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Integration of Early Childhood Data in New York State: Formation of Goal Nine Work Group and Unique Identifiers

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Integration of Early Childhood Data in New York State:

Formation of Goal Nine Work Group and Unique Identifiers

Prepared by

The Center for Human Services Research

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Contents

Introduction

Background

An Early Childhood Integrated Data System (ECIDS) collects, integrates, maintains, stores, and reports on information from the many programs comprising the early childhood care and education system within a state. A fully functioning ECIDS includes data about individual children and their families; early childhood programs, providers, and services; and the early childhood workforce. It includes data from different child serving agencies such as state departments of health, education, family services, and local non-profit agencies and community-based organizations, i.e., a mixed delivery system. ECIDS data can thus be used to address program and policy questions that cannot be otherwise answered using a single data source. For example, an ECIDS would give policymakers a more complete picture of what demographics receive specific services, and whether or not these services promote positive short- and long-term outcomes.

New York State, which operates such a mixed delivery system, does not currently have a statewide ECIDS, but has been gathering data regarding the feasibility of such for several years. Early efforts through the Early Childhood Advisory Council included a fiscal analysis and a proposal to create an ECIDS (http://www.nysecac.org/).[1] More recently, one of the initial successes of the New York State Preschool Development Grant Birth through Five (NYSB5) was the 2019 creation of a "Birth Through Five Strategic Plan" by the New York State Early Childhood Advisory Council (ECAC). The plan included ten goals to guide the work of the ECAC in strengthening and building early childhood systems.[2] The ninth goal of the plan specifically relates to the development of a statewide ECIDS. The goal will be achieved when: "An Early Childhood Integrated Data System (ECIDS) is created for tracking service delivery, outcomes and system improvements to drive accountability, policy development, funding and best practices across New York State." It includes the following objectives (full text of the goal can be found in Appendix A):

   a. Support the development of an ECIDS that tracks all children from birth regarding the services/supports they receive, the programs that provide the services, and the staff and administrators who work in those programs.
   b. Use newly available data to inform public policy, communications, and collaboration.

This report includes a summary of the work completed in 2021 by the ECAC Strategic Plan Goal 9 Work Group, and an updated understanding of the importance and feasibility of utilizing a unique identifier for matching individuals across data systems based on conversations the Work Group had with several other states regarding their own ECIDS.

Formation of Goal Nine Work Group

In Spring 2021, the Goal 9 Work Group began planning its activities for the fiscal year. Early meetings focused on the goals and activities of the work group to support the goals and objectives of the Strategic

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[1] New York State Early Childhood Advisory Council (2018). Building an early childhood education data system. Retrieved from http://staging.nysecac.org/application/files/9915/5310/9666/FINAL_Data_Proposal.pdf
[2] The New York State Early Childhood Advisory Council (2019). Strategic plan. Retrieved from http://www.nysecac.org/application/files/6716/2879/0861/ECAC_Strategic_Plan_Final_8.12.21.pdf

Plan. Laurie Black, Director of the Early Childhood Alliance of Onondaga County, led the group with the support of Cate Bohn, CCF Kids Count Director, and Erin Berical, Assistant Director of the Center for Human Services Research at the University at Albany (CHSR). In collaboration with the ECAC, a group of data leaders at a variety of state/city agencies and non-profit organizations met regularly to discuss the need for, and feasibility of, a statewide ECIDS. Members represented the following state, city, and non-profit groups:

- New York State Council on Children and Families (CCF)
- New York State Education Department
- New York State Department of Health
- New York State Office of Children and Family Services
- New York State Office of Mental Health
- New York City Department of Mental Health
- New York Association for the Education of Young Children
- City University of New York
- Early Care and Learning Council
- New York State Head Start
- Administration for Children and Families Office of Head Start
- The Center for Human Services Research, State University of New York at Albany
- Schuyler Center for Analysis and Advocacy
- Children's Institute, Inc.
- Docs for Tots
- Raising New York
- Children's Agenda
- Northwell Health
- Corning Enterprises
- United Hospital Fund

Ongoing Work Group Activities

Regular meetings of the Goal 9 Work Group included planning activities for creating, publishing, and utilizing a stateside ECIDS, but also focused on creating a shared understanding of the history of ECIDS development both in New York State and in states with a more advanced data system. Members of the Work Group met with EC Dataworks, a non-profit that specializes in helping states develop, implement, and expand their ECIDS. Presenters from EC Dataworks reviewed common barriers to building a statewide ECIDS, and some general strategies for addressing the barriers. One of the common barriers faced by many states is the creation and implementation of a statewide unique identifier to track children, programs, and staff across the different agencies and organizations (both statewide and local) of a mixed delivery early childhood system. While the presenters stressed the importance of creating a unique identifier, underscoring the many benefits of such a system, they also reassured participants that many states with functioning ECIDS either initially struggled and/or continue to struggle with scaling-up the use of unique identifiers. Three states successfully addressing the barriers of implementing a statewide unique identifier system – Pennsylvania, Utah, and North Carolina – then provided the Work

Group an overview of their systems and answered questions regarding the process of setting up their ECIDS.

Unique Identifiers

Definition of a Unique Identifier

An early childhood unique identifier is a single, non-duplicated number assigned to a child as some point in their early development that remains with them, unchanged, as they participate in any early childhood program or service. The child may move or participate in a variety of programs or services; the unique identifier allows them to be tracked across all available geographic locations and programs/services.[3] Many young children access multiple programs, services, and systems before they enter kindergarten, and these identifiers allow children to be followed across the early childhood mixed delivery system in their state.

Such an identifier is a fundamental component of a coordinated statewide early childhood data system. As stated by Child Trends, "[a statewide identifier] improves the coordination and provision of services… [it] alleviates redundant data entry on children participating in multiple ECE programs by allowing information about a single child to be linked across various data systems."[4]

Creating a new unique identifier requires consideration of several key principles, as outlined by Cochenour, Duarte, Irvine, and Sellers (2014):

1) When possible, identify and use established childhood program identifiers
2) Consider how a unique identifier fits within the overall design of the State's ECIDS
3) Consider how the process of assigning a unique early childhood identifier fits within, or impacts, the P-20 system
4) Examine state and federal privacy laws that may impact the State's work
5) Create a plan to protect identifiable information
6) Establish a data governance process to handle "near-matches." [5]

"Near matches" occur when data being used to create a unique identifier is either duplicative or "closely resembles" that of another individual who already has been assigned a unique ID. In these cases, the data needs to be investigated by a data administrator and "manually" matched or assigned a unique ID. Even in states with advanced automated software, a certain level of manual matching is required to

New York State Efforts Toward Creating a Unique Identifier

The service delivery system in New York State is complex, expansive, and mixed. Because of this composition, the process of creating a single, unique identifier for every young child is a complicated and daunting undertaking. The 2018 New York State Early Childhood Advisory Council Data

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[3] While identifiers can also be created for programs and staff members, this report focuses primarily on unique identifiers at the child-level.

[4] King, C. (2017). The 10 fundamentals of coordinated state data systems. Retrieved from
https://www.childtrends.org/publications/the-10-fundamentals-of-coordinated-state-data-systems

[5] Cochenour, M., Duarte, S., Irvine, S., and Sellers, J. (2014). Unique identifiers: Beyond K-12. Retrieved from
https://nces.ed.gov/programs/slds/pdf/uid_brief.pdf

Development Work Group proposal for establishing an ECIDS[6] noted that New York State has previously studied the feasibility of creating a unique identifier, and reminded readers of some of the changes that would be necessary for such a step:

> [I]n order for the federated model to work in New York State, some modifications to the way agencies collected data [are] warranted. Two most notable changes would be the creation of a statewide unique identifier for each child, workforce member, and provider/program., and the tracking of young children via this identifier in circumstances that are not currently included in individual-level data collection and reporting (e.g., tracking children not receiving a subsidy in licensed daycare settings).

To assign identifiers for each child, the 2018 Data Development Work Group ECIDS proposal suggested expanding the use of the New York State Education Department (NYSED) P-20 Longitudinal Data System unique identifier, called the New York State Student Identification System (NYSSIS) ID. The NYSSIS ID is assigned when a child enters the NYS public and private education system, and remains constant throughout the child's school career. In the federated model proposal, all children who are enrolled in or are receiving services through the ECCE system in New York State would be assigned a NYSSIS ID upon entry into the system. The ID would then follow the child into the NYSED P-20 Longitudinal Data System.[7] While providing many suggestions and a path toward a NYS ECIDS, the 2018 proposal also estimated a cost of over $18 million, which was not feasible given early childhood budgetary limitations.

In collaboration with CCF, CHSR began a pilot study to compare data from the New York State Office of Children and Family Services with data from the New York State Education Department to assess the success of matching individuals without the benefit of a unique identifier. Unfortunately, this pilot study was paused in 2020 due to the COVID-19 pandemic, and efforts shifted to gathering information on the challenges, successes, and benefits of integrating data at the local level.[8]

Other States' Experiences with Creating Unique Identifiers

While many states are at some early stage of creating an ECIDS, several have been building, utilizing, and expanding their systems for a number of years. Pennsylvania, Utah, and North Carolina have been pioneers in establishing statewide ECIDS, and were able to provide both historical and current information on the successes and barriers to building, implementing, and expanding their systems.

Of particular interest to the Goal 9 Work Group was states' experiences with establishing a unique identifier system for individual children under the age of 6. Representatives were able to discuss their process for assigning identifiers, described below.

Pennsylvania

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[6] Data Development Work Group (2018). Building an early childhood integrated data system. Retrieved from http://staging.nysecac.org/application/files/9915/5310/9666/FINAL_Data_Proposal.pdf
[7] Data Development Work Group (2018). Building an early childhood integrated data system. http://staging.nysecac.org/application/files/9915/5310/9666/FINAL_Data_Proposal.pdf
[8] The Center for Human Services Research (2021). Integration of early childhood data in New York State: Examples of successful data integration efforts at the local level. Retrieved from https://www.ccf.ny.gov/files/1416/3890/8473/ECIDS_Update_Report_12072021.pdf

Pennsylvania uses a system called "Pennsylvania's Enterprise to Link Information for Children Across Networks" (PELICAN) to track children as they make their way through the early childhood care and education system. Each child is assigned two unique identifiers. PELICAN initially assigns a child a unique identifier from the Department of Human Services when they begin participating in a government-sponsored early childhood care and education program (e.g., early intervention, subsidized childcare, Head Start, etc.). When the child enters the school system, they are then assigned an additional identifier from the Department of Education, and the two identifiers are linked. Linking is mostly an automated process that looks at key demographics (e.g., name, birth date, social security number, parent name, etc.) with a certain number of errors or incomplete matches requiring manual review. This linkage allows stakeholders to compare 3rd grade assessments based on children's early childhood care and education experiences. While the system is robust, there are errors and manual lookups need to be completed in order to ensure a majority of children are captured and matched in the two systems. Further, this unique identifier process does not include young children who do not receive any government-sponsored services prior to entering the school system. More information on the Pennsylvania ECIDS can be found here: https://www.pakeys.org/pa-early-learning-initiatives/pelican/pelican-getting-started/

Utah
Utah relies less on a unique identifier system than a robust data-matching system. Each state- and local-level child-serving department or program contributes individual-level data, which may include name, address, and other demographics, to the Department of Health Master Patient Index (DOHMPI, independently managed by the Utah Data Research Center), which provides data-matching services. Utilizing a separate, independently operated data matching system has allowed state leaders to address agency and program data privacy concerns. In this federated model, all data is saved separately, and individual level matching is completed in a separate database. This design allows aggregate reports to be run, but no identifiable data to be saved, outside the data match database. Historical vital records are stored in yet another separate database so children can be followed if they move within the state, but again, data is not linked to program or outcome data unless an ECIDS staff member with the appropriate security credentials runs the report. To keep all program-specific data separate and private, program data is stored in a separate data system as well. More information on Utah's ECIDS can be found here: https://ecids.utah.gov/.

North Carolina
North Carolina uses the E-Scholar system to assign a unique identifier when a child enters a program or service (https://escholar.com/escholar_cdw/early-childhood-warehouse/). Children are assigned a unique identifier through E-Scholar when they enter a government-sponsored early childhood program or service. These programs and services are instructed to use the E-Scholar system to first search for an already-assigned identifier for a child, and assign a new one if no previous identifier is found; however, there are often errors and thus a need for manual review. For example, school districts often assign identifiers when a child enters pre-kindergarten without first checking the system, resulting in assignment of a second identifier. To catch these cases, a full time staff member runs a report through the state's longitudinal data warehouse, Enterprise Entity Resolution (EER). This data warehouse contains all longitudinal data from birth-12th grade; running a report through it flags duplicate

identifiers. The staff person can then manually merge any duplicates. More information on the North Carolina ECIDS can be found here: https://www.ncdhhs.gov/north-carolina-early-childhood-integrated-data-system

State Summary: Lessons Learned

There are several important lessons learned about unique identifiers from these states. First, while unique identifiers are key components of statewide ECIDS systems, none of these states' systems capture all young children. Instead, the unique identifier assignment protocols attempt to capture children that encounter a government-sponsored program. While some children never receive a government-sponsored service (e.g., do not attend a state-sponsored ECCE program and are homeschooled), these systems still allow for the majority of children to be included in a state's ECIDS. Additionally, all three states shared the vision of expanding their unique identifier systems to eventually capture private-pay child care participants and other children who are not served by a government program.

A second lesson is the need for a robust data matching system that can capture children who either have multiple identifiers assigned, or have not been assigned an identifier, and flag those entries for manual review. No data matching or unique identifier system is without error, and manual review will always be an integral part of any ECIDS system.

Next Steps

The Goal 9 work group has identified additional steps it must take to continue to work toward a New York State ECIDS. To address the lack of a robust data matching system that could lead to a unique identifier assignment system, the Goal 9 work group will continue to study the feasibility of matching data across systems by reviewing and synthesizing small-scale data matching efforts between state and local agencies. The work group work gather process and outcome data on efforts to match these data to create a guide for matching data within a statewide ECIDS.

Additionally, the Work Group will continue to identify existing data points that can serve as a launchpad for a statewide ECIDS. Once these data have been identified, the group will discuss the feasibility and possible plan for establishing data dashboards to begin to bring New York's early childhood data "to life." The possibility of adding early childhood data to the statewide Kids' Well-being Indicators Clearinghouse (KWIC) could also be explored as a first step in merging relevant data. More information on the KWIC can be found here: https://www.ccf.ny.gov/council-initiatives/kids-well-being-indicators-clearinghouse-kwic/. Either of these avenues would allow state and local stakeholders to begin using available data to make decisions to improve outcomes for New York's youngest population.

Appendix A

> *GOAL 9*
> *An early childhood integrated data system is created for tracking service delivery, outcomes and system improvements to drive accountability,*
> *policy development, funding and best practices across New York State.*

Objectives

9-A: Support the development of an Early Childhood Integrated Data System (ECIDS) that tracks all children from birth regarding the services/supports they receive, the programs that provide the services, and the staff and administrators who work in those programs.

Activities
1. Work with representatives of all state and New York City early childhood related data systems to develop a plan to build an Early Childhood Integrated Data System. Be informed by the 2019 Data System Feasibility Study results and the experiences of states with existing ECIDS.
2. Identify specific goals and objectives for the ECIDS to drive the use of data collection technology.
3. Explore the feasibility that each child has a unique identifier at birth in New York State to ensure that service delivery tracking translates and transfers across systems, with a family "opt out" feature.
4. Add to existing data systems a child-based registry to collect information on all children receiving early childhood education services that are not funded through public funds. Provide New York policy makers and program managers data about the children and families we aim to serve.
5. Examine the relationships and areas of opportunity for data that focuses on both health (including mental health) and early learning.
6. Agreements for privacy protection are made and data sharing across agencies and entities are drawn up, reviewed, and executed by agency legal counsels.

9-B: Use newly available data to inform public policy, communications, and collaboration.

Activities
1. The Aspire Registry currently supports programs and agencies to track and maintain training and qualification records. In collaboration with Office of Children and Family Services and State Education Department, determine the value add and the costs to add a feature to the Aspire Registry for users to track, search and retain background checks and fingerprints for the early childhood workforce.
2. Use data to understand breadth of homelessness affecting young children and service delivery options.
3. Support the Department of Health to enhance the existing new-born hearing screening data system to track follow up services for children testing positive after initial auditory screening.

Performance Measures that will indicate that the goal has been achieved:
   A. An integrated early childhood data system is designed and in preliminary stages of use.
   B. State Agencies are accessing/using data for policy and planning to inform policy, funding, and to implement best practices.
   C. State and local public agencies are accessing to data to inform policy and finance with regard to health, early learning, family security and issues of inequity.

Progress Indicators		
Year One	**Year Two**	**Year Three**
− Key information to be shared across systems has been identified. − Agency buy-in has increased. − Public agencies have been convened to identify current available data and gaps. − A plan has been created to design and implement an early childhood integrated data system. − The opportunity to integrate background checks and finger printing into the Aspire Registry has been analyzed.	− Feasibility of each child born in NYS having a unique identifier at birth is actively explored across state agencies. − Feasibility of integrating background checks and fingerprinting into the Aspire Registry has been determined and appropriate recommendations have been prepared to support its implementation.	− Data has been used to develop policy recommendations to the Governor's Office. − The ECIDS has been made available to all public agencies serving children. − Data systems provide adequate information to support policy and budget. − Heat maps have been developed to provide pictorial representation of data in NYS.