

# Dashboard Development Between State Agencies to Track Language Acquisition in Young Children with Hearing Loss

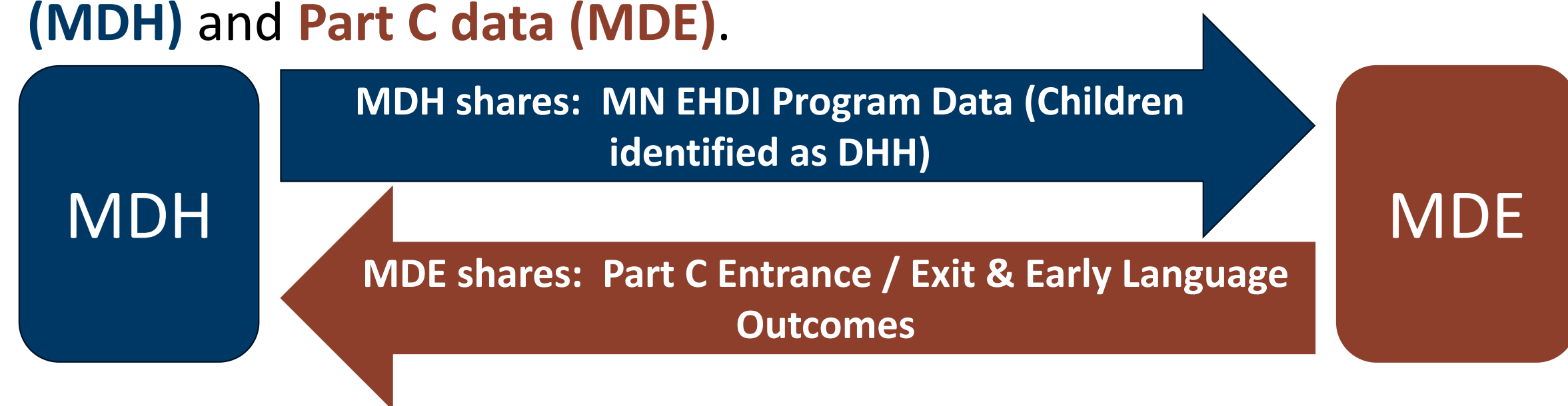
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## Background

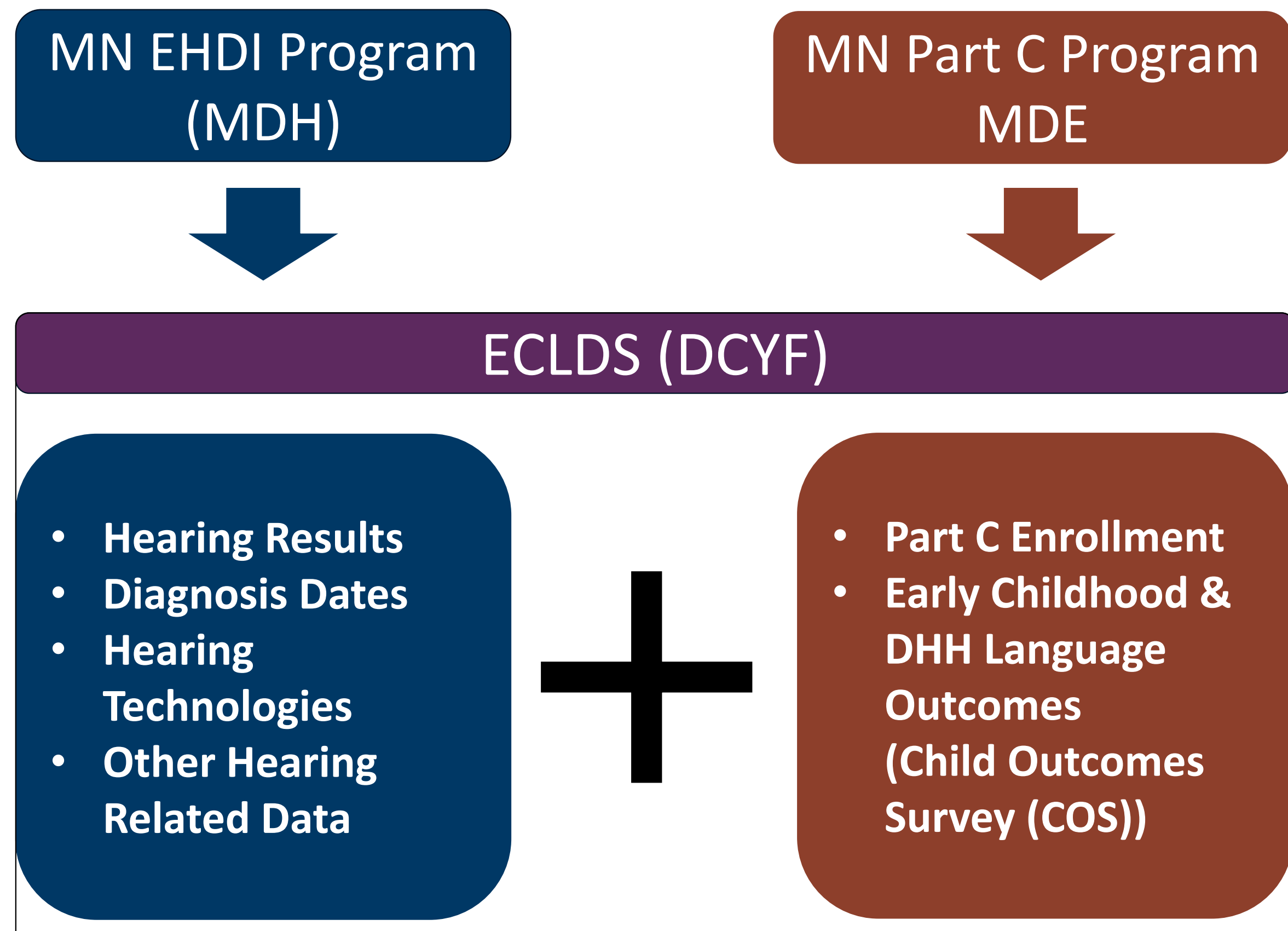
Language acquisition among children who are Deaf or hard of hearing (DHH) is a growing priority within national and state Early Hearing Detection and Intervention (EHDI) programs as early access to language directly shapes a child's ability to communicate. To support data informed decision making by Minnesota partners, this project describes the collaborative development between state agencies of a data dashboard in the Minnesota Early Childhood Longitudinal Data System (ECLDS). This dashboard is designed to track and visualize key early language development indicators for DHH children transitioning out of Part C.

### Interagency Data Sharing Agreement (DSA)

The **Minnesota Department of Health (MDH)** and the **Minnesota Department of Education (MDE)** maintain a DSA that enables individual-level data linkage between the **MN EHDI Program (MDH)** and **Part C data (MDE)**.



MDH and MDE data are also shared with the **Minnesota Early Childhood Longitudinal Data System (ECLDS) at the Minnesota Department of Children, Youth, and Families (DCYF)**, where MDH and MDE data are securely matched at the individual level.



## Dashboard Development

### DHH Specific Outcomes (MDE)

- At time of Part C exit, school districts report receptive and expressive language outcomes across four domains to **MDE**.

Spoken / signed words & phrases

Grammar

Social Language & Behavior

School Readiness Vocabulary

- School districts also report data to **MDE** on current hearing technology use, cognitive delays or disabilities, primary communication mode in the home and early learning environment, and early literacy and numeracy skills.

### Partner Engagement

Staff from **MDH (EHDI Epidemiologist)** and **DCYF (ECLDS Research Scientist)** meet regularly to collaboratively develop a dashboard displaying language acquisition outcomes for children who are DHH exiting Part C early intervention services.



Feedback on dashboard visualizations was solicited from the **MN Newborn Hearing Screening Advisory Committee (MDH)** and the **MN Commission of the Deaf, Deafblind, and Hard of Hearing language acquisition workgroup (DHS)** and incorporated into discussions and the design process. These committees include a wide range of professionals, families, and agency partners.

### Tableau Dashboard Development

- Part C exit data & DHH specific outcomes from MDE** were linked with **public health data for children who are DHH identified in the MDH EHDI Program** through the **ECLDS system at DCYF**.
- Tableau is being used to create data visualizations using the merged data set.



#### Possible Data Filters

Communication Mode

Hearing Technology

Laterality / Degree of HL

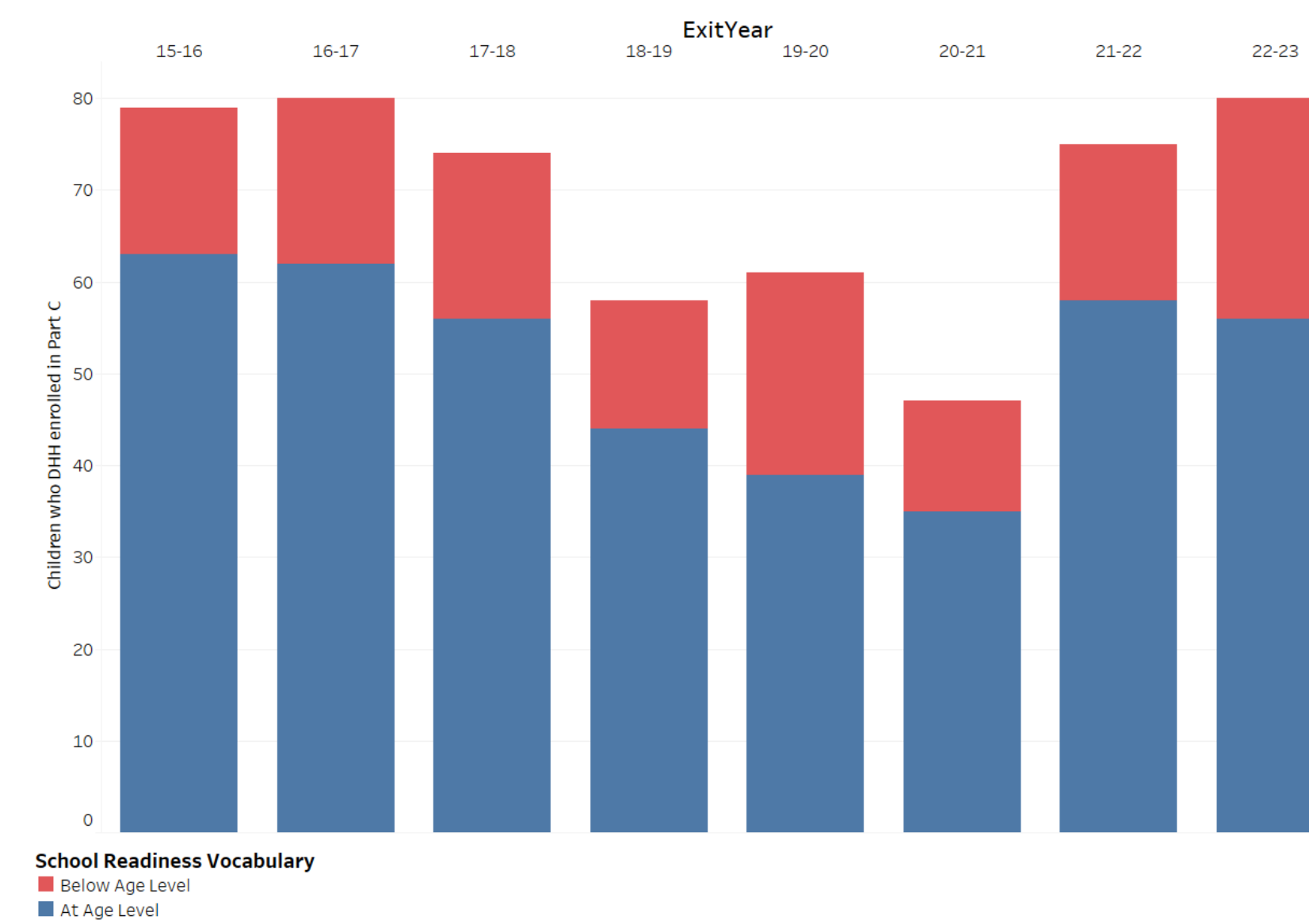
#### Outcomes of Interest

Receptive Language

Expressive Language

Early Literacy / Numeracy

### School Readiness Vocabulary (Receptive Language) EXAMPLE DATA



### Goals of the Project

The goal of this project is to create a dashboard that tracks and visualizes early language development outcomes for children who are DHH, supporting data-informed decision-making for both internal and external collaborators.

### Data Completeness

A substantial proportion of children identified as DHH in the MDH EHDI Program have matched COS data from MDE at Part C exit; however, match rates varied by expressive and receptive language outcome domains.

### Implementation Challenges

Staffing changes across partner agencies affected project timelines, highlighting the need for flexibility in cross-agency dashboard development.

### Next Steps / Final Thoughts / Considerations

- Multiple state agencies (**MDH, MDE, DCYF, DHS**) will continue collaborating to develop a dashboard tracking language acquisition in young children with hearing loss. **Ongoing cross-agency collaboration and feedback** between agencies and partners is important to ensure a future public-facing dashboard meets the needs of internal and external collaborators, including professionals and families.
- Visualization of early language acquisition outcomes of children who are deaf and hard of hearing helps **translate data into actionable insights** for families, professionals, and policy makers across the state.