description, Risks and Justification of Procedures and Data Collection Tools

The Ages and Stages Questionnaire is the developmental screening measure administered in clinic. There is no associated risk with administration. Screening improves early detection of developmental

delay and to provide an opportunity for early intervention. The ASQ performs well with children with biological risk factors as well as those with environmental risk factors such as foster care placement. In the last decade, the ASQ has been validated in many countries, in different languages and settings. (2) Chart review will be utilized to collect demographics and determine referral and intervention. Information collected will be de-identified and stored with password control for protection purposes.

E. Potential Scientific Problems:

Screening questionnaire is completed by caregiver accompanying child to appointment. Foster parents may be less familiar with a child's developmental skills, particularly at initial visit upon entry to child welfare system. Therefore, ASQ scores may over or under-represent child's true developmental ability. Identifying presence or absence of intervention may be difficult due to separate reporting systems: child welfare, medical, and early intervention.

F. Data Analysis Plan:

Differences in developmental profiles among children in foster care will be compared using chi square and t-test statistical analysis. Chi-square test will measure difference in categorical outcomes: delayed, borderline, normal. T-test will measure differences in continuous outcomes on ASQ scale of 0-60. Service provision will be compared between two populations. Association between service provision and developmental trajectory will be evaluated by comparison to population without intervention. Information will be stored in RedCap database.

G. Summarize Knowledge to be Gained:

Understanding the unique differences in developmental profiles of children in foster care will inform policy and management guidelines for providing the best possible care for this vulnerable population. It is also important to consider how developmental trajectories may differ from general pediatric population. This information will help support the need for adequate and timely intervention. Findings may influence recommendations provided to families caring for children in foster care. There may be evidence to provide additional developmental supports and avoid interruption in services.

References:

- (1) *The AFCARS Report*. (2020, August 24). Retrieved from U.S. Department of Health and Human Services, Administration for Children and Families, Children's Bureau.
- (2) Schonhaut, Luisa, and Iván Armijo. "Validity of the Ages and Stages Questionnaires in Term and Preterm Infants." *PEDIATRICS*, vol. 131, no. 5, 2013, doi:10.1542/peds.2012-3313d.