**Data Analysis for Informed Decision Making in Part C Early Intervention Program: Insight from the Interactive Data-Driven Dashboard in Shiny R**

**Abstract**

Effective data use and data-based decision-making are indispensable for improving the Part C Early Intervention (EI) services and achieving positive outcomes for children with disabilities and their families (DaSY). The aggregated Part C data that States report to meet federal reporting requirements are collected and retrieved at the EI program level.

Despite having a robust data systems framework for Part C EI and ECSE services, devised by Early Childhood Technical Assistance (ECTA) to guide States on data governance, management, and utilization, there are several unexamined assumptions and gaps at the EI program level. There is a lack of evidence in the literature on what data analytic tools are available to EI local programs and how they utilize data for informed decision-making to monitor and improve program practices and strategies to achieve positive outcomes for children and families.

In this article, we present a case study of a local EI program where barriers restricting limited data use were removed by the use of open-source data science programming interface in R. The study used Part C county-level data to address the need for use of data for operational decision making, accountability, and monitoring at the EI program level.

The data were explored using interactive data visualization and results were disseminated to stakeholders through an interactive, data-driven dashboard in Shiny R. Collaborative methodological approach was adopted to understand and analyze the data.

Hence, through this case study, we discuss the challenges, opportunities, and future directions to improve data utilization using open-source data science tools and their use at the Part C EI program level to provide high-quality services to young children with or at-risk of disabilities and their families.

Keywords: Part C, Early Intervention, Data Systems, Data-based decision making, and Data Use.