Working with Administrative Data in Early Childhood and Related Fields

A List of Resources

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Child Care and Early Education Policy and Research Analysis

Contents

Overview

Introduction

This list includes resources useful to researchers and agency staff who analyze state-level early care and education (ECE) administrative data for research purposes. The resource list emphasizes materials that explain how to acquire, use, manage, link, and analyze administrative data in early childhood or related fields.

Purpose

The resource list aims to support Child Care and Development Fund (CCDF) administrators and their research partners in using administrative data to address policy-relevant early care and education research questions.

Methods

The authors identified resources by searching the Child Care and Early Education Research Connections website for reports, briefs, fact sheets, and other written materials. We used the following search terms: administrative data, early childhood administrative data, child care administrative data, early care and education administrative data, data governance, data security, data confidentiality, and data analysis. We also reviewed several other websites, including the following:

- the Statewide Longitudinal Data Systems (SLDS);

- Early Childhood Data Collaborative (ECDC);

- the Data Quality Campaign (DQC);

- the Center for IDEA Early Childhood Data Systems (DaSy);

- the Privacy Technical Assistance Center (PTAC);

- the Quality Initiatives Research and Evaluation Consortium (INQUIRE);

- the BUILD initiative;

- Common Education Data Standards (CEDS);

- the Quality Rating and Improvement System (QRIS) Learning Network; and

- the Office of Planning, Research, and Evaluation (OPRE).

We then narrowed the list down to resources that would be useful for to those conducting analyses of *state-level* ECE administrative data *for research purposes*, with an emphasis on materials that explain **how to use, manage, or link such data**. In particular, the resources were selected because they

1. highlighted advantages and disadvantages to using administrative data;

2. detailed steps or procedures about how to use administrative data;

3. provided state examples about administrative data use; or

4. were tools or toolkits that housed information about administrative data.

This resource list includes the same resources hosted on the "Working with Administrative Data" page on the Child Care and Early Education Research Connections webpage as of September 2020.

Glossary

Administrative data: refers to information about individual children, families, or providers of early care and education and other family benefits that is collected and maintained as part of the operation of government programs.

Introduction

This list includes resources useful to researchers and agency staff who analyze state-level early care and education (ECE) administrative data for research purposes. The term administrative data refers to information about individual children, families, and/or providers of early care and education and other family benefits that is collected and maintained as part of the operation of government programs.

The resource list emphasizes materials that explain how to acquire, use, manage, link, and analyze administrative data in early childhood or related fields. The first section lists several websites that offer resources for working with administrative data. This is followed by four tables listing resources on the following topics:

1. linking and integrating administrative data;

2. analyzing administrative data;

3. managing administrative data; and

4. data confidentiality and security.

For each resource in the four tables, we list the name of the resource, the type (e.g., report, webinar, fact sheet, etc.), and a brief description. We include an asterisk if the resource provides a state example of administrative data use.

We hope the listed resources will support state/territory child care administrators and their research partners in using administrative data to address policy-relevant early care and education research questions.

Methods

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1. highlighted advantages and disadvantages to using administrative data;

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4. were tools or toolkits that housed information about administrative data.

The resource list was initially compiled by Van-Kim Bui Lin, Kelly Maxwell, and Carlise King, Child Trends researchers with the Child Care Administrative Data Analysis Center (CCADAC). They conceptualized the list, developed resource categories, and identified resources for inclusion, as part of CCADAC's larger goal of strengthening the ability of state and territory child care administrators and their research partners to use administrative data to address policy-relevant early care and education research questions. The "Working with Administrative Data" list was published on the Child Care and Early Education Research Connections website, with regular updates made by CCADAC through September 2018. CCADAC was part of the Child Care and Early Education Policy and Research Analysis contract at Child Trends.

Urban Institute researchers Kassandra Martinchek and Julia Isaacs updated the list in May and September 2020 and developed this written report. For updates made in 2020, we also reviewed materials submitted in response to a request posted on the Urban Institute's "Building Child Care Research Capacity" web page: "In Search of Resources about Using Administrative Data in Early Care and Education." We also reviewed discussion posts from an online administrative data discussion forum

for members of the Child Care and Early Education Policy Research Consortium (CCEEPRC). The Urban update was done as part of the work of the Child Care Research and Evaluation Capacity Building Center.

Linking and Integrating Administrative Data

Below you can find resources related to integrating data systems or combining two or more administrative datasets either within the same organization or between different organizations.

Note: An asterisk in the description section indicates that a state example is included.

Resource	Type	Description
10 fundamentals of coordinated state early care and education data systems: Inaugural state analysis. Early Childhood Data Collaborative. (2011). Washington, DC: Early Childhood Data Collaborative.	Fact sheets and briefs	This brief presents highlights of an analysis of a survey of 48 states and the District of Columbia on state implementation of ten essential components of coordinated early care and education (ECE) data systems. Suggestions are offered in response to the finding that current systems, though they collect large amounts of data on children, providers, and program sites, are often inadequate for the needs of state ECE policymakers in assessing data and formulating policy.
A Compendium of Administrative and Survey Data Resources in the Administration for Children and Families (OPRE Report 2020-10). (2020). Washington, DC: Division of Data and Improvement, Office of Planning, Research, and Evaluation, Office of the Assistant Secretary for Planning and Evaluation.	Report	This compendium documents data collected by the Administration for Children and Families (ACF) that is or could be used for evidence-building purposes. It includes summaries of twelve major ACF administrative data sources and seven surveys. It provides an overview of each data source; its basic content; major publications, websites, and documentation; data quality; capacity to link with other data sources; examples of prior research using linked data; and other information.
A look at Maryland's early childhood data system. Stedron, J. (2010). Denver, CO: National Conference of State Legislatures.	Reports and articles	This report briefly discusses Maryland's Early Childhood Data System—covering governance, history, linkages, access, reporting, use, and next steps.*
A look at Pennsylvania's early childhood data system. Stedron, J. (2010). Denver, CO: National Conference of State Legislatures.	Reports and articles	This report briefly discusses Pennsylvania's Early Childhood Data System—covering governance, history, privacy, linkages, access, reporting, use, and advice.*
A planning guide for linking data to support program improvement in early care and education (Report # 2016-39). Friese, S., Maxwell, K. L., Epstein, D., & Abrams, J. (2016). Bethesda, MD: Child Trend	Reports and articles	This planning tool is designed to help programs and technical assistance partners assess their capacity to engage in data linking efforts and identify next steps to accomplish data linking goals based on six areas of practice.
Administrative Data Sources to Address Early Care and Education Policy-Relevant Research Questions (OPRE Research Brief #2019-81). Shaw, S., Lin, V., & Maxwell, K. (2019).	Fact sheets and briefs	This brief highlights a range of federal, state, and local administrative data sources that could be used to address policy-relevant early care and education (ECE) questions. It describes data sources across

Resource	Type	Description
Bethesda, MD: Child Trends. Washington, DC: Office of Planning, Research, and Evaluation Administration for Children and Families, US Department of Health and Human Services.		early care and education, health, child welfare/public assistance, and employment. It offers examples of the types of ECE research questions that could be answered when data sources from these areas are linked with other sources.
An overview of architectures and techniques for integrated data systems (IDS) implementation. Prashant, K. (2014). Unpublished paper.	Reports and articles	This paper begins with a discussion of potential applications of linked administrative data in policy-level and case-level decision-making. It presents primary data integration approaches and options that are available to health and human services enterprises based on today's technologies and know-how. The paper also addresses the data architecture options and business process implications of embarking on a data integration program.
Answering key questions with an early childhood data system. Cochenour, M., & Porowski, S. (2013). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	This brief discussed how states are going about building early childhood data systems that are linked to other data systems.
AVANCE-Houston's partnership with the Houston Independent School District (Case Study #5, Publication # 2016-26). Abrams, J., Maxwell, K. L., & Epstein, D. (2016). Bethesda, MD: Child Trends.	Reports and articles	This case study highlights AVANCE Houston, a Head Start program, that partnered with the Houston Independent School District to understand children's literacy and math skills in early elementary school and how they compared with other children from low-income families.*
Bringing Early Childhood and K12 Together. Statewide Longitudinal Data Systems Grant Program. (2019). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	Although early childhood data can provide critical information on children entering K12 education and evaluate outcomes of early childhood services when linked to K12 data, data from these two sectors often are kept siloed. Two states demonstrate their linked data systems and offer state strategies for bringing early childhood and K12 data together.*
Building and using coordinated state early care and education data systems: A framework for state policymakers. Early Childhood Data Collaborative. (2010). Washington, DC: Early Childhood Data Collaborative.	Toolkits and guides	In consultation with an early childhood data advisory group, and with feedback from early childhood stakeholder groups, the ECDC has developed a framework that: articulates principles for developing state ECE data systems that enable continuous improvement and answer states' critical policy questions; identifies the 10 ECE Fundamentals that provide the foundation for coordinated ECE data systems; and provides guidance to state policymakers to ensure appropriate data access and use while protecting privacy and keeping data secure. (author abstract)
Building data sharing infrastructures at the state level: Context, stakeholders, technology. Schroeder. A. D. (2015). Paper presented at the Office of Planning, Research, and Evaluation meeting, The Promises and	Webinars and presentations	This presentation uses The Virginia Longitudinal Data System (VLDS) as an example to explain some best practices to implement a linked data system in a state.*

Resource	Type	Description
Challenges of Administrative Data in Social Policy Research, Washington, DC.		
CEDS in the Field: Alaska. CEDS in the Field: Alaska. Common Education Data Standards. (n.d.). Washington, DC: Common Education Data Standards.	Fact sheets and briefs	The "CEDS in the Field" series of briefs addresses various ways that different data stakeholders are using CEDS and its associated tools. CEDS is built in a way to support a variety of implementations that are all different; there is no one way to "use" CEDS. This brief focuses on how Alaska, while building its P–20W data system, used CEDS as a tool in the development process.*
Challenges in linking state and federal data. Goerge, R. M. (2015). Paper presented at the Office of Planning, Research, and Evaluation meeting, The Promises and Challenges of Administrative Data in Social Policy Research, Washington, DC.	Webinars and presentations	This presentation reviews the benefits, challenges, and strategies when linking state and federal administrative data.
Compendium of Administrative Data Sources for Self-Sufficiency Research. Holman, D., Pennington, A., Schaberg, K., and Rock, A. (OPRE Report 2020-42). (2020). New York, NY: MDRC.	Report	This report describes promising administrative data sources for evaluations of economic and social interventions.
Connecting the dots: Using linked administrative data to improve public child welfare programs. Person, A., Stagner, M., Cancian, M., Lindert, B., & Noyes, J. (2015). Princeton, NJ: Mathematica Policy Research.	Webinars and presentations	This webinar summary focuses on how linked administrative data can be used to improve public child welfare programs. During the meeting presenters: 1) identify trends in the use of administrative data to improve child welfare programs; 2) address the challenges related to interoperability; and 3) review best practices that will help agencies with program development and implementation.
Conquering the trials and tribulations of data sharing and linking. Nelson, R., Rodriguez, B., Goodman, L., & Franklin, S. (2014). Presentation at the Improving Data, Improving Outcomes Conference, New Orleans, LA.	Webinars and presentations	This presentation provides information on requirements and best practices for data sharing agreements. Panelists from two states discuss key decisions in sharing and linking data across early childhood programs, the policy considerations related to those decisions, and lessons learned from their efforts.
Developing coordinated longitudinal early childhood data systems: Trends and opportunities in Race to the Top Early Learning Challenge applications. Kipnis, F., Stebbins, H., & Szekely, A. (2012). Washington, DC: Early Childhood Data Collaborative.		The Race to the Top Early Learning Challenge (ELC) encouraged states to demonstrate their commitment to integrating and aligning resources and policies across all of the state agencies that administer public funds related to early learning and development. Building or enhancing an early learning data system was an optional section of the application, and 30 of the 37 applicants addressed this priority. In 2011, nine states, six of which addressed the data priority, won competitive ELC grants. An additional five states are eligible to apply for smaller grants in 2012, and all but one of these states addressed the data priority in their initial

Resource	Type	Description
		applications. Some states that chose not to address this priority in their ELC applications indicated that they were already working on early learning data systems through other federal grants, including the State Longitudinal Data Systems (SLDS) Grant or grants that support State Advisory Councils on Early Childhood Development and Care. This issue brief analyzes the 30 state plans to build or enhance early learning data systems (section E2), with a more in-depth review of the states with the top 17 scores from this section. (author abstract)
Developing Policy Questions to Guide Integration of Home Visiting and Other Early Childhood Data. Steber, K., & King, C. (2019). Bethesda, MD: Child Trends.	Fact sheets and briefs	This resource provides examples of policy questions that state leaders can answer when home visiting data are combined with other early childhood data. Depending on the policy question(s) to be answered, home visiting data can be integrated in one of three ways: (1) across home visiting models, (2) with data from other early childhood services, or (3) with longitudinal data, to examine impact on both short- and long-term child outcomes.
Early childhood integrated data systems toolkit. Cochenour, M., Chatis, C., Sellers, J., & Taylor, R. (2014). Washington, DC: National Center for Education Statistics.	Toolkits and guides	The SLDS Early Childhood Integrated Data System Toolkit was designed for use by any state regardless of where it is in the process of developing an ECIDS. The Toolkit has seven components: (1) Purpose and Vision, (2) Planning and Management, (3) Stakeholder Engagement, (4) Data Governance, (5) System Design, (6) Data Use, and (7) Sustainability. Each component has a set of key indicators that describe the "what" is ideal for the specific component and each indicator has elements that discuss "how" to accomplish the "what" outlined in the indicator.
Establishing a standard data model for large-scale IDS. Wulczyn, F., Clinch, R., Coulton, C., Keller, S., Moore, J., Muschkin, C., et al. (2017). Philadelphia, PA: Actionable Intelligence for Social Policy.	Reports and articles	This paper provides both general and specific guidance to states and localities interested in building robust integrated data systems that take full advantage of all that these systems have to offer.
Forum guide to the teacher-student data link: A technical implementation resource (NFES 2013-802). National Forum on Education Statistics. (2013). Washington, DC: National Center for Education Statistics.	Toolkits and guides	This publication is a practical guide for implementing a teacher-student data link (TSDL) that supports a range of uses at the local, regional, and state levels. The guide addresses the considerations for linking teacher and student data from multiple perspectives, including governance, policies, data components, business rules, system requirements, and practices. It provides references to promising practices for high quality data linkages, including TSDL-specific processes such as roster verification and the establishment of the Teacher of Record. The information and opinions published here are those of the Forum and do not necessarily represent the

Resource	Type	Description
		policy or views of the US Department of Education or NCES.
[Getting started: Incorporating Head Start data in an SLDS](). National Center for Education Statistics. State Support Team. (2012). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	This resource addresses how to incorporate Head Start Data in an SLDS by discussing reasons for integrating Head Start data, who to involve when, and strategies for engagement.
[IDEA Part C and Part B 619 state data systems: Current status and future priorities](). Derrington, T., Spiker, D., Hebbeler, K., & Diefendorf, M. J. (2013). Menlo Park, CA: DaSy Center.	Reports and articles	The Center for IDEA Early Childhood Data Systems, the DaSy Center, was funded by the Office of Special Education Programs (OSEP) to provide technical assistance (TA) to states to support them in developing or enhancing Part C and Part B Section 619 (Part B 619) data systems. TA also will assist Part C and Part B 619 state agencies in participating in the development of integrated early childhood data systems and longitudinal data systems in their states. To inform the DaSy Center's work, the Center collected information about the current status of Part C and Part B 619 state data systems, priorities for improvement, and areas where the states would like TA. State Part C and Part B 619 coordinators, their respective data managers, and other state staff completed an online survey over the summer of 2013. Responses were obtained from 94% of the 50 states, DC, and Puerto Rico for Part C and from 96% for Part B 619. This report summarizes what was learned about the current status of Part C and Part B 619 data systems and where states are in moving to improve their data systems. (author abstract)
[Identifying Home Visiting Data to Integrate with Other Early Childhood Data](). Bul Lin, V. (2019). Bethesda, MD: Child Trends.	Fact sheets and briefs	This resource provides a map of home visiting and other early childhood data for states. It outlines how to (1) compile a list of home visiting programs in a state, (2) identify available home visiting data and linkages, and (3) create a data map.
[Improving the Lives of Young Children through Data](). Jordan, E., King, C., Banghart, P., & Nugent, C. (2018). Providence, RI: Rhode Island KIDS COUNT.	Fact sheets and briefs	This brief highlights projects implemented in three states to integrate education, health, and/or social services data to inform policies that influence the lives of young children and their families.*
[Integrated data systems: An emerging tool to support services for low-income Hispanic families with young children (Publication #2015-34)](). Limlingan, M. C., Grindal, T., Lopez, M., Blocklin, M., & Bumgarner, E. (2015). Bethesda, MD: National Research Center on Hispanic Children & Families.	Reports and articles	This brief explores how integrated data systems (IDS) data may be an important and cost-efficient resource for better understanding public service use among low-income Hispanics in the United States.*
[Investing in a data quality research program for administrative data linked to survey data for policy research purposes is essential](). Davern, M., Roemer, R., &Thomas, W. (2009). Paper presented at the 2009 Federal	Reports and articles	In this paper we set out a research agenda for improving linked data files for policy research considering research that needs to be conducted concerning coverage error, nonresponse error, sampling error, measurement error,

Resource	Type	Description
Committee on Statistical Methodology Research Conference, Washington, DC.		editing/imputation, documentation of metadata and production of timely linked data files.
Linking data across agencies: States that are making it work. Carson R., Laird E., Gaines, E., & Ferber, T. (2010). Washington, DC: Data Quality Campaign.	Reports and articles	This issue brief captures the current status of states' ability to link data across agencies, the opportunities and challenges they face, and how leading states are breaking down silos to ensure data follow individual students over time to improve success. It also describes processes states can use in developing and implementing their cross-agency data sharing efforts.
Linking data to understand children's academic progress from early care and education through elementary school (Data Direction 5, Publication # 2016-35). Friese, S., Epstein, D., & Maxwell, K. L. (2016). Bethesda, MD: Child Trends.	Reports and articles	This report highlights a strategy for linking early care and education and early elementary data to track children's academic progress over time.
Linking Head Start data with state early care and education coordinated data systems (Publication No. 2015-11). Jordan, E., Schultz, T., & King, C. (2015). Bethesda, MD: Early Childhood Data Collaborative.	Fact sheets and briefs	At present, there is no requirement for local Head Start programs to link or share their data with other state data systems. However, several states are making advances toward linking and/or sharing data across their state's K–12 data system or other services' data systems. In this process, states have encountered some challenges and have had to tackle issues related to data privacy and security, among others. To better understand some of the challenges, successes, and strategies behind this work, the Early Childhood Data Collaborative (ECDC) contacted and interviewed a sample of Head Start and state early childhood leaders in a dozen states. Based on these interviews, this brief from the ECDC examines the actions some states have taken in linking Head Start data to other state systems. It describes the importance of including Head Start data in a coordinated early care and education data system, relays what we learned about current data linkage steps across states, and presents action steps for state and federal leaders. (author abstract)
Maine Statewide Longitudinal Data System. Hurwitch, B. (2008, 2011). Phase 1	Phase 2	Webinars and presentations	Design, develop and implement a longitudinal data system that stakeholders can draw upon to make well-informed decisions about improving student achievement. Expand the SLDS to examine student progress from early childhood into career while protecting student privacy and confidentiality consistent with applicable privacy protection laws.*
Many missing pieces: The difficult task of linking early childhood data and school-based data systems. Bornfreund, L., & Severns, M. (2010). Washington, DC: New America Foundation.	Fact sheets and briefs	The authors outline the main challenges states face in integrating early childhood data into their K–12 statewide longitudinal data systems. Proposals from recent grant winners are analyzed and data collection strategies are presented. Recommendations are made at both the federal and

Resource	Type	Description
		state levels to support the optimal use of early childhood data for all stakeholders.
Matching and cleaning administrative data. Goerge, R. M., & Lee, B. J. (2002). In M. Ver Ploeg, R. A. Moffitt, & C. F. Citro (Eds.), Studies of welfare populations: Data collection and research issues: Panel on Data and Methods for Measuring the Effects of Changes in Social Welfare Programs (pp. 197-219). Washington, DC: National Academy Press.	Reports and articles	This paper addresses the cleaning and linking of individual-level administrative data for the purposes of social program research and evaluation.
Maximizing the impact of state early childhood home visitation programs. National Governors' Association. Center for Best Practices. (2011). Washington, DC: National Governors' Association, Center for Best Practices	Fact sheets and briefs	As new federal funds augment existing state investments in home visiting, governors have an opportunity to integrate home visiting into an effective and comprehensive early childhood system. Several strategies can ensure that states use new and existing resources wisely to ensure more consistently high-quality programs that are better targeted to families' needs with less duplication of effort. Governors should lead efforts to: Promote coordinated planning and shared accountability across the agencies that fund home visiting and other early childhood programs; Develop research-based quality standards and support ongoing program improvement; and Improve data linkages to track outcomes and better target services. (author abstract)
More than referral: Linkages between early intervention and child welfare data and improved child outcomes. Derrington, T., Sheppard, B., Ferguson, A., Scott, C., & Smith, K. (2013). Presentations at the Improving Data, Improving Outcomes Conference, Washington, DC.	Webinars and presentations	This presentation discusses implementation issues and their implications for state IDEA data systems. Panelists from three states describe their states' linkages and discuss how implementation issues have been addressed and how linkages have been (or could be) used to improve child outcomes. *Oregon Webinar includes screenshots of their EC data system
Navigating Data Systems When Integrating Home Visiting Data. Epstein, D. (2020). Bethesda, MD: Child Trends.	Fact sheets and briefs	This resource (1) discusses ways home visiting data are stored at the state and local levels and (2) recommends how data integration leaders can navigate these data storage systems when integrating home visiting data with other early childhood data.
One Step at a Time: The Benefits of an Incremental Approach to the Integration of Home Visiting and Other Early Childhood Data. Steber, K., & Epstein, D. (2019). Bethesda, MD: Child Trends.	Fact sheets and briefs	This brief describes various ways states can integrate their home visiting data into their early childhood integrated data system over time. It highlights five examples of how states can approach this incremental integration of home visiting data.
Pre-kindergarten and child care coordination initiatives. Child Care State Systems	Fact sheets and briefs	To support pre-kindergarten services in midst of budget cuts, States are coordinating services, funds, and efforts with other programs, such as child care, to support working families by offering

Resource	Type	Description
Specialist Network. (2012). Fairfax, VA: Child Care State Systems Specialist Network.		comprehensive care for their children that is also high quality and supports children's development. The following tables provide examples of pre-kindergarten and child care coordination initiatives and highlights the income eligibility requirements, funding streams, and eligible provider requirements for both programs. (author abstract)
Putting administrative data to work: A toolkit for state agencies on advancing data integration and data sharing efforts to support sound policy and program development. Duran, F., Wilson, S. B., & Carroll, D. (2005). Farmington, CT: Child Health and Development Institute of Connecticut.	Reports and articles	The ultimate goal of this toolkit is to help state agencies strengthen their data and research infrastructure. It provides an assessment tool to help agencies determine their enhancement needs as well as guidelines on how to approach implementation of several different infrastructure-enhancing strategies. The toolkit is not intended to function as a technical design manual, but rather seeks to help agencies identify necessary components for successful implementation of the strategy or strategies they choose to pursue. The guidance provided within the toolkit is based on best practice and lessons learned from those that have worked on similar efforts, both nationally and in Connecticut. (author abstract)*
Researching the CCDF program by linking administrative data with data from the CCDF Policies Database: A how-to guide (OPRE Report 2016-24). Giannarelli, L., Minton, S., & Durham, C. (2016). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Fact sheets and briefs	This brief suggests answering questions about setting policies for the Child Care and Development Fund (CCDF) by linking case-level information on subsidized families and children with detailed policies from the federally funded CCDF Policies Database.
Roadmap for early childhood and K–12 data linkages: Key focus areas to ensure quality implementation. Data Quality Campaign, & Early Childhood Data Collaborative. (2016). Washington, DC: Data Quality Campaign.	Fact sheets and briefs	This document describes how state policymakers can support the development of links between early childhood and K–12 data systems. State examples are provided.*
Roadmap for foster care and K–12 data linkages: Key focus areas to ensure quality implementation. Data Quality Campaign, & Legal Center for Foster Care & Education. (2017). Washington, DC: Data Quality Campaign.	Reports and articles	This report explains ways child welfare and state education agencies can link data to improve outcomes for children in foster care.*
Rochester Childfirst Network's use of linked data to support classroom teaching (Case Study #4, Publication # 2016-27). King, C., Maxwell, K. L., Abrams, J. & Epstein, D. (2016). Bethesda, MD: Child Trends.	Reports and articles	This case study highlights Rochester Childfirst Network, a Rochester, New York early care and education program, that partnered with The Children's Institute of the University of Rochester to use linked data to support classroom instruction and teacher professional development.*
SLDS Early Childhood Integrated Data System Self-Assessment. Cochenour, M., Chatis, C., Sellers, J., & Taylor, R. (2014).	Fact sheets and briefs	This supplemental resource, known as the SLDS Early Childhood Integrated Data System Self-Assessment, was created to help states assess their needs as they integrate early childhood data into an

Resource	Type	Description
Washington, DC: National Center for Education Statistics.		early childhood data system and the P–20W+ (early childhood through workforce and beyond) statewide longitudinal data system (SLDS).
SLDS topical webinar summary: Head Start and SLDS: Getting to know you. Cochenour, M., Allen, B. L., Murphy, C., Shinn-Brown, K., & Thornburg, K. R. (2012). Washington, DC: National Center for Education Statistics.	Webinars and presentations	This webinar summary is based on presentations from states on how Head Start fits into their statewide longitudinal data systems (SLDS). Missy Cochenour of the State Support Team (SST) explained the goals of SLDSs and how they align with Head Start. Ben Allen (Vermont) described Head Start and Early Head Start, while Kimberly Shinn-Brown (Missouri) discussed which data are collected, aggregated, and analyzed through Head Start. Colleen Murphy (Utah) presented on how Utah and Head Start work together on the state's SLDS, and Kathy Thornburg (Missouri) discussed why Head Start data are critical to answering school readiness questions.
SLDS topical webinar summary: Prioritizing early childhood data. Illgen, S., Laird, E., & Regenstein, E. M. (2011). Washington, DC: National Center for Education Statistics.	Webinars and presentations	Early childhood data are a key component in developing robust P–20W data systems. This webinar summary focuses on how states can design early childhood data systems that a) address key issues, on the local, state, and national levels; b) are improvement-driven as opposed to compliance-driven; and c) can be coordinated with K–12 and other key program data. Elizabeth Laird spoke about the work of the Early Childhood Data Collaborative (ECDC), and Elliot Regenstein of EducationCounsel LLC and the Illinois Early Learning Council reviewed the process of developing early childhood (EC) data systems in three states.
Sources and linking strategies for employment data. McGrew, C. & Sellers, J. (2016). Washington, DC: National Center for Education Statistics.	Toolkits and guides	As the demand to connect education and employment data grows, states are navigating the challenges of locating essential data across a number of sources as well as establishing agreements and technical processes. This brief describes common sources of workforce data and processes states use to link data across education and workforce programs. It is the first in a series of publications focused on the integration and use of workforce data for SLDS work.*
Stacking the blocks: A look at integrated data strategies. Jordan, E., & King, C. (2015). In *Rising to the Challenge: Building effective systems for young children and families: A BUILD e-book*. Boston: Build Initiative.	Reports and articles	Leaders from seven of the ten states (Illinois, Maryland, Minnesota, North Carolina, Oregon, Rhode Island, and Wisconsin) that had prioritized data systems development goals in their Race to the Top-Early Learning Challenge (ELC) applications and completed at least one year of the grant cycle were interviewed. The chapter identifies five "building blocks" or strategies that states have used to grapple with their early learning and development data and plan for improved integration.*

Resource	Type	Description
State of the states. DaSy Center. (2016). Menlo Park, CA: DaSy Center.	Toolkits and guides	This interactive map tool shows the national status of data systems for Part C and Part B 619, including linked data systems. They also offer a quick glance at 10 different facets of state early childhood data systems, plus detailed information for each state. These data are based on information collected by the DaSy Center and the Infant Toddler Coordination Association (ITCA) in fall 2015. If data were not provided in 2015, 2013 data were used if available.*
State success stories. Early Childhood Data Collaborative. (n.d.). Washington, DC: Early Childhood Data Collaborative.	Reports and articles	States are beginning to make progress toward building and using coordinated state early care and education data systems. Although states have more work to do to ensure ECE data are collected and used for continuous improvement, promising state practices are beginning to emerge. This webpage provides links to a case study for each state.*
Statewide Longitudinal Data Systems Grant Program resource database. National Center for Education Statistics. (n.d.). Washington, DC: National Center for Education Statistics.	Toolkits and guides	The Statewide Longitudinal Data Systems Grant Program offers a variety of support resources.
Strength in numbers: Supporting quality improvement in early care and education programs through linking administrative data (Publication # 2016-36). King, C., Epstein, D., Maxwell, K. L., Lin, V. K., Abrams, J., Hutchison, L., & Burgess, K. (2016). Bethesda, MD: Child Trends.	Fact sheets and briefs	This brief highlights opportunities and challenges in linking data and offers ideas for overcoming identified challenges.
Strengthening workforce data to support quality: State spotlight on Oregon. Early Childhood Data Collaborative. (2017). Bethesda, MD: Early Childhood Data Collaborative.	Reports and articles	This case study tells the story behind Oregon's recent workforce data developments and describes the different ways they are using their workforce data to strengthen their early care and education workforce.*
Structuring Data for Cross-Sector Longitudinal Reporting. Statewide Longitudinal Data Systems Grant Program. (2018). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	SLDSs support state programs and inform policy decisions by providing high-quality, longitudinal data that cross multiple sectors of education, workforce, and social services. To achieve this purpose, SLDS teams must solve the challenge of delivering cross-sector longitudinal data from their data systems in a form that stakeholders can use. This brief describes how two states, Hawai'i and Washington, have developed products and processes to provide cross-sector longitudinal data to inform research and policy decisions. (author abstract)*
Telamon North Carolina Corporation's collaboration with a county agency (Case Study #3, Publication # 2016-28). Epstein, D., & Maxwell, K. L. (2016). Bethesda, MD: Child Trends.	Reports and articles	This case study highlights Telamon, a North Carolina Head Start program, that partnered with a TANF agency to improve enrollment in both programs and coordinate family services across programs.*

Resource	Type	Description
The future is data linking. Mauzy, D. & Bull, B. (2018). Menlo Park, CA: DaSy Center.	Webinars and presentations	This webinar provided a high-level overview of the advantages, preparation for, and processes associated with linking Part C and 619 data with other early childhood data. States were offered an opportunity to receive specific TA to meet and assist states with their early childhood data linking.
The integration of early childhood data: State profiles and a report from the US Department of Health and Human Services and the US Department of Education. US Department of Health and Human Services, & US Department of Education. (2016). Washington, DC: US Department of Health and Human Services.	Reports and articles	This report from the US Departments of Health and Human Services (HHS) and Education (ED) helps states refine their capacity to use existing administrative data from early childhood programs to improve services for young children and families. The report includes key considerations, eight state examples, technical assistance, and other resources.*
The Learning Center for Families' use of data to support children's healthy development (Case Study #2, Publication # 2016-29). King, C., Maxwell, K. L., Abrams, J. & Epstein, D. (2016). Bethesda, MD: Child Trends.	Reports and articles	This case study highlights how an early care and education program (The Learning Center) in Utah and Arizona linked health and early intervention data within their program and with other external programs to better serve children.*
The role of administrative data in evidence-based policy and innovation. Stack, K. (2015). Paper presented at the Office of Planning, Research, and Evaluation meeting, The Promises and Challenges of Administrative Data in Social Policy Research, Washington, DC.	Webinars and presentations	This presentation provides a historical policy context for integrating data systems. It also reviews the benefits and challenges of integrating data with tips for how to integrate data, such as common data definitions, incentivizing states and localities, and providing education and technical assistance to integrate data.
Tulsa Community Action Project's commitment to data driven decision-making (Case Study #1, Publication # 2016-30). King, C., Maxwell, K. L., Abrams, J, & Epstein, D. (2016). Bethesda, MD: Child Trends	Reports and articles	This case study highlights a Tulsa, OK early care and education program (CAP Tulsa) that linked data to public schools to understand transitions to kindergarten and support teacher effectiveness.*
Using IDEA Part C and 619 Data in the PDG 0-5 State Systems Needs Assessment Webinar. Hebbeler, K., Kazprzak C., Kelley, G., Bernstein, H., Anderson, D., Lesko, J., Elliott-Teague, G., & Adusumilli, J. (2019). Menlo Park, CA: The DaSy Center.	Webinars and presentations	This presentation highlights the types of data collected by states IDEA 619 and Part C and where the data is located. Discussion focuses on collaboration with state partners to integrate these sources into the broader state picture of how children and families are being supported. Included are suggestions for how the data can be used and analyzed for effective decision making. (author abstract)*
Using Integrated Data to Examine Access to Services for Children of Color: State Spotlight on Minnesota. Child Trends. (2019). Bethesda, MD: Child Trends.	Fact sheets and briefs	This state spotlight focuses on recent work in Minnesota, where state agency leaders and the Children's Defense Fund-Minnesota are working together to use and share early care and education data.*
Using integrated data to improve communities: Lessons from a cross-site project. Hendley, L. (2016). Wasihngton, DC: Urban Institute.	Fact sheets and briefs	Integrated data systems (IDS) periodically link individual-level records from multiple government agencies. These systems can be used for policy analysis, program planning, and evaluation. Six

Resource	Type	Description
		partners in the National Neighborhood Indicators Partnership (NNIP) worked to expand access to information from IDS in their own communities and strengthened the relationships between NNIP partners and agencies hosting IDS.*
Workforce information: A critical component of coordinated state early care and education data systems. Kipnis, F., & Whitebook, M. (2011). Berkeley: University of California, Berkeley, Center for the Study of Child Care Employment.	Fact sheets and briefs	The brief describes the early care and education workforce data landscape in the states, focusing on the three main workforce data systems operating across multiple states. It also details the challenges to aligning these systems and current efforts to address these challenges. (author abstract)

Analyzing Administrative Data

This section includes resources related to how administrative data have been or can be analyzed by organizations, best practices for analyzing administrative data, and guidance in interpreting results after analyzing administrative data.

Note: An asterisk in the description section indicates that a state example is included.

Resource	Type	Description
A Comparison of Regulated Child Care in Rural and Urban Pennsylvania. Manlove, E. E., Benson, M. S., Strickland, M. J., and Fiene, R. J. (2011). Harrisburg, PA: The Center for Rural Pennsylvania.	Report	This research was conducted in 2009-2010 to provide a comparison of regulated child care in rural and urban counties in Pennsylvania. Specifically, the research explored the types of licensed child care available, child care quality, and the types of care most often used by families who receive subsidies in rural and urban counties.
A Dozen Policy Questions You Can Answer with Your Agency's Administrative Data: A Webinar for Child Care Development Fund Lead Agencies. Isaacs, J., Maxwell, K., Bowne, J., Hudgins, R. (2019). Washington, DC: Office of Planning, Research, and Evaluation Administration for Children and Families, US Department of Health and Human Services.	Webinars and presentations	This webinar is designed to support Child Care and Development Fund (CCDF) Lead Agency staff and their partners in using existing administrative data. The webinar focuses on how to use data to address state legislators', agency heads', local child care providers', and other stakeholders' policy questions. The webinar covers a dozen policy and operational questions CCDF lead agencies have addressed by analyzing existing data. It provides tips for using administrative data. CCDF Lead Agency staff from Georgia and Massachusetts describe about how they have used data to answer their agency's policy and operational questions.*
A guide to support states and territories' use of child care licensing data. National Center on Early Childhood Quality Assurance. (2017). Fairfax, VA: National Center on Early Childhood Quality Assurance.	Reports	This guide will help CCDF/licensing Administrators assess current licensing data systems and identify needed changes. It explores new uses for licensing data, examines some strategies for dealing with common challenges, and provides additional resources for review and reference.
Administrative data as children's well-being indicators: The South Carolina Data Bridge Project. Lavenda, O., Hunter, B., Noelle, M., Bolick, L., Haselden, C., Tester, D., Knopf, H., & Ha, Y. (2011). Child Indicators Research, 4(3), 439-451.	Reports and articles	To study the quality of care provided in the area and ultimately improving the well-being of children and families in South Carolina by linking different sources of child care administrative data to create analytic data cubes to allow examination of quality of care provided to children and factors contributing to it; Can use administrative data for potential impact on well-informed decision making and policy change to improve children and families' well-being.*
Administrative data for policy-relevant research: Assessment of current utility and recommendations for development. Hotz, V.	Reports and articles	The report describes the key practical and political considerations of transforming the information in these programmatic records into research-ready

Resource	Type	Description
J., Goerge, R., Balzekas, J., & Margolin, F. (n.d.). Chicago: Joint Center for Poverty Research.		databases; identifies the strengths and weaknesses of administrative data, relative to that gathered in national surveys, for use in descriptive and evaluative research and in accountability-based monitoring of program performance; describes examples of several states' efforts to develop an ongoing capacity to use administrative data for both programmatic and policy evaluations; and makes initial recommendations that will improve the quality and usefulness of administrative data for policymakers and program administrators.
America's Child Care Deserts in 2018. Malik, R., Hamm, K., Schochet, L., Novoa, C., Workman, S., & Jessen-Howard, S. (2018). Washington, DC: Center for American Progress.	Reports and articles	This report assesses trends in proximity to child care as one component of a child's ability to attend a high-quality early childhood program. To describe this geographic proximity, in 2016, the Center for American Progress introduced a working definition of child care deserts—areas with an insufficient supply of licensed child care.
Answering Key Questions with an Early Childhood Integrated Data System. Statewide Longitudinal Data Systems Grant Program. (2019). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	To build useful early childhood integrated data systems, states must start with a vision for how they would like the system to be used and, more specifically, a list of essential questions to be answered using the data. This brief offers examples of key early childhood policy questions and outlines why those questions are needed, how to create them, and who should be involved in developing questions that will guide ECIDSs. (author abstract)
Cheaper, faster, better: Are state administrative data the answer?: The Mother and Infant Home Visiting Program Evaluation-Strong Start second annual report (OPRE Report 2015-09). Lee, H., Warren, A., & Gill, L. (2015). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Reports and articles	This report details MIHOPE-Strong Start's process of acquiring administrative vital records and Medicaid data from 20 states and more than 40 state agencies. The study relies on administrative data to measure infant and maternal health, health care use, and cost outcomes. Policymakers have increasingly encouraged greater access to and use of administrative data to produce timely, rigorous, and lower-cost evaluations of health and social programs, since these records may be less costly and more accurate than information collected directly from families. The MIHOPE-Strong Start experience sheds light on the process of acquiring permission to access such data.
Child care data tracker. United States. Office of Child Care. (n.d.). Washington, DC: US Office of Child Care.	Toolkits and guides	The Child Care Data Tracker (Tracker), available to tribes and territories, is a comprehensive case management tool designed to support the collection, management, and utilization of the case-level information needed for the generation of the required ACF-700 and ACF-801 reports.
Child care data viewer. United States. Office of Child Care. (n.d.). Washington, DC: US Office of Child Care.	Toolkits and guides	The Child Care Data Viewer, available to CCDF State and Territory grantees, is a software tool to

Resource	Type	Description
		help improve the quality of ACF-801 data and enhance its utilization.
Child Care Deserts in New York State: Prekindergarten Implementation and Community Factors Related to the Capacity to Care for Infants and Toddlers. Sipple, J. W., McCabe, L., and Casto, H. G. (2020). Early Childhood Research Quarterly 51 (pp. 167-177).	Report	This paper assesses the infant and toddler child care capacity of communities across New York State over 9 years (2007-2016), using data from the NY State Education Department, the NYS Office of Children and Family Services, and the National Center for Education Statistics definitions of locale. Using negative binomial regression, we see overall stability in capacity for infant and toddler child care but important variation by demographic factors and geography.
Considerations in preparing to analyze administrative data to address child care and early education research questions (OPRE Research Brief # 2017-18). Lin, V., Maxwell, K., & Forry, N. (2017). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Reports and articles	The resource can help researchers prepare for issues that may arise when using administrative data in a research project.
Data Activities Inventory: Leader's Level. National Center for Program Management and Fiscal Operations. (n.d.). Waltham, MA: National Center for Program Management and Fiscal Operations.	Toolkits and guides	This is an inventory that leaders can use to determine their teams' proficiency levels with each of the four data activities: prepare, collect, aggregate and analyze, and use and share.
Data collection and use in early childhood education programs: Evidence from the Northeast Region (REL 2015-084). Zweig, J., Irwin, C. W., Fuccillo, J,. & Cox, J. (2015). Washington, DC: National Center for Education Evaluation and Regional Assistance.	Reports and articles	This study focuses on preschools' collection and use of administrative data on dosage, classroom quality, and early learning outcomes.*
Data in Head Start and Early Head Start: Creating a culture that embraces data: Guide for users and trainers. National Center on Program Management and Fiscal Operations. (n.d.). Washington, DC: National Center on Program Management and Fiscal Operations.	Toolkits and guides	An online series on using data in Head Start and Early Head Start. The module includes an introduction and five interactive activities. Each activity includes scenarios that are based on real-life examples from actual Head Start and Early Head Start programs.
Data in Head Start and Early Head Start: Tips for embracing data. National Center on Program Management and Fiscal Operations. (n.d.). Washington, DC: National Center on Program Management and Fiscal Operations.	Fact sheets and briefs	This resource provides a list of tips for building a data culture in Head Start programs.
Data use for continuous quality improvement: What the Head Start field can learn from other disciplines: A literature review and conceptual framework (OPRE Report No. 2014-77). Derrick, T. M., Sandstrom, H., Pettijohn, S. L., Fyffe, S., & Koulish, J. (2014). Washington, DC: US Administration for	Reports and articles	This report summarizes research on the processes, facilitators, and impediments to data use for continuous quality improvement; develops a conceptual framework representing the elements of data use for continuous quality improvement; provides linkages between the disciplines from which the literature was drawn and the Head Start field; and suggests areas for future research.

Resource	Type	Description
Children and Families, Office of Planning, Research and Evaluation.		
Data Visualization for Data Use. Statewide Longitudinal Data Systems Grant Program. (2018). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	As stakeholders of SLDSs become more adept at using data in their work and for decisionmaking, SLDS programs in many states are expanding and evaluating their use of data visualization to continue to meet their users' demands for information. This spotlight examines the data visualization tools and processes used by SLDS programs in Michigan, Maryland, and Hawai'i. (author abstract)*
Determining the feasibility of using state early care and education administrative data (OPRE Research Brief # 2017-17). Lin, V., Maxwell, K., & Forry, N. (2017). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Reports and articles	The resource can help researchers and their state partners determine whether analyzing administrative data is feasible and appropriate for addressing their child care and early education research questions.
Developing a robust research agenda that the SLDS can support. Gosa, K. & Howe, C. (2015). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	This brief provides a step-by-step process for developing or improving a research agenda that the SLDS can support.
Disaggregated Data: Not Just a Box Checking Exercise. Data Quality Campaign, Learning Heroes, National Parent-Teacher Association. (2019). Washington, DC: Data Quality Campaign, National Parent-Teacher Association. Alexandria, VA: Learning Heroes.	Fact sheets and briefs	This brief shows how disaggregated data are key to identifying opportunity gaps and confronting barriers to student success. It also provides information for state leaders as they make sure that families have the data they need to ensure that their students get a high-quality, equitable education.
Dual Language Learner Data Gaps: The Need for Better Policies in the Early Years. Carnock, J. (2018). Washington, DC: New America.	Report	This report highlights current practices and proposes how states can better collect and use early childhood education (ECE) data in three areas: (1) tracking dual language learner (DLL) enrollment, (2) evaluating program quality, and (3) assessing kindergarten readiness.
Evaluating early childhood program access: An analysis of participation data for lower income children, children of color and American Indian children from the Minnesota Early Childhood Longitudinal Data System. Children's Defense Fund--Minnesota. (2017). St. Paul, MN: Children's Defense Fund--Minnesota.	Reports	This report summarizes findings from analyses of Minnesota's Early Childhood Longitudinal Data System (ECLDS) data on access to early childhood programs for children of color and low-income children enrolled in the Minnesota Family Investment Program (MFIP) and food programs.*
Family-Centered Measures of Access to Early Care and Education. Davis, L., Lee, W. F., & Sojourner, A. (2019). Early Childhood Research Quarterly 47, no. 2 (pp. 472-486).	Paper	This study proposes new family-centered measures of access to early care and education (ECE) services with respect to quantity, cost, and quality and uses them to assess disparities in access across locations and socio-demographic groups in Minnesota. These distance-based measures use available geographic data to account for the fact that families can cross

Resource	Type	Description
		arbitrary administrative boundaries and thus better reflect the real experiences of families. Combining synthetic family locations simulated from Census demographic and geographic data and information on ECE provider locations, we calculate travel time between the locations of families with young children and ECE providers to measure families' access to providers of different types.
Focus on Integrated Early Care and Education Data. Rhode Island KIDS COUNT. (2018). Providence, RI: Rhose Island KIDS COUNT.	Report	This report provides an overview of a demonstration project conducted by Rhode Island KIDS COUNT that sought to use integrated data from early care and education programs to look at a population of children with high needs (young children who were maltreated in 2015) and their participation in high-quality early learning programs. (author abstract)*
How States Use Data to Inform Decisions. The PEW Charitable Trusts. (2018). Philadelphia, PA: The PEW Research Center.	Report	This report uses interviews from state leaders across the US and reviewed laws, documents, and policies to evaluate how administrative data are being used in all 50 states.*
IDEA Part C and Part B 619 state data systems: Current status and future priorities. Derrington, T., Spiker, D., Hebbeler, K., & Diefendorf, M. J. (2013). Menlo Park, CA: DaSy Center.	Reports and articles	The Center for IDEA Early Childhood Data Systems, the DaSy Center, was funded by the Office of Special Education Programs (OSEP) to provide technical assistance (TA) to states to support them in developing or enhancing Part C and Part B Section 619 (Part B 619) data systems. TA also will assist Part C and Part B 619 state agencies in participating in the development of integrated early childhood data systems and longitudinal data systems in their states. To inform the DaSy Center's work, the Center collected information about the current status of Part C and Part B 619 state data systems, priorities for improvement, and areas where the states would like TA. State Part C and Part B 619 coordinators, their respective data managers, and other state staff completed an online survey over the summer of 2013. Responses were obtained from 94% of the 50 states, DC, and Puerto Rico for Part C and from 96% for Part B 619. This report summarizes what was learned about the current status of Part C and Part B 619 data systems and where states are in moving to improve their data systems. (author abstract)
Implementing a research agenda. Gosa, K., & Howe, C. (2016). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	This brief describes key steps and considerations for communicating and carrying out a research agenda that a state longitudinal data system can support. The brief also discusses how to ensure that the research agenda is sustainable over time. The guidance in this brief is intended for states that have already developed a research agenda but have not taken steps to implement it.

Resource	Type	Description
Incorporating Spatial Analyses into Early Care and Education Research (OPRE Research Brief #2019-88). Lin, V., & Madill, R. (2019). Washington, DC: Office of Planning, Research, and Evaluation Administration for Children and Families, US Department of Health and Human Services.	Fact sheets and briefs	This resource first highlights three uses of spatial analysis that are common in ECE research: (1) categorizing geographical areas, (2) creating variables using spatial information, and (3) analyzing spatial patterns and associations. This is not an exhaustive list of all that can be done with spatial analysis; rather, it is a summary of common approaches in ECE research that are most suitable for ECE researchers new to spatial analysis. (author abstract)
INQUIRE data toolkit (OPRE Report No. 2013-58). Friese, S., King, C., & Tout, K. (2013). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Methods	The INQUIRE Data Toolkit was designed to provide tools to support effective data collection and the use of data to answer important policy and reporting questions through the use of common data elements.
Making effective use of postsecondary data in K–12 education settings. Heinkel, L., Hallgren, K., Gill, B., & Shoji, M. (2015) Princeton, NJ: Mathematica Policy Research.	Fact sheets and briefs	This issue brief (1) summarizes the uses and limitations of postsecondary data in raw form, (2) describes three sophisticated ways that K–12 officials can use these data to inform K–12 policy and practice, and (3) discusses the importance of dissemination.
Making use of integrated data: State examples of how ECIDS data can inform policies and practices. King, C., Epstein, D., Hogenson, S., & Larson, A. (2017). Bethesda, MD: Child Trends	Webinars and presentations	This webinar describes how two states are using their data and reports from their Early Childhood Integrated Data Systems (ECIDS) to inform state policies and programs.*
Mapping Answers to Child Care Questions: Comparing Your Administrative Data with Other Data: A Webinar for Child Care Development Fund Lead Agencies. Isaacs, J., Greenberg, E., Dorn, C., & Pergande, K. (2020). Washington, DC: Office of Planning, Research, and Evaluation Administration for Children and Families, US Department of Health and Human Services.	Webinars and presentations	This webinar supports Child Care and Development Fund (CCDF) Lead Agency staff and partners in mapping access to care across their state or other region. The webinar covers (1) a review of basic mapping terms, concepts, and resources; (2) a presentation from a research partner in Pennsylvania on mapping child care deserts; and (3) a presentation from CCDF Lead Agency staff in Wisconsin on mapping trends in provider locations across the state.*
Measuring Child Care Supply Using the Enhanced Two-Stage Floating Catchment Area Method. Malik, R., Lee, W. F., Sojourner, A., and Davis, E. E. (2019). Washington, DC: Center for American Progress.	Report	This brief describes the methodology to measure child care supply using distance-based measures, based on a 2019 paper by Davis, Lee, and Sojourner. (The 2019 paper, "Family-Centered Measures of Access to Early Childhood Education," is also included among this list of resources).
Measuring employment and income for low-income populations with administrative and survey data. Hotz, V. J., & Scholz, J. K. (2002). In M. Ver Ploeg, R. A. Moffitt, & C. F. Citro (Eds.), Studies of welfare populations: Data collection and research issues: Panel on Data and Methods for Measuring the Effects of Changes in Social Welfare Programs (pp. 275–	Reports and articles	In this paper we assess the strengths and weaknesses of using survey or administrative data to measure the employment and income of low-income populations. We review a number of studies, most of which have been conducted in the past 10–15 years, (3) that assess the comparability of income and employment measures derived from surveys and administrative records.

Resource	Type	Description
315). Washington, DC: National Academy Press.		
PFS + ECE: Using data to inform decisionmaking: Pay for Success Early Childhood Education toolkit report #2. Sandstrom, H. & Greenberg, E. (2016). Washington, DC: Urban Institute.	Reports and articles	Data play an integral role in pay for success (PFS) projects. Knowing the kinds of data needed for a successful project, how to collect them, and how they should be used may seem straightforward. But the complexity of early childhood outcome measures and data systems can create challenges.
Planning, conducting, and documenting data analysis for program improvement. DaSy Center, & Early Childhood Technical Assistance Center. (2015). Menlo Park, CA: DaSy Center.	Toolkits and guides	This document was developed to help technical assistance (TA) providers and state staff define and limit the scope of data analysis for program improvement efforts, including the State Systemic Improvement Plan (SSIP); develop a plan for data analysis; document alternative hypotheses and additional analyses as they are generated; and summarize findings and document results.
Putting administrative data to work: A toolkit for state agencies on advancing data integration and data sharing efforts to support sound policy and program development. Duran, F., Wilson, S. B., & Carroll, D. (2005). Farmington, CT: Child Health and Development Institute of Connecticut.	Methods	The ultimate goal of this toolkit is to help state agencies strengthen their data and research infrastructure. It provides an assessment tool to help agencies determine their enhancement needs as well as guidelines on how to approach implementation of several different infrastructure-enhancing strategies. The toolkit is not intended to function as a technical design manual, but rather seeks to help agencies identify necessary components for successful implementation of the strategy or strategies they choose to pursue. The guidance provided within the toolkit is based on best practice and lessons learned from those that have worked on similar efforts, both nationally and in Connecticut. (author abstract)*
Putting the pieces together: New York early learning program data systems. Kreader, J., & Schneider, W. (2011). Rensselaer, NY: New York State Council on Children and Families, Early Childhood Advisory Council.	Reports and articles	An inventory of the elements and accessibility of early education and care data systems maintained by New York State and New York City agencies in the areas of: (1) program/provider supply; (2) enrollment, participant demographics, and demand; (3) early childhood workforce; (4) program quality; (5) outcomes for children and families; and (6) costs and financing; with recommendations for steps toward the development of integrated comprehensive early childhood data systems.*
SLDS Data Analysis Tip Sheet. Statewide Longitudinal Data Systems Grant Program. (2018). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	For SLDS data analyses to be useful for leaders and policymakers, they must be designed soundly and presented in ways that align with users' information needs. This document offers tips for planning, conducting, and sharing education data analyses that can inform policy decisions and allow stakeholders to take action. (author abstract)*

Resource	Type	Description
SLDS Issue Brief: Data Stories for the Data Curious. Statewide Longitudinal Data Systems Grant Program. (2019). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	This brief describes how Minnesota created the MN Kids Explorer data tool and a data story to help engage busy stakeholders in their statewide longitudinal data system (SLDS).*
Statewide Longitudinal Data Systems Grant Program resource database. National Center for Education Statistics. (n.d.). Washington, DC: National Center for Education Statistics.	Toolkits and guides	The Statewide Longitudinal Data Systems Grant Program offers a variety of support resources.
Subsidized Child Care in Massachusetts: Exploring Geography, Access, and Equity. (2018). Waltham, MA: Institute for Child, Youth, and Family Policy, Brandeis University, Massachusetts, Child Care Research Partnership, and diversitydatakids.org.	Report	This report summarizes five years of geographic and spatial research on access to federally subsidized child care for low-income working families in Massachusetts.*
The Coronavirus Will Make Child Care Deserts Worse and Exacerbate Inequality. Malik, R., Hamm, K., Lee, W. F., Davis, E. E., and Sojourner, A. (2020). Washington, DC: Center for American Progress.	Report	This report highlights estimates by the Center for American Progress that the country could lose half of its licensed child care capacity without government intervention. The analysis provides a tool (found at www.childcaredeserts.org) that illustrates the state of child care supply before the novel coronavirus pandemic to show how child care closures will disproportionately affect some communities.
The feasibility of using electronic health records (EHRs) and other electronic health data for research on small populations. Devers, K., Gray, B., Ramos, C., Shah, A., Blavin, F., & Waidmann, T. (2013). Washington, DC: US Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation.	Reports and articles	This report explores the feasibility of using electronic health record (EHR) and other electronic health data for research on small populations.
The nuts and bolts of working with administrative data: Linking data across multiple states and multiple data sources. Henly, J. (2015). Paper presented at the Office of Planning, Research, and Evaluation meeting, The Promises and Challenges of Administrative Data in Social Policy Research, Washington, DC.	Webinars and presentations	This presentation uses the Illinois-New York child care research partnership as an example to explain how to use administrative data to answer policy-relevant research questions through linking administrative data across states.*
The role of administrative data within economic evaluation. Crowley, M. (2015). Paper presented at the Office of Planning, Research, and Evaluation meeting, The Promises and Challenges of Administrative Data in Social Policy Research, Washington, DC.	Webinars and presentations	This presentation details possible administrative datasets that can be used to perform a cost analysis, cost-effectiveness, cost-savings analysis, or benefit-cost analysis with an example.*
The role of the policy context in using and understanding administrative data. Davis, E. (2015). Paper presented at the Office of	Reports and articles	This case study highlights AVANCE Houston, a Head Start program, that partnered with the Houston Independent School District to

Resource	Type	Description
Planning, Research, and Evaluation meeting, The Promises and Challenges of Administrative Data in Social Policy Research, Washington, DC.		understand children's literacy and math skills in early elementary school and how they compared with other children from low-income families.*
The Use of Integrated Data to Inform Quality Pre-K Expansion in Philadelphia. LeBoeuf, W., Barghaus, K., Henderson, C., Coe, K., Fantuzzo, J., & Moore, J. (2017). Philadelphia, PA: Penn Child Research Center.	Brief	This research brief describes how integrated administrative data from the City of Philadelphia's CARES data system were used to inform the expansion of pre-K services in the City of Philadelphia. It provides a model for other states and municipalities seeking to use integrated data to inform policymaking, particularly for young children and their families.
Understanding data use for continuous quality improvement in Head Start: Preliminary findings (OPRE Report #2015-33). Derrick, T. M. (2015). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Reports and articles	This brief summarizes common themes across two studies of local Head Start programs and a multidisciplinary literature review. Preliminary evidence shows that Head Start programs experience similar challenges and facilitators to data use for continuous quality improvement as those experienced in other fields.
Unequal availability of Head Start: How Neighborhood Matters. Hardy, E., Joshi, P. Geronimo, K., Huber, R., Acevedo-Garcia, D. (2020). Waltham, MA: Diversity Data Kids.	Brief	This brief explores how residential segregation shapes inequitable access to Head Start programs at the neighborhood level, by race/ethnicity, for two time periods (2014 and 2019). National and state level patterns are discussed.
Using administrative data for research: A companion guide to A descriptive analysis of the principals workforce in Florida schools (REL 2015-049). Folsom, J. S., Osborne-Lampkin, L., & Herrington, C. D. (2014). Washington, DC: National Center for Education Evaluation and Regional Assistance.	Reports and articles	This companion guide describes the methods used to extract information from the Florida Department of Education database for data on school leaders and transform it into an understandable structure for use. The report focuses on methods of data cleaning, merging, and analysis in order to help those interested in analyzing similar databases in other states or contexts.*
Using aggregate administrative data in social policy research (OPRE Report #2016-91). Jacob, R. (2016). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Reports and articles	This report provides considerations for using aggregate administrative data to analyze policy-relevant questions when it may be too difficult or costly to obtain individual-level administrative data.
Using Integrated Data to Answer Critical Policy Questions: Lessons Learned in Three States. King, C., Hogenson, S., Walker, B., & Barrett, L. (2018). Bethesda, MD: Child Trends.	Webinars and presentations	This webinar shares lessons learned and recommendations from a new report released by the Early Childhood Data Collaborative. The report highlights examples of integrated data systems (IDS) that were used to produce policy research reports addressing key child advocacy issues.*
Using integrated data to examine access to services for children of color: State spotlight on Minnesota. Early Childhood Data Collaborative. (2018). Bethesda, MD: Early Childhood Data Collaborative.	Reports	This state spotlight focuses on recent work in Minnesota, where state agency leaders and the Children's Defense Fund-Minnesota are working together to use and share early care and education data.*

Resource	Type	Description
Using linked survey and administrative data to better measure income: Implications for poverty, program effectiveness and holes in the safety net (AEI Economic Policy Working Paper 2015-10). Meyer, B. D., & Mittag, N. (2015). Washington, DC: American Enterprise Institute for Public Policy Research.	Reports and articles	The report examines the consequences of underreporting transfer programs in household survey data for low-income populations. The report also focuses on the Current Population Survey (CPS), the source of official poverty and inequality statistics. Administrative data for food stamps, TANF, General Assistance, and subsidized housing from New York State are linked to the CPS at the individual level.
Using your state's linked data to develop and answer critical questions. Copa, N., Larson, A., Petrosky, C., & Whiteman, A. (2017). Menlo Park, CA: DaSy Center.	Webinars and presentations	This session by the Center for IDEA Early Childhood Data Systems (DaSy) shares Minnesota's journey using state data to answer critical questions, details steps for analyzing state-level data, and demonstrates the capabilities of CEDS myConnect to map elements for data analysis.*
Video: Minnesota's data story. Early Childhood Data Collaborative. (2018). Bethesda, MD: Early Childhood Data Collaborative.	Video	This video highlights the benefits of Minnesota's Early Childhood Longitudinal Data System, according to staff at local and state organizations.*

Managing Administrative Data

Below are resources related to how to store, organize, prepare, and maintain the quality of administrative data.

Note: An asterisk in the description section indicates that a state example is included.

Resource	Type	Description
Avoid the pitfalls: Benefits of formal Part C data system governance. Mauzy, D., Bull, B., & Gould, T. (2016). Menlo Park, CA: DaSy Center.	Fact sheets and briefs	This brief promotes formal data governance for Part C data by describing lessons learned from other industries; outlining the risks of informal data governance and benefits of formal data governance; and providing action steps to support state Part C systems in establishing or improving formal data governance.
Best practices in data governance and management for early care and education: Supporting effective quality rating and improvement systems (OPRE Research Brief No. 2014-35). Weber, R. & Iruka, I. (2014). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Reports and articles	As a centerpiece of state early care and education (ECE) activities, Quality Rating and Improvement Systems (QRIS) serve as an example of the how an effective ECE data system can support planning, operations, service delivery, monitoring and evaluation. Intentional and rigorous data management practices are essential for data gathered exclusively for the QRIS (such as program observation scores), as well as for external data accessed by the QRIS (such as workforce registry data). Implementing strong ECE data governance and management practices will ensure the quality of QRIS data and thus the integrity of the QRIS itself. Incomplete, inaccurate, or unreliable data can introduce errors in the ratings that can threaten the credibility of the QRIS and have negative consequences for ECE and school-age care (ECE-SAC) programs through skewed reimbursement rates and inaccurate marketing tied to incorrect ratings. The purpose of this brief is to illustrate the need for and benefits of building strong ECE data governance structures and implementing system-wide data management policies and practices, using the example of QRIS. (author abstract)
Best practices in ensuring data quality in quality rating and improvement systems (QRIS) (OPRE Research Brief No. 2014-47). Friese, S., Tout, K. & Kirby, G. (2014). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Fact sheets and briefs	Collecting and using data are core activities in a well-functioning Quality Rating and Improvement System (QRIS). Yet, data used in a QRIS are frequently housed in different systems, using different data management techniques. Ensuring a high level of QRIS data quality involves implementing a number of best practices drawn from established practices used in other fields. The purpose of this brief is to describe the specific strategies QRIS data stakeholders can use to improve upon the collection, management, and

Resource	Type	Description
		dissemination of QRIS data. The audience for this brief includes QRIS program administrators, technical assistance providers, data managers, and researchers. This brief is structured around the five stages of the Data Lifecycle: planning, collection, processing, management and distribution. Best practices are recommended for each stage of the Lifecycle. (author abstract)
Building a data sharing partnership with other organizations (Data Direction 4, Publication # 2016-34). Epstein, D., Maxwell, K. L., & Lin, V. K. (2016). Bethesda, MD: Child Trends.	Reports and articles	This report provides practical steps for how to establish a data-sharing partnership between two programs or organizations.
Child care data tracker. United States. Office of Child Care. (n.d.). Washington, DC: US Office of Child Care.	Toolkits and guides	The Child Care Data Tracker (Tracker), available to tribes and territories, is a comprehensive case management tool designed to support the collection, management, and utilization of the case-level information needed for the generation of the required ACF-700 and ACF-801 reports.
Communicating the value of data governance. Chatis, C. & Gosa, K. (2017). Washington, DC: National Center for Education Statistics.	Brief	This issue brief discusses common benefits that programs and organizations can gain from participating in data governance and how SLDS teams can define the value based on those benefits. It also covers how to craft messages that communicate the value and keep those messages relevant and central to the state's work.
Core data elements for early childhood and school-age registries. National Registry Alliance. (2013). Washington, DC: National Registry Alliance	Fact sheets and briefs	The 2013 Core Data Elements for Early Childhood and School-Age Registries builds on and synthesizes the prior work and captures current trends in registry data collection processes and advancements in data systems planning.
Data Activities Inventory: Leader's Level. National Center for Program Management and Fiscal Operations. (n.d.). Waltham, MA: National Center for Program Management and Fiscal Operations.	Toolkits and guides	This is an inventory that leaders can use to determine their teams' proficiency levels with each of the four data activities: prepare, collect, aggregate and analyze, and use and share.
Data Culture Toolkit: Supporting state and local data use. DaSy Center. (2018). Menlo Park, CA: DaSy Center.	Toolkit	The DaSy Data Culture Toolkit is a resource containing information, guidance, and templates to assist Part C and Part B 619 program staff with building effective data teams and supporting conditions for a culture of data use at the state and local levels. The section on assessing and improving data quality may be particularly useful.
Data Governance and Management Toolkit. The DaSy Center. (2018). Menlo Park, CA: The DaSy Center.	Toolkit	The DaSy Data Governance and Management Toolkit is a resource containing information, guidance, and templates to assist Part C and Part B 619 program staff with creating or enhancing their data governance policies and procedures. For each data governance topic, an overview, consideration questions, and a fillable Microsoft Word template

Resource	Type	Description
		are provided. The Toolkit Introduction (first tile) provides general information on how to use the toolkit. (author abstract)
Data governance and stewardship. Privacy Technical Assistance Center. (2011). Washington, DC: Privacy Technical Assistance Center.	Fact sheets and briefs	This brief provides guidance on how to successfully manage complex data systems by establishing a comprehensive data governance approach. Data governance principles discussed in this paper apply to a large number of audiences and can be used to improve data management of systems spanning pre-school through postsecondary education and into the workforce.
Data Governance Checklist. Privacy Technical Assistance Center. (2011). Washington, DC: Privacy Technical Assistance Center.	Checklists	This checklist is designed to assist stakeholder organizations with establishing and maintaining a successful data governance program by summarizing the key data privacy and security components of such a program and listing specific best practice action items.
Data Governance for Two-Generation Programs. Annie E. Casey Foundation. (2019). Baltimore, MD: Annie E. Casey Foundation.	Toolkit	This tool kit aims to help two-generation initiatives—programs that serve children and families together—harness data in their decision making, funding strategy, and service delivery. Supplemental resources include a guiding framework, a brief that identifies elements of data capacity, and an infographic that charts progress through the tool kit. Considered together, these resources guide programs and organizations in refining practices for managing and using data; creating a data governance protocol; and using data to design programs, meet performance outcomes, and collaborate across departments. (author abstract)
Data stewardship: Managing personally identifiable information in student education records (SLDS Technical Brief 2, NCES 2011-602). National Center for Education Statistics. (2010). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	This Statewide Longitudinal Data Systems (SLDS) Technical Brief focuses on data stewardship, which involves each organization's commitment to ensuring that privacy, confidentiality, security, and the appropriate use of data are respected when personally identifiable information is collected. Data stewardship involves all aspects of data collection, from planning, collection and maintenance to use and dissemination. The Brief also discusses internal control procedures that should be implemented to protect personally identifiable information, including the use of unique student identifiers and linking codes, workforce security, authorization for access, role based access to student record data, permitted uses, and the handling of data breaches. This Brief concludes with a discussion of accountability and auditing, including an overview of the types of audit activities that can be implemented to ensure

Resource	Type	Description
		that all stages of data stewardship have been successfully implemented.
Developing collaborative partnerships with state agencies to strengthen research using early care and education administrative data (OPRE Research Brief# 2017-16). Maxwell, K. & Lin, V. (2017). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Reports and articles	The resource provides considerations for building strong partnerships between researchers who want to analyze administrative data and state partners who oversee the administrative data.
Developing Data Sharing Agreements to Use Early Care and Education Administrative Data Webinar. Maxwell, K., Lin, V-K., Shaw, S., Joshi, P., & Lazarte Alcala, N. (2018). Bethesda, MD: Child Trends.	Webinars and presentations	These slides share advice and lessons learned fron early care and education research from both inside and outside state agencies who have developed data sharing agreements.*
Developing Effective Data Policies and Processes. Statewide Longitudinal Data Systems Grant Program. (2019). Washington, DC: National Center for Education Statistics.	Toolkit	This guide describes the differences between data policies and processes, their role in data governance, and common content areas for policies and processes. It also outlines steps for developing strong data policies and for implementing them effectively. (author abstract)
Early Childhood Data Definitions: A Guide for Researchers Using Administrative Data. King, C., & Maxwell, K. (2017). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Fact sheets and briefs	This is a resource for researchers using administrative data collected by government and/or private organizations to answer research questions related to early childhood services, supports, or initiatives. Our goal is to increase researchers' awareness of existing resources that can help them define variables to support secondary analysis of early childhood administrative data.
Early Childhood Data Governance in Action! An Introduction. Cochenour, M., Chatis, C., & Irvine, S. (n.d.). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	Recognizing that social and academic success is shaped long before students enter the elementary school classroom, states are working to increase access to high-quality early childhood programs. Supporting that work, Early Childhood Integrated Data Systems (ECIDS) allow agencies and programs to efficiently collect and use robust information about state and local early childhood programs, workforce, and child outcomes. As states work to integrate information across these programs--including state preschool programs, Head Start and Early Head Start, Early Intervention, Preschool Special Education, and private programs--data governance is critical to success. Data governance provides a means to establish a common vision for early childhood data use in the state, with key policy and program decisions supporting that vision. Further, when data governance is effectively established, the quality and security of data collected, reported, and used by early childhood programs and agencies is enhanced; staff burden is reduced; and

Resource	Type	Description
		communication, collaboration, and relationships across the various agencies, programs, and information technology (IT) staff is improved. This introduction defines data governance for an ECIDS, identifies who should be involved in it, and describes their roles and responsibilities. It is intended to support states in beginning the process of developing their early childhood data governance. (author abstract)
Early childhood data governance in action!: Initial steps to establish data governance. Chatis, C., Cochenour, M., & Irvine, S. (n.d.). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	Data governance provides a means to establish a common vision for early childhood data use in the state, with key policy and program decisions supporting that vision. Further, when data governance is effectively established, the quality and security of data collected, reported, and used by early childhood programs and agencies is enhanced; staff burden is reduced; and communication, collaboration, and relationships across the various agencies and programs and information technology (IT) staff are improved. This document describes the initial, concrete steps necessary to establish data governance for an early childhood integrated data system (ECIDS). It is intended to support states beginning the process of developing their early childhood data governance program.
Early Childhood Data Systems: Responding to COVID-19 and Building for the Future. (2020). Washington, DC: Data Quality Campaign.	Fact sheet	States can benefit from data to better understand the landscape of local early childhood services—and about resources needed to help families access those services. This brief, written in June 2019 during the early stages of the COVID-19 crisis, explores steps state leaders can take to develop infrastructure, engage with communities, and leverage federal funds to support students in early childhood and beyond.
Early Childhood Integrated Data Systems Toolkit. ochenour, M., Chatis, C., Sellers, J., & Taylor, R. (2014). Washington, DC: National Center for Education Statistics.	Toolkits and guides	The SLDS Early Childhood Integrated Data System Toolkit was designed for use by any state regardless of where it is in the process of developing an ECIDS. The Toolkit has seven components: (1) Purpose and Vision, (2) Planning and Management, (3) Stakeholder Engagement, (4) Data Governance, (5) System Design, (6) Data Use, and (7) Sustainability. Each component has a set of key indicators that describe the "what" is ideal for the specific component and each indicator has elements that discuss "how" to accomplish the "what" outlined in the indicator.
Engaging an external research partner to help use linked data (Data Direction 3, Publication # 2016-33). Lin, V. K., Epstein, D., & Maxwell, K. L. (2016). Bethesda, MD: Child Trends.	Reports and articles	This report details steps for identifying and negotiating a partnership with an external research partner to help local early care and education programs use linked data.

Resource	Type	Description
From compliance to service: Evolving the state role to support district data efforts to improve student achievement. Data Quality Campaign. (2011). Washington, DC: Data Quality Campaign.	Reports and articles	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.
Help Ensure Effective Data Governance and Management: Use the Updated DaSy Toolkit. Miceli, M., Bernstein, & Walsh, S. (2018). Menlo Park, CA: The DaSy Center.	Webinars and presentations	This presentation includes information on the importance of formal data governance policies and procedures to state agencies. It also includes the current federal data governance management activities and how to use the DaSy Data Governance and Management Toolkit. (author abstract)
How Policymakers Can Support Early Childhood Data Governance. King, C., & Perkins, V. (2019). Bethesda, MD: Child Trends.	Fact sheets and briefs	This brief highlights steps for policymakers to support the establishment of strong early childhood governance structures to increase access to early childhood data.*
IDEA Part C and Part B 619 state data systems: Current status and future priorities. Derrington, T., Spiker, D., Hebbeler, K., & Diefendorf, M. J. (2013). Menlo Park, CA: DaSy Center.	Reports and articles	The Center for IDEA Early Childhood Data Systems, the DaSy Center, was funded by the Office of Special Education Programs (OSEP) to provide technical assistance (TA) to states to support them in developing or enhancing Part C and Part B Section 619 (Part B 619) data systems. TA also will assist Part C and Part B 619 state agencies in participating in the development of integrated early childhood data systems and longitudinal data systems in their states. To inform the DaSy Center's work, the Center collected information about the current status of Part C and Part B 619 state data systems, priorities for improvement, and areas where the states would like TA. State Part C and Part B 619 coordinators, their respective data managers, and other state staff completed an online survey over the summer of 2013. Responses were obtained from 94% of the 50 states, DC, and Puerto Rico for Part C and from 96% for Part B 619. This report summarizes what was learned about the current status of Part C and Part B 619 data systems and where states are in moving to improve their data systems. (author abstract)
Interagency Data Governance: Roles and Responsibilities. Statewide Longitudinal Data Systems Grant Program. (2019). Washington, DC: National Center for Education Statistics.	Fact sheets and Briefs	Data governance includes establishing representative governing bodies that are responsible for developing and implementing data policies and processes. This publication describes the roles and responsibilities involved in an interagency data governance program, including critical ongoing collaboration with IT representatives. (author abstract)
Issues in accessing and using administrative data (OPRE Report #2017-24). Maxwell, K. (2017). Washington, DC: US Administration for	Reports and articles	This report details issues in accessing and using administrative data for social policy research,

Resource	Type	Description
Children and Families, Office of Planning, Research and Evaluation.		including access, relationship-building, confidentiality, and capacity-building.
Mapping data flows: Checklist (PTAC-CL-7). Privacy Technical Assistance Center, & DaSy Center. (2015). Washington, DC: Privacy Technical Assistance Center.	Fact sheets and briefs	The purpose of the checklist is to provide steps to understand data flows, sources, and elements in a data system helps to determine which laws apply to which types of elements. Mapping also helps to understand the data and communicate about data-related issues more effectively, both internally and externally.
Maryland: Establishing partnerships to build data use capacity . Ruggiero, T., Gupta, S., Nicholas, A., & Mauzy, D. (2016). Menlo Park, CA: DaSy Center.	Reports and articles	This report describes the partnership between the Maryland State Department of Education (MSDE) and the Johns Hopkins University Center for Technology in Education to build a statewide longitudinal data system with linkages across early intervention, early childhood special education, school-age special education, and general education. The brief also offers guiding questions for other state agencies to use when pursuing partnerships with institutions of higher education.*
Opportunities through State Agency Research Partnerships for Using Administrative Data to Support Early Care and Education (OPRE Research Brief #2018-53). Lin, V., King, C., Maxwell, K., & Shaw, S. (2018). Bethesda, MD: Child Trends. Washington, DC: Office of Planning, Research, and Evaluation Administration for Children and Families, US Department of Health and Human Services.	Reports and articles	The report provides examples of how partnerships have used administrative data to address questions about pre-K, child care quality, access, and child care subsidies, and other topics of interest to states. In this report, members of research partnerships describe the benefits and challenges of partnerships and offer tips for sustaining them.*
Roadmap for Cross-Agency Data Governance. Data Quality Campaign. (2015). Washington, DC: Data Quality Campaign.	Fact sheets and briefs	This roadmap provides recommendations for states who are looking to develop and implement a high-quality cross-agency data governance committee.
Roadmap for cross-agency data governance: Key focus areas to ensure quality implementation . Data Quality Campaign. (n.d.). Washington, DC: Data Quality Campaign.	Toolkits and guides	This roadmap provides recommendations for states who are looking to develop and implement a high-quality cross-agency data governance committee.
Single Agency Data Governance: Roles and Responsibilities. Statewide Longitudinal Data Systems Grant Program. (2019). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	Data governance includes establishing representative governing bodies that are responsible for developing and implementing data policies and processes. This publication describes the roles and responsibilities involved in a single-agency data governance program, including critical ongoing collaboration with IT representatives. (author abstract)
SLDS Issue Brief: Data Governance and IT: Tips for Communicating about Education Data Requirements. Chatis, C., Gosa, K., Abend, M., Cherry, T., Ereth, J., Hedani, S., Korsmi, T., Ostgaard, G., Petrosky, C., Wakefield, L., Piatt,	Brief	Successful education data systems depend on developing a comprehensive set of requirements covering how the system will be constructed, managed, and used. This brief provides guidance for data governance and IT teams on

Resource	Type	Description
M. L., and Yedlin, D. (2020). Washington, DC: National Center for Education Statistics at IES.		communicating effectively about the requirements for education data systems and tools, including relevant content, standards, protections, and use.
SLDS topical webinar summary: Identity management approaches: Protecting access while serving multiple stakeholders. Rodriguez, B., Gibson, N., & Swiggum, R. (2012). Washington, DC: National Center for Education Statistics.	Webinars and presentations	This webinar summary is based on a webinar that addressed innovative use of local early childhood data. Dr. Cindy Decker, Director of Assessment and Accountability for the Tulsa Community Action Project (CAP), presented CAP's efforts to gather classroom quality data, child outcomes, and health and workforce data, as well as CAP's efforts to link these data to area public schools' data systems. Dr. Jason Sachs, Early Childhood Director for Boston Public Schools (BPS), presented Boston's efforts to track school readiness assessment data, classroom quality data, workforce data, and child outcomes from pre-K to the K12 system, as well as how the district has used these data to influence policy and program development.
State spotlight: Data sharing: Alaska: Improving referrals of victims of maltreatment to the IDEA Part C program. Derrington, T., Peters, M. L., Mauzy, D., & Ruggiero, R. (2015). Menlo Park, CA: DaSy Center.	Fact sheets and briefs	This spotlight describes how Alaska Part C improved the referral of children from Child Welfare to the Individuals with Disabilities Education Act (IDEA) Part C Program by an automated transfer of data from Child Welfare to Part C for substantiated cases of child maltreatment (i.e., child abuse and/or neglect).*
Strategies for handling 'opt out'. Gosa, K., Popp, J., & Rodriguez, B. (2016). Washington, DC: National center for Education Statistics.	Fact sheets and briefs	This brief provides an overview of the data collections and data uses that are often part of opt-out measures. It also examines strategies that states are developing to handle opt-out preferences in their SLDSs and ensure that data are properly managed.*
The ABCs of data dictionaries. Gould, T., Nicholas, A., Blandford, W., Ruggiero, T., Peters, M., & Thayer, S. K. (2014). Menlo Park, CA: DaSy Center.	Reports and articles	This overview of the basic components of a data dictionary is designed to educate and inform IDEA Part C and Part B 619 state staff about the purpose and benefits of having up-to-date data dictionaries for their data systems.
The art of the possible: Cross-agency data governance lessons learned from Kentucky, Maryland, and Washington. Data Quality Campaign. (2018). Washington, DC: Data Quality Campaign.	Reports and articles	The three data governance bodies featured in this paper reflect the unique context of each state and have broken down the silos that tend to exist among state agencies that use data to support education and workforce efforts.*
The status of state data dictionaries. Common Education Data Standards. (n.d.). Washington, DC: Common Education Data Standards.	Fact sheets and briefs	This paper looks at the status of state data dictionaries in order to highlight states' experiences, common challenges, and guidance for other states. The purpose of this paper is to provide a perspective on the development and implementation of state data dictionaries and to offer guidance to states. In addition, the paper considers how tools such as data dictionaries

Resource	Type	Description
		factor into larger data initiatives (e.g.,CEDS, EDFacts, and SLDS).*
The workforce data deficit: Who it harms and how it can be overcome. Whitebook, M., McLean, C., & Austin, L. J. E. (2018). Berkeley: University of California, Berkeley, Center for the Study of Child Care Employment.	Fact sheets and briefs	The resource describes the workforce data deficit and its consequences and outlines the features of comprehensive and sound data. The resource highlights several promising practices in the states to combat these challenges.*
Toolkit for communities using health data: How to collect, use, protect, and share data responsibly. National Committee on Vital and Health Statistics. (2015). Hyattsville, MD: National Center for Health Statistics.	Fact sheets and briefs	The Toolkit briefly introduces each important principle of data stewardship for communities using health data. It provides both broad background information and tips for data users. Descriptions of stewardship principles are provided, along with checklists for each principle.
Unique identifiers: Beyond K12. Cochenour, M., Duarte, S., Irvine, S., & Sellers, J. (2014). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	The purpose of this brief is to support early childhood integrated data systems leaders in understanding unique identification numbers (UID); communicating the benefit of assigning UIDs in early childhood; understanding possible approaches to assigning UIDs; and identifying key considerations in carrying out the work.
Using administrative data in social policy research (OPRE Report #2016-62). US Administration for Children and Families, Office of Planning, Research and Evaluation. (2016). Washington, DC: US Administration for Children and Families, Office of Planning, Research and Evaluation.	Fact sheets and briefs	This brief summarizes an Innovative Methods Meeting that was organized by OPRE in the fall of 2015 that considered the potential benefits and pitfalls of using administrative data for research purposes. Topics included: Promises and challenges; Balancing access to data with maintaining confidentiality; Innovative applications; Working with administrative data; Federal efforts and future directions.
Using CEDS: Data Governance. Common Education Data Standards. (n.d.). Washington, DC: US Department of Education.	Reports and articles	This paper focuses on how Common Education Data Standards (CEDS) can be used in the effort to clearly define protocols for effective data governance within an organization.
Who's in charge of my data?: Protecting data with effective data governance. Mauzy, D., Miceli, M., Arzamendia, K., & Sellers, J. (2017). Menlo Park, CA: DaSy Center.	Webinars and presentations	This presentation covers how states have developed a data governance structure with clearly written policies and procedures that support education data can help states.*

Data Confidentiality/Security

This final section includes resources related to best practices for implementing data security agreements and addressing confidentiality/privacy issues when using and reporting administrative data.

Note: An asterisk in the description section indicates that a state example is included.

Resource	Type	Description
Access and confidentiality issues with administrative data. Brady, H. E., Grand, S. A., Powell, M. A., & Schink, W. (2002). In M. Ver Ploeg, R. A. Moffitt, & C. F. Citro (Eds.), *Studies of welfare populations: Data collection and research issues: Panel on Data and Methods for Measuring the Effects of Changes in Social Welfare Programs* (pp. 220-274). Washington, DC: National Academy Press.	Reports and articles	In this paper we consider ways to facilitate researchers' access to administrative data collected about individuals and their families in the course of providing public benefits. In most cases, applicants to social welfare programs are required to disclose private information deemed essential to determining eligibility for those programs. Individuals who are otherwise eligible for services but who refuse to provide information may be denied those services. Most people forgo privacy in these circumstances; that is, they decide to provide personal information in order to obtain public benefits. They believe that they have little choice but to provide the requested information. Consequently, it is widely agreed that the uses of this information should be limited through confidentiality restrictions to avoid unwanted disclosures about the lives of those who receive government services.
Accessing SLDS Data: Innovative Solutions to State-Specific Security Controls. Statewide Longitudinal Data Systems Grant Program. (2020). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	This spotlight highlights two states, California and Louisiana, with laws that strongly regulate data access. It describes how their state education agencies have adapted their data management and data use procedures to comply with state requirements while continuing to meet their reporting and operational needs. (author abstract)
Barriers to using administrative data for evidence-building. US Office of Management and Budget. (2016). Washington, DC: US Office of Management and Budget.	Fact sheets and briefs	This white paper details many of the barriers to using administrative data for evidence-building and how resource and capacity concerns can constrain the functional access and use of data even when legal and policy issues are resolved. The paper also provides a case study on how these barriers interact with access to various sources of wage data for evidence-building purposes.
Best practices for data destruction (PTAC-IB-5). Privacy Technical Assistance Center. (2014). Washington, DC: Privacy Technical Assistance Center.	Fact sheets and briefs	This document provides an overview of various methods for disposing of electronic data, and discusses how these methods relate to legal requirements and established best practices for protecting student information.

Resource	Type	Description
Best Practices for Data Destruction. Privacy Technical Assistance Center. (2019). Washington DC: US Department of Education.	Toolkits and guides	The Data Destruction Document is a best practices guide on properly destroying sensitive student data after it is no longer needed. It details the life cycle of data and discusses various legal requirements relating to the destruction of data under FERPA, and examines a variety of methods for properly destroying data. The guide also discusses best practices for data destruction and provides some real-world examples of how to implement it within your organization. (author abstract)
Case study #5: Minimizing access to PII: Best practices for access controls and disclosure avoidance techniques (PTAC-CS-5). Privacy Technical Assistance Center. (2015). Washington, DC: Privacy Technical Assistance Center.	Fact sheets and briefs	The purpose of this document is to provide a case study to illustrate best practices for minimizing access to sensitive information with education data maintained in a statewide longitudinal data system.
Challenges in using administrative data: Legal, technical and political. Petrila, J. (2015). Paper presented at the Office of Planning, Research, and Evaluation meeting, The Promises and Challenges of Administrative Data in Social Policy Research, Washington, DC.	Webinars and presentations	This presentation acknowledges the various legal, technical, and political barriers faced when trying to access and use administrative data.
Confidentiality issues: Addressing questions about sharing data among organizations. Thornburg, K., & Rodriguez, B. (2014). Washington, DC: Early Learning Challenge Technical Assistance Program.	Fact sheets and briefs	This brief summarizes of a webinar on confidentiality issues faced by early childhood education programs that manage, view, and share data on children and/or interface with integrated and longitudinal data systems. It addresses select restrictions in place under Family Educational Rights and Privacy Act (FERPA) and the Health Insurance Portability and Accountability Act (HIPPA), and includes a list of commonly-asked questions and answers on the topic as well as a record of those asked and answered during the webinar.
Confidentiality toolkit: A resource tool from the ACF Interoperability Initiative. ACF Interoperability Initiative. (2014). Washington, DC: US Administration for Children and Families.	Toolkits and guides	The Administration for Children and Families (ACF) developed this Confidentiality Toolkit to help jurisdictions successfully navigate the delicate balance between privacy and security with the delivery of efficient and effective services. The Confidentiality Toolkit analyzes, explains and aids states and local jurisdictions in the navigation of a number of federal laws that impact the implementation of human services. Embedded throughout are success stories and sample documents from across the country from which jurisdictions using the Toolkit can borrow freely. This Toolkit has been developed for leaders in the human service field, to support their best efforts to share information across silos. (author abstract)

Resource	Type	Description
[Creating and managing a data governance entity (Data Direction 1, Publication # 2016-31)](#). Lin, V. K., Epstein, D., & Maxwell, K. L. (2016). Bethesda, MD: Child Trends.	Reports and articles	This report provides practical steps for how to establish a data governance structure.
[Data de-identification: An overview of basic terms](#). Privacy Technical Assistance Center, & DaSy Center. (2014). Washington, DC: Privacy Technical Assistance Center.	Fact sheets and briefs	This document is intended to assist early childhood stakeholders in maintaining compliance with privacy and confidentiality requirements under IDEA and FERPA. It reviews the terminology used to describe data de-identification as well as related concepts and approaches; provides general best practice de-identification strategies and statistical techniques to protect children against data disclosures; and identifies additional resources on applicable IDEA and FERPA requirements.
[Data Governance Checklist](#). Privacy Technical Assistance Center. (2011). Washington, DC: Privacy Technical Assistance Center.	Checklists	This checklist is designed to assist stakeholder organizations with establishing and maintaining a successful data governance program by summarizing the key data privacy and security components of such a program and listing specific best practice action items.
[Data Security Checklist](#). Privacy Technical Assistance Center. (2011). Washington, DC: Privacy Technical Assistance Center.	Checklists	This checklist is designed to assist stakeholder organizations with developing and maintaining a successful data security program by listing essential components that should be considered when building such a program, with focus on solutions and procedures relevant for supporting data security operations of educational agencies.
[Data sharing agreement checklist for IDEA Part C and Part B 619 agencies and programs](#). Privacy Technical Assistance Center, & DaSy Center (2014). Menlo Park, CA: DaSy Center.	Reports and articles	This 2014 document is an adaptation of the 2012 release of "Data Sharing Agreement Checklist" intended for K–12 audiences. Presented as a checklist, the document summarizes the requirements for the written agreements under the audit or evaluation exception that is specified in FERPA and that also applies to the IDEA for Part C early intervention and Part B 619 preschool special education.
[Guidelines for Developing Data Sharing Agreements to Use State Administrative Data for Early Care and Education Research (OPRE Research Brief #2018-67)](#) . Shaw, S., Lin, V., & Maxwell, K. (2018). Bethesda, MD: Child Trends. Washington, DC: Office of Planning, Research, and Evaluation Administration for Children and Families, US Department of Health and Human Services.	Fact sheets and briefs	This resource provides guidance for preparing data sharing agreements for administrative data. It builds on existing materials by pulling together relevant information from multiple sources into one document and sharing guidance from researchers with experience developing such agreements. It also includes examples of data sharing agreements (see Appendix A).
[Guidelines for developing data sharing agreements to use state administrative data for early care and education research (OPRE Research Brief No. 2018-67)](#). Shaw, S. H., Lin, V., & Maxwell, K. (2018). Washington, DC: US	Briefs	This resource describes components of a data sharing agreement, outlines steps in developing an agreement, and includes examples of data sharing agreements.*

Resource	Type	Description
Administration for Children and Families, Office of Planning, Research and Evaluation.		
Linking EHDI and Part C Data Webinar. Bernstein, H., Shaw, E., Walsh, S., Converse, A., Altmaier, F., Kerr, J., Culpepper, B., & Pennington, L. (2019). Menlo Park, CA: The DaSy Center.	Webinars and presentations	This webinar highlights stories from Part C Coordinators who have or are developing collaborative data sharing agreements that allow them to share Part C data with their Early Hearing Detection and Intervention Program (EHDI).*
NNIP'S Resource Guide to Data Governance and Security. Hendley, L., Gold, A., & Pettit, K. (2018). Washington, DC: National Neighborhood Indicators Partnership.	Reports and articles	To help groups improve their data policies and practices, this guide assembles lessons from the experiences of partners in the National Neighborhood Indicators Partnership network and similar organizations. The guide presents advice and annotated resources for: protecting privacy and human subjects, ensuring data security, and managing the data life cycle. While applicable for non-sensitive data, the guide is geared for managing confidential data, such as data used in integrated data systems or Pay-for-Success programs.
Nothing to Hide: Tools for Talking (and Listening) About Data Privacy for Integrated Data Systems. Future of Privacy Forum. (2018). Washington, DC: Future of Privacy Forum.	Toolkits and guides	This toolkit provides tools for integrating data for policy and program improvement in government setting. In addition to a step-by-step guide to communication and engagement on data privacy, the toolkit includes action-oriented appendices, including worksheets, checklists, exercises, and additional resources.
Policies for users of student data: A checklist (PTAC-CL-8). Privacy Technical Assistance Center. (2015). Washington, DC: Privacy Technical Assistance Center.	Fact sheets and briefs	The purpose of this checklist is to define a data use policy and provide best practices for using student data.
Privacy and confidentiality in the use of administrative and survey data. US Office of Management and Budget. (2016). Washington, DC: US Office of Management and Budget.	Reports and articles	This white paper reviews some of the most relevant US privacy laws and discusses how they provide a strong legal framework that governs Federal agencies, using the Census Bureau's Data Stewardship program as a case study. The paper then considers a range of protocols used by different agencies to provide researcher access to restricted data, such as the National Center for Education Statistics data licensing program.
Privacy and Security Considerations When Integrating Home Visiting Data. Bui Lin, V., & Shea Crowne, S. (2020). Bethesda, MD: Child Trends.	Fact sheets and briefs	Home visiting programs typically collect sensitive information about family characteristics, risk factors, and services received. States may choose to integrate these data with other early childhood data to learn more about the reach and effectiveness of the services and supports that families receive. As more states begin to integrate data across early childhood programs, data integration leaders should consider how the privacy and security of home visiting data are maintained when shared across organizations or

Resource	Type	Description
		integrated with other early childhood data. (author abstract)
Roadmap to Safeguarding Student Data. Data Quality Campaign. (2015). Washington, DC: Data Quality Campaign.	Toolkits and guides	This document provides specific, practical recommendations for state education agencies as they safeguard student data and review and update their data privacy policies and practices to address changes in technology.
SLDS Issue Brief: Best Practices for the Design and Implementation of Data Privacy and Security Programs. Borkosky, L., Cunningham, J., Cottrell, S., Sellers, J., Frederick, C., Smith, A., Straw, M., Gray, E., & Lemke, R. (2020). Washington, DC: National Center for Education Statistics at IES.	Brief	This brief offers an overview of key concepts and content to be covered in privacy and security plans for state longitudinal data systems (SLDS) agencies as well as methods of developing and implementing these plans. It draws on best practices identified by the Privacy Technical Assistance Center (PTAC) and includes examples of privacy and security plans from Wisconsin and Kentucky.
SLDS Issue Brief: SLDS IRB Requirements. Armstrong, C., Gosa, K., McGrew, C., Patton, J., Ream, D., Rodamar, J., Tay, A. (2020). Washington, DC: National Center for Education Statistics at IES.	Brief	To ensure that federally funded work related to statewide longitudinal data systems (SLDS) adequately protects the privacy and well-being of the individuals whose data they contain, the US Department of Education (ED) requires states to have their SLDS grant-funded projects undergo the same processes as other research grants to determine whether they require institutional review board (IRB) approval. This publication describes ED's IRB requirement for SLDS grantees and offers expert perspectives and tips for states approaching the IRB review process.
SLDS Spotlight: Accessing SLDS Data: Innovative Solutions to State-Specific Security Controls. Cottrell, S., Watson, J., Gray, E., Lemke, R., Nesmith, K., and Wisnia, E. (2020). Washington, DC: National Center for Education Statistics at IES.	Brief	This spotlight highlights two states, California and Louisiana, with laws that strongly regulate data access. It describes how their state education agencies have adapted their data management and data use procedures to comply with state requirements while continuing to meet their reporting and operational needs.
Statewide Longitudinal Data Systems Grant Program resource database. National Center for Education Statistics. (n.d.). Washington, DC: National Center for Education Statistics.	Toolkits and guides	The Statewide Longitudinal Data Systems Grant Program offers a variety of support resources.
Statewide Longitudinal Data Systems Grant Program resource database. National Center for Education Statistics. (n.d.). Washington, DC: National Center for Education Statistics.	Fact sheets and briefs	This document is intended to assist elementary and secondary schools and local educational agencies (LEAs or "districts") in achieving greater transparency with respect to their data practices.
Toolkit for communities using health data: How to collect, use, protect, and share data responsibly. National Committee on Vital and Health Statistics. (2015). Hyattsville, MD: National Center for Health Statistics.	Reports and articles	The Toolkit briefly introduces each important principle of data stewardship for communities using health data. It provides both broad background information and tips for data users. Descriptions of stewardship principles are provided, along with checklists for each principle.

Acknowledgments

About the Authors

Van-Kim Bui Lin is a research scientist in the early childhood development research area at Child Trends. She supports the use of early childhood data systems to facilitate early childhood policies, practices, and programs to improve access to high-quality early care and education. Her research interests include supporting the use of administrative data, building data systems, home visiting, child care, and early grade assessments.

Kelly Maxwell is a senior research scientist and program area co-director for early childhood development at Child Trends. She is known nationally for her policy-relevant research and evaluation focused on helping states improve their early care and education systems. Her research interests include early childhood policy issues, Quality Rating and Improvement Systems (QRIS), school readiness assessment, and evaluation of early childhood initiatives.

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