



Resources to Support the Use and Linking of Data in Early Care and Education Programs

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Purpose

The purpose of this document is to provide a list of resources related to linking¹ and using data that could be useful to early care and education (ECE)² programs. It is intended to provide supplementary information to the resources developed as part of the *Building Capacity to Use Linked Data* project.³ Some resources in the list below are targeted to ECE programs and practitioners that work with data, while others are targeted to officials at the state-level. Many of the resources targeted to states may also be of interest to and helpful for program staff.

Organization of the Resources

This document is divided into four categories, each targeting a different topic related to using and linking data. Within each category, the resources are listed in alphabetical order.

- 1. Data Confidentiality/Security:** Resources related to data confidentiality and security that include information regarding best practices for obtaining data security agreements and ensuring confidentiality when using and reporting administrative data.

¹ Data are considered linked when information from two or more separate data systems or databases are shared, connected, combined, or merged. These data systems or databases may be housed in the same program or in multiple programs or agencies. Linking can occur in various ways ranging from simple (e.g., sharing a spreadsheet) to more complex (e.g., merging two databases into a single file), to very complex (e.g., fully integrating data across multiple agencies). However, all linked data has the potential to provide useful information to support ECE program improvement.

² Early care and education programs include child care centers, pre-k programs, Head Start, family child care homes, and other programs that provide care and education to young children, birth to age five.

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2. **Linking Administrative Data:** Resources related to linking administrative data that include information about combining two or more administrative datasets either within the same organization or between different organizations.
3. **Analyzing and Using Administrative Data:** Resources related to analyzing and using administrative data that include information about how administrative data has been or can be analyzed by organizations, best practices for analyzing and using data, how to interpret results, as well as how data can help programs achieve their goals, develop a data-driven culture, and support continuous quality improvement.
4. **Other Relevant Resources:** Other resources that may be relevant for ECE programs related to data governance and managing administrative data, including information about how to store, organize, prepare, and maintain the quality of data.

The title, author, a hyperlink⁴ to the original document (if available), and a summary are provided for each of the resources. We also identified key words from the resource that will allow users to quickly identify resources with subtopics that may be of interest. The methodology for gathering the resources listed here is described in Appendix A.

Data Confidentiality/Security

	Title/Link	Author/Source	Summary	Subtopics
1.	CASE STUDY #2: Head Start Program (Illustrating an SEA sharing data with a Head Start Program)	Privacy Technical Assistance Center (PTAC)	This case study demonstrates how a State educational agency (SEA) can share data with a Head Start program while upholding the requirements of the Family Educational Rights and Privacy Act (FERPA).	Head Start/ Head Start Data; Data Privacy; State Example/State Practice; FERPA
2.	Confidentiality Toolkit: A resource tool from the ACF Interoperability Initiative	Administration for Children and Families (ACF)	This guide is intended to help state and local programs navigate intersecting laws around confidentiality for ACF-funded programs. The Toolkit will enable states and local jurisdictions to determine ways to share necessary information so that human services agencies can more effectively and efficiently serve children and families, while also protecting people’s rights to confidentiality and privacy.	Confidentiality; Data Privacy; Data Security
3.	Data Security Checklist	Privacy Technical Assistance Center (PTAC)	This checklist is designed to assist organizations who collect data on children and families with developing and maintaining a successful data security program. It discusses essential components that should be considered when building such a program.	Data Security; Data Tool

⁴ If your internet browser does not allow you to click on the link and open the resource, you can use an internet search engine instead to type in the name of the resource and search for it.

	Title/Link	Author/Source	Summary	Subtopics
4.	Data Stewardship: Managing Personally Identifiable Information in Electronic Student Education Records	National Center for Education Statistics	This document discusses the concept of data stewardship, which involves a commitment to ensuring the privacy, confidentiality, security, and appropriate use of personally identifiable information that may be collected on children and families. Data stewardship involves all aspects of the data cycle, including planning, data collection, maintenance of data, data use, and dissemination. While this document is targeted to K-12, the information provided about data privacy and security may also be useful for ECE programs.	Confidentiality; Data Privacy; Data Security
5.	Developing Data Sharing Agreements	William T. Grant Foundation	This group of resources provides information regarding the development of data sharing agreements. Resources include: an overview, guiding tips, work samples, and a list of additional resources with links.	Data Management; Data Security; Data Sharing
6.	Early Childhood Data Privacy	Privacy Technical Assistance Center (PTAC)	This website provides a wealth of information on issues related to protecting the privacy of data on children and families that are participating in early childhood programs, including a definition of personally identifiable information, resources on data governance and for developing written agreements to share data, best practices for maintaining records, and information on talking with families about data.	Data Privacy; Data Security; Data Management; Data Governance
7.	Family Educational Rights and Privacy Act (FERPA)	U.S. Department of Education	Provides information on the Federal law that protects the privacy of student education records (FERPA).	Data Privacy; FERPA
8.	Head Start Program Performance Standards	Office of Head Start, Administration for Children and Families, U.S. Department of Health and Human Services	Provides rules and regulations about when and how a program should obtain parental consent when collecting data. ⁵	Parental Consent; Head Start/ Head Start Data

⁵ Note that the Head Start Program Performance Standards are currently under-going revisions by the Office of Head Start. The proposed rule, released for public comment in 2015, included several newly proposed standards for data privacy and data sharing.

	Title/Link	Author/Source	Summary	Subtopics
9.	IDEA and FERPA Privacy Provisions: Understanding the Basics	IDEA Data Center and The Center for IDEA Early Childhood Data Systems (DaSy); presenters: Ross Lemke and Sharon Ross	This presentation provides an overview of the provisions under IDEA Part C, IDEA Part B, and FERPA regarding the privacy of student data.	IDEA; FERPA; Data Privacy
10.	Transparency Best Practices for Schools and Districts	Privacy Technical Assistance Center (PTAC)	This document is intended to provide local educational agencies (LEAs) with information on best practices for data transparency, including sharing information with parents and families about the organization's data practices. The information provided in this document is also useful for ECE programs.	Data Privacy; Data Sharing; FERPA; Dissemination/Communication

Linking Administrative Data

	Title/Link	Author/Source	Summary	Subtopics
1.	Building and Using Coordinated State Early Care and Education Data Systems: A Framework for State Policymakers	Early Childhood Data Collaborative	This framework describes principles for developing state ECE data systems that can support continuous improvement, answer critical policy questions, and provide guidance to state policymakers to ensure appropriate data access and use while protecting privacy and keeping data secure. This document also identifies 10 fundamentals that provide the foundation for a coordinated state ECE data system. While this document is geared toward a state audience, it also has some useful information for ECE programs.	Building Coordinated Data Systems; Data Use; Integrated Data Systems (IDS)
2.	Conquering the Trials and Tribulations of Data Sharing and Linking	The Center for IDEA Early Childhood Data Systems (DaSy); presenters: Robin Nelson, Baron Rodriguez, Linda Goodman, Sherry Franklin	This presentation provides information on requirements and best practices for sharing data between organizations while maintaining privacy and confidentiality. Panelists from two states discuss key decisions in sharing and linking data across early childhood programs, policy considerations, and lessons learned. While this document is geared toward a state audience, it also has some useful information for ECE programs.	Data Privacy; Data Governance; Data Privacy; Integrated Data Systems (IDS)

	Title/Link	Author/Source	Summary	Subtopics
3.	Developing Coordinated Longitudinal Early Childhood Data Systems: Trends and Opportunities in Race to the Top Early Learning Challenge Applications	Early Childhood Data Collaborative	This brief analyzes the plans that 30 states submitted for the Race to the Top Early Learning Challenge grant program. Specifically, those states that wrote to the priority to build or enhance early learning data systems are reviewed in this resource. Many states included the following elements in their plan: make data accessible to improve and inform ECE practice and policy; link existing ECE data systems; fill ECE data gaps, including workforce and child development data; strengthen the connection between ECE data and data from other systems; and develop interagency data governance structures.	Data Accessibility; Data Governance; State Example/State Practices; Integrated Data Systems (IDS)
4.	Getting Started: Incorporating Head Start Data in an SLDS	National Center for Education Statistics	This resource addresses the topic of incorporating Head Start data into a statewide longitudinal data system (SLDS). The brief discusses reasons for integrating Head Start data, how to get started, which stakeholders to involve at what points in the process, and strategies for engaging those stakeholders. State examples are highlighted throughout. While this document is geared toward a state audience, it also has some useful information for ECE programs.	Head Start/Head Start Data; State Example/State Practices
5.	Linking Head Start Data with State Early Care and Education Coordinated Data Systems	Early Childhood Data Collaborative; by: Elizabeth Jordan, Thomas Schultz, and Carlise King	This brief examines the progress some states have made in linking Head Start data to other data in their state. It describes the importance of including Head Start data in a coordinated early childhood data system, lessons learned across states, and action steps for state and federal leaders. While this resource is geared towards a state audience, it may also be useful for ECE programs.	Head Start/Head Start Data; State Example/State Practices

	Title/Link	Author/Source	Summary	Subtopics
6.	Moving Right Along: Incorporating Head Start Data in an SLDS	National Center for Education Statistics	This resource discusses potential benefits of integrating Head Start data into a statewide longitudinal data system (SLDS). It lists questions for states to consider as they begin to integrate Head Start data and highlights examples of states engaged in this work. While this document is geared toward a state audience, it also has some useful information for ECE programs.	Head Start/ Head Start Data; Integrated Data Systems (IDS)
7.	Roadmap for Early Childhood and K-12 Data Linkages: Key Focus Areas to Ensure Quality Implementation	Early Childhood Data Collaborative	This resource provides a roadmap for states interested in linking early childhood data with K-12 data, and discusses several important issues including state capacity, data governance, data privacy and security, data matching and sharing, data quality, data access and use, and stakeholder engagement. Several state examples are highlighted.	Data Integration and Linking; State Example/State Practices
8.	SLDS Issue Brief: Answering Key Questions with an Early Childhood Data System	Missy Cochenour, SLDS Grant Program; Stephanie Porowski, SLDS Grant Program; Early Childhood Data Sharing Working Group	This brief discusses how state early childhood data systems can be developed and used to answer key questions. The brief then discusses the necessary steps for accomplishing this work, including: identify key end users; specify key questions and sub-questions; determine the required data elements; determine who collects that data and how; identify any changes needed in data collection efforts; and decide how to link the necessary data. Even though this resource is intended for state audiences, it can help ECE programs think about how to identify questions of interest and use them to determine which data are needed.	Building Coordinated Data Systems; Integrated Data Systems (IDS)

	Title/Link	Author/Source	Summary	Subtopics
9.	SLDS Topical Webinar: Head Start and SLDS: Getting to Know You	National Center for Education Statistics (NCES); webinar presenters: Missy Cochenour, Ben Allen, Kimberly Shinn-Brown, Colleen Murphy, and Kathy Thornburg	This webinar featured presentations from multiple states explaining how Head Start data fits into their respective statewide longitudinal data systems (SLDS). Presenters discussed: how the goals of SLDSs align with Head Start; an example of which Head Start data are collected, aggregated, and analyzed; an example of how a state and Head Start can work together on the state's SLDS; and how Head Start data can help to answer school readiness questions.	Head Start/Head Start Data; Data Collection; Data Analysis
10.	SLDS Topical Webinar Summary: Prioritizing Early Childhood Data	National Center for Education Statistics (NCES); webinar presented by: Elizabeth Laird, Early Childhood Data Collaborative (ECDC); Elliot Regenstein, EducationCounsel LLC, Illinois Early Learning Council	This webinar explained how states can design early childhood data systems that address important questions at multiple levels (local, state, national) and that are improvement-driven as opposed to compliance-driven. Presenters discussed the work of the Early Childhood Data Collaborative and reviewed the process of developing early childhood data systems in three states.	Building Coordinated Data Systems; Integrated Data Systems (IDS)
11.	Tips for Administrators, Teachers, and Families: How to Share Data Effectively	Harvard Family Research Project	This document provides tips for teachers and administrators on how to effectively share data with parents and families. It also provides tips for families on communicating with teachers about their children's progress.	Dissemination/Communication; Data Sharing

Analyzing and Using Administrative Data

	Title/Link	Author/Source	Summary	Subtopics
1.	Creating a Data-Driven Culture: Leadership Matters	SAS; by: Lane Mills	This paper describes eight steps a school district can engage in to create a data-driven culture within their school.	Data Culture; Data Use

	Title/Link	Author/Source	Summary	Subtopics
2.	Data in Head Start and Early Head Start	Head Start National Center on Program Management and Fiscal Operations	This website provides a series of online modules that include a mixture of practical scenarios, real-life examples from the field, and tools and templates. The modules are designed to assist Head Start programs in planning for and implementing effective use of data. Additional resources include resource lists, inventories, guides, conceptual models, and tip sheets to help Head Start programs prepare, collect, aggregate, analyze, use and share data, as well as resources specifically geared toward building a data culture.	Data Collection; Data Analysis; Data Sharing; Head Start/Head Start Data; Data Culture
3.	Embracing the Use of Data for Continuous Program Improvement	Heidi Rosenberg	In this commentary, the author discusses how continuous improvement processes can strengthen family engagement strategies in organizations, including early childhood programs. The author outlines the mindset and key practices that organizations need to adopt in order to use data to understand and improve upon their work.	Data Culture; Data Use
4.	A Resource Guide for Head Start Programs: Moving Beyond a Culture of Compliance to a Culture of Continuous Improvement	OPRE Report; by: Teresa Derrick-Mills, Mary K. Winkler, Olivia Healy, and Erica Greenberg	The purpose of this resource guide is to help leadership, management, supervisory, and data-focused staff in Head Start and Early Head Start programs (1) understand how data, including the data they already collect, can help them achieve their program goals; (2) learn techniques for fostering a culture of learning in their organization; and (3) increase their ability to identify and address gaps and continuously improve their programs. This document provides guidance on enhancing data use for quality improvement by drawing on data use in other fields, promising practices observed in Head Start programs, and existing Head Start technical assistance and training materials.	Head Start/Head Start Data; Data Culture

	Title/Link	Author/Source	Summary	Subtopics
5.	Understanding Data Use for Continuous Quality Improvement in Head Start	OPRE Report; by: Teresa Derrick-Mills	This brief summarizes themes that emerged from a literature review undertaken as part of a study on Head Start Leadership, Excellence and Data Systems. The brief presents a conceptual framework for continuous quality improvement in Head Start. It also discusses how findings on quality improvement from other disciplines might apply to a Head Start setting by drawing on data from site visits to Head Start programs.	Head Start/Head Start Data; Data Culture; Data Governance; Data Use
6.	SLDS Topical Webinar: Strategies for Engaging Early Learning Stakeholders	National Center for Education Statistics; webinar presenters: Amy Nicholas, Elliot Regenstein, Hilary Shager, and Missy Cochenour	This webinar discusses the importance of states engaging a variety of stakeholders when developing an early childhood integrated data system, including the roles of stakeholders and benefits for both the state and respective stakeholders. State examples and lessons learned are highlighted.	Stakeholders; Integrated Data Systems (IDS); State Example/State Practices

Other Relevant Resources

	Title/Link	Author/Source	Summary	Subtopics
1.	The ABCs of Data Dictionaries	The Center for IDEA Early Childhood Data Systems (DaSy); by Tate Gould, Amy Nicholas, William Blandford, Tony Ruggiero, Mary Peters, and Sara Thayer	Using IDEA Part C and Part B 619 data as an example, this document provides an overview of the basic components of a data dictionary, as well as the purpose and benefits of maintaining an up-to-date data dictionary. While this document is geared toward a state audience, it also has some useful information for ECE programs when thinking about their own data.	Data Dictionary
2.	Common Education Data Standards (CEDS)	Common Education Data Standards (CEDS)	The Common Education Data Standards (CEDS) project is a national collaborative effort to develop voluntary, common data standards for a key set of education data elements to streamline the exchange, comparison, and understanding of data within and across P-20W institutions and sectors.	Data Dictionary; Data Elements

	Title/Link	Author/Source	Summary	Subtopics
3.	Core Data Elements for Early Childhood and School-Age Registries	The National Registry Alliance	This document provides a list of “core data elements” for early childhood and school-age workforce data, as well as best practices for each data element.	Data Elements
4.	Data Governance and Stewardship	Privacy Technical Assistance Center (PTAC)	This brief provides guidance on how to successfully manage complex data systems by establishing a comprehensive data governance approach. The data governance principles discussed in this paper apply to a large number of audiences and can be used to improve management of data systems spanning pre-school through postsecondary education and into the workforce. While this document is geared toward a K-12 audience, it also has some useful information for ECE programs.	Data Governance
5.	Data Governance Checklist	Privacy Technical Assistance Center (PTAC)	This checklist is designed to assist organizations, such as ECE programs, with establishing and maintaining successful data governance policies and procedures. It summarizes the key data privacy and security components of a data governance program and lists specific best practice action items.	Data Governance
6.	Data System Glossary	The Center for IDEA Early Childhood Data Systems (DaSy)	This data glossary provides definitions for terms commonly used in data systems that contain data from IDEA Part C and Part B 619.	Data Integration and Linking; Data Analysis; Confidentiality; Data Security
7.	From Compliance to Service: Evolving the State Role To Support District Data Efforts To Improve Student Achievement	Data Quality Campaign	This framework presents guiding principles for states on how to support districts’ data efforts to ensure that data are not only collected but also used to improve student achievement. While this document is geared toward a state audience, it also has some useful information for ECE programs.	Data Use; Data Literacy; Data Collection; State Example/State Practices
8.	INQUIRE Data Toolkit	Quality Initiatives Research and Evaluation Consortium (INQUIRE); by Sarah Friese, Carlise King, and Kathryn Tout	The INQUIRE Data Toolkit includes: (1) a data linkages guide, which provides potential questions that can be answered with linked data, the data elements needed to address those questions, and possible analytic strategies; and (2) a dictionary of common data elements.	Data Elements; Data Dictionary

Appendix: Methods

To gain an understanding of the use and linking of administrative data in Head Start and other early childhood programs, we conducted a literature search using the following search engines and organization websites: Google Scholar, EBSCO, Research Connections, INQUIRE, BUILD Initiative, Early Childhood Data Collaborative (ECDC), Data Quality Campaign (DQC), The National Registry Alliance, Common Education Data Standards (CEDS), Quality Rating and Improvement System (QRIS) Learning Network, National Center on Child Care Data and Technology (NCDT), Privacy Technical Assistance Center (PTAC), State Longitudinal Data Systems, and The Center for IDEA Early Childhood Data Systems (DaySy). This survey of resources includes articles and resources published from 2005 through 2015. The types of resources collected include reports, fact sheets, webinars, case studies, and guides/tools. We used a broad list of search terms including: “linking early childhood data,” “head start and linking data,” “data governance,” “data quality,” “data use,” “data security,” and “data management.”

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