The Early Childhood
D A T A
Collaborative

A Framework for State Policymakers

Building and Using Coordinated State Early Care and Education Data Systems

The Early Childhood DATA Collaborative

The Early Childhood Data Collaborative (ECDC) supports state policymakers' development and use of coordinated state early care and education (ECE) data systems to improve the quality of ECE programs and the workforce, increase access to high-quality ECE programs, and ultimately improve child outcomes. The ECDC will provide tools and resources to encourage state policy change and provide a national forum to support the development and use of coordinated state ECE data systems.

For more information, please visit www.DataQualityCampaign.org.

TABLE OF CONTENTS

BUILDING AND USING
Coordinated State Early Care and Education Data Systems

State policymakers are increasingly focused on closing the achievement gap and preparing all students to succeed in school and in life. However, college and career readiness begins long before students enter high school or even a classroom. Differences in children's abilities appear as early as the first year of life,[1] and research has shown that targeted interventions during the early childhood years can narrow the "school readiness gap."[2]

Although states may provide a variety of early childhood programs and interventions, they are often administered independently of each other and are not well coordinated. The result is that information on children's early care and education (ECE) experiences before kindergarten is siloed and uncoordinated, making it difficult for policymakers to target resources. In fact, policymakers often struggle to obtain answers to basic questions about their states' public ECE systems, such as how many children currently participate in high-quality ECE programs? How many more could benefit if they had access? What are the qualifications of the workforce in quality ECE programs, and where are these program sites?

States are already collecting some of these data, but the key components are not in place for using the data to improve programs and outcomes for individual children. Answering these questions requires data to be collected over time at the individual child level and to be linked to data on ECE programs, the individual sites and the ECE workforce. It also requires structures and policies that can ensure appropriate access to and use of data, along with security and privacy protection for children in publicly funded programs.

States are beginning to make progress toward implementing and using coordinated ECE data systems, and the federal government is supporting state efforts. For example, State Advisory Councils on Early Childhood Education and Care, established through the recent reauthorization of Head Start, will develop recommendations for their states' ECE data systems within the next three years (see box on page 5). But building the infrastructure is not enough. By ensuring that data are accessible and stakeholders have the capacity to use data appropriately, state leaders will enable data-driven decision-making on how to *improve the quality of ECE programs and the workforce, increase access to high-quality ECE programs, and ultimately improve child outcomes.*

Early Childhood Data Collaborative

To support state policymakers' efforts to build and use coordinated ECE data systems, seven national organizations established the Early Childhood Data Collaborative (ECDC):

- The Center for the Study of Child Care Employment at UC Berkeley;
- Council of Chief State School Officers;
- Data Quality Campaign;
- National Center for Children in Poverty at Columbia University's Mailman School of Public Health;
- National Conference of State Legislatures;
- National Governors Association Center for Best Practices; and
- Pre-K Now, a campaign of the Pew Center on the States.

In consultation with an early childhood data advisory group, and with feedback from early childhood stakeholder groups (see Appendix), 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.

Early Care and Education Defined

Four domains of services and supports are fundamental to early child growth and development: health, early intervention programs, family supports and services, and early care and education (ECE).[3] This framework focuses on the ECE domain. Within the ECE area, each state will decide what programs to include in its coordinated state data systems, based on its approach to funding services for young children, the governance of the ECE system and other state policies.

These programs vary widely in program administration; amount of state and federal funding support and regulation; and differences in reporting demands and uses at the local, state and federal levels. The majority state ECE programs typically include:

- **Child Care (birth–age 13)** — Provides nonparental care for children in either centers or home-based settings.

- **Early Childhood Special Education (ages 3–5) and Early Intervention Programs (birth–age 3)** — Provides special services to children diagnosed with developmental delays and disabilities who are eligible under the Individual with Disabilities Education Act.

- **Early Head Start (birth–age 3) and Head Start (ages 3–5)** — Provides comprehensive services to children and their families, including access to health services and parenting information, as well as high-quality care and education.

- **Pre-kindergarten (ages 3–5)** — Offers early education programs for children one or two years before kindergarten entry.

LAYING THE FOUNDATION
for the Strategic Development of Coordinated State ECE Data Systems

Accurate, timely and quality ECE data are necessary to inform policy decisions; guide the daily work of ECE professionals; and support coordination between ECE programs, the K–12 system, and other systems that serve young children and their families.

Building and using ECE data systems that support these efforts require states to lead a threefold transformation:

- From compliance-driven data efforts to **improvement-driven data systems.**

- From fragmented and incomplete data efforts to **coordinated data systems.**

- From "snapshot" data to **longitudinal data systems.**

Improvement-driven data systems inform policy, instructional and management decisions

Current ECE data systems were created to satisfy reporting requirements for a variety of state and federal agencies. Therefore, the information housed in these systems is usually siloed, uncoordinated and updated infrequently. The data rarely can be used to help programs improve their effectiveness or to help states answer key policy questions about program access, ECE workforce issues and supporting the school readiness of young children. Concerned stakeholders, be they state policymakers, ECE program administrators or advocates for young children, often lack timely, quality data on even the most basic characteristics of the state's ECE services, much less specific information about the outcomes of past and current public investments.

Improvement-driven data systems are designed to answer the critical policy questions states seek to answer regarding young children, ECE programs and the ECE workforce (see box at right). To transition systems from being compliance driven to improvement driven, states may begin

their data system planning by identifying the information needs of state policymakers and other key audiences who shape learning opportunities for young children. Based on these questions, states can then delineate what types of data will be collected, linked and reported by coordinated state ECE data systems.

Coordinated data systems help users understand the relationships among young children, programs and the ECE workforce

Because existing ECE data systems were created to meet reporting requirements for varied state and federal programs, they have unique data definitions and standards and, in turn, have difficulty sharing information with other systems. As a result, these data systems fail to reflect the fact that significant numbers of children participate in multiple programs over time (and sometimes simultaneously) and that many local provider sites combine funding from several state and federal programs. One consequence of these practices is that states are often unable to generate an unduplicated count of children being served by publicly funded programs in different communities or statewide, making it difficult to coordinate services, support program improvement and help individual children.

Coordinated state ECE data systems, driven by critical policy questions, overcome these problems by strategically linking select data collected on young children, program sites and ECE practitioners. They deliberately align data collection and use across program and agency silos to provide state policymakers with a comprehensive

picture of their states' young children, programs and ECE workforce and ensure individual children receive the services they need in a more coordinated fashion. They can reduce duplicative data entry, streamline reporting requirements, reduce costs for local providers, and answer the critical policy questions state policymakers need to answer.

States may increase coordination incrementally, phasing in publicly funded programs or targeting specific populations of children. Based on critical policy questions, states may also choose to include limited linking to data systems that are outside of ECE programs but also promote child development, such as health, human services and family support initiatives when appropriate.

Longitudinal data systems better serve the individual and inform policy by following children, programs and the ECE workforce over time and into K–12 and beyond

ECE data systems have historically collected point-in-time data, or "snapshots," of children, programs and the ECE workforce. Although these data may prove helpful for compliance reporting, they are limited in their ability to support continuous improvement. Longitudinal information, data that follow individuals over time and across programs, allows for much more robust analyses. Rather than just providing information on children, programs and the ECE workforce at a moment in time, longitudinal data can reveal trends and provide actionable information to stakeholders at all levels.

For example, policymakers can receive ongoing, year-by-year feedback on key policy questions and reports on progress toward improving program and ECE workforce quality; increasing program access; and, in turn, improving child outcomes. If ECE data are linked with K–12 data, public schools can obtain useful information on prior experiences to help tailor curriculum and instruction for individual students.

Federal Support for Coordinated State Early Care and Education Data Systems

- **State Advisory Councils.** Under the 2007 reauthorization of Head Start, states were able to access a minimum of $500,000 through the American Recovery and Reinvestment Act (ARRA) to establish State Advisory Councils on Early Childhood Education and Care for children from birth to school entry. Councils are required to "develop recommendations regarding the establishment of a unified data collection system for public early childhood education and development programs and services throughout the State."[4]

- **Statewide Longitudinal Data Systems (SLDS) Grants.** Established in 2001, the SLDS Grants program supports states in building longitudinal P–20/workforce data systems. These grants initially focused on elementary and secondary education but now include linkages to preschool, postsecondary and workforce data. ARRA provided $245 million in new money for SLDS Grants that were awarded in 2010, and there is an additional FY 2010 appropriation of $58 million.

- **State Fiscal Stabilization Funds (SFSF).** To qualify for the second round of SFSF, states have committed to demonstrating progress in four areas of education reform, including establishing data systems that track students' progress from prekindergarten to college and careers. Specifically, states are required to assign a unique identifier to "students enrolled in Federal and State-supported early learning programs … that will follow each student through the pre-K–12 system" to access the $48.6 billion.

- **Race to the Top.** To qualify for the competitive $4.35 billion Race to the Top grants, states are required to demonstrate "significant progress" toward meeting the four required assurances in the SFSF, including establishing a longitudinal data system. The final application also includes an invitational priority to support the expansion and adaptation of statewide longitudinal data systems that include "plans to integrate data from … early childhood programs."

For more information on federal funding opportunities available to build and use P–20/workforce data systems, please see *Leveraging Federal Funding for Longitudinal Data Systems: A Roadmap for States* (http://DataQualityCampaign.org/resources/arra_programs).

Moreover, ECE providers can receive aggregate feedback on how well children progress after they enroll in public schools to improve services and increase the subsequent success of children.

Transforming data systems so that they are improvement driven, coordinated and longitudinal lays the foundation for a comprehensive ECE data system. The 10 ECE Fundamentals outlined in the following section provide the architecture to answer the critical questions that policymakers seek to answer.

10 FUNDAMENTALS
of Coordinated State ECE Data Systems

The 10 Fundamentals of coordinated state ECE data systems allow stakeholders to better understand the relationships among children, program sites and ECE workforce characteristics over time.

In addition to collecting data, coordinated data systems have the capabilities to link select information longitudinally and with other key programs. In addition, a governance structure manages data collection and use, and states have transparent privacy protections and security practices and policies (see chart at right). These ECE Fundamentals are the backbone of the data systems, but based on a state's unique interests and political realities, state stakeholders may choose to include additional information and capabilities.

Coordinated state early care and education data systems

Children
FUNDAMENTALS 1–3

Governance and Privacy
FUNDAMENTALS 9–10

Program Sites
FUNDAMENTALS 5–6

ECE Workforce
FUNDAMENTALS 7–8

K–12 & Other Key Data Systems
FUNDAMENTAL 4
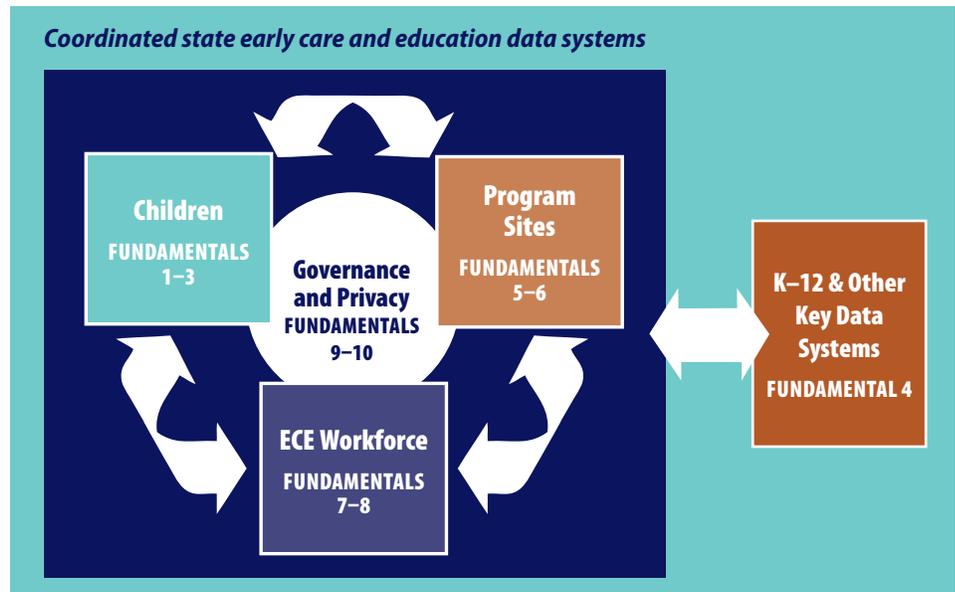
10 ECE Fundamentals at a Glance

After identifying the critical policy questions confronting state policymakers, the Early Childhood Data Collaborative (ECDC) identified the following 10 Fundamentals of coordinated state early care and education (ECE) data systems that provide the foundation to answer these questions:

1. Unique statewide child identifier
2. Child-level demographic and program participation information
3. Child-level data on child development
4. Ability to link child-level data with K–12 and other key data systems
5. Unique program site identifier with the ability to link with children and the ECE workforce
6. Program site data on structure, quality and work environment
7. Unique ECE workforce identifier with ability to link with program sites and children
8. Individual ECE workforce demographics, including education, and professional development information
9. State governance body to manage data collection and use
10. Transparent privacy protection and security practices and policies

Stay Tuned …
The Data Quality Campaign (DQC), in partnership with the ECDC, will administer a survey in fall 2010 to track state progress toward implementing these 10 ECE Fundamentals in state ECE data systems. The results of the survey will be released in winter 2011 and will be available on the DQC Web site: www.DataQualityCampaign.org.

Beyond Early Childhood …
When the DQC launched in 2005, it sought to build state policymaker understanding of and political will to implement the 10 Essential Elements of a longitudinal P–20/workforce data system. Each state's education system is unique, and the DQC 10 Essential Elements provide a necessary, but not exhaustive, foundation for a robust longitudinal data system that is able to answer critical policy questions beyond early childhood. To find out more about the 10 Essential Elements, visit the DQC Web site: www.DataQualityCampaign.org.

1 Unique statewide child identifier

A unique statewide child identifier is a single, nonduplicated number that is assigned to and remains with a child throughout participation in ECE programs and services and across key databases. The child identifier remains consistent even if the child moves or enrolls in different services within a state. State policies need to ensure that the unique identifiers are secure and protected, and only certain stakeholders, like parents and teachers, have access to identifiable information.

A child identifier allows the state to track progress of each child over time, throughout the early childhood years, and across programs and sites within the state to improve the coordination and provision of services. A unique child identifier alleviates redundant data entry on children participating in multiple ECE programs by allowing information about a single child to be linked across various data systems.
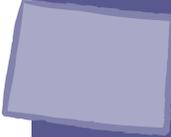
Colorado's recently awarded $17.4 million Statewide Longitudinal Data Systems Grant includes plans to link federally and state-funded early childhood intervention, care and education programs managed by the Colorado Department of Human Services to the state's education data system, including the matching of child identifiers used in various early childhood databases to the student identifier used in the K–12 data system. For more information, see http://nces.ed.gov/programs/slds/pdf/Colorado2009ARRA.pdf.

2 Child-level demographic and program participation information

Information on child-level demographics and program participation is important to connect children and their families to the appropriate services and to understand how child outcomes might relate to various characteristics. This information includes age, ethnicity, socio-economic status and program participation, including early intervention services for children with special needs. Additional information on risk factors known to correlate with school readiness and academic success would enable states to explore how the impact of these characteristics relate to children's progress toward school readiness and target services to children.

*The **Illinois** State Board of Education (ISBE) Student Information System includes a unique child identifier for children in publicly funded early care and education (ECE) programs. For each child in the system, ISBE tracks ECE program participation, whether a child meets criteria for being "at risk" and/or low household income, and family structure (e.g., two-parent vs. single-parent family). School administrators and teachers have access to data for an individual child in their classrooms. In aggregate, the state uses descriptive data to meet reporting requirements and to support longitudinal research on child outcomes. For more information, see www.isbe.net/sis/pdf/early_childhood.pdf.*

3 Child-level data on development

Assessing and collecting data about young children's development requires different methods and instruments from assessing older children. State leaders need to ensure that the data collected are appropriate, valid and reliable, using scientifically sound instruments. Collecting developmental data from multiple sources (e.g., observations and ratings by teachers, collecting samples of children's work, and parent questionnaires) and assessing multiple skills, including social/emotional, physical, cognitive and linguistic development, and approaches to learning over time increases the validity of the findings.[5]

Data on child developmental outcomes allow ECE professionals to monitor child progress and quickly address concerns. Local ECE providers have used child-level development data formatively to tailor services and instruction for continuous improvement, but these efforts have occurred without coordinated data across state programs and systems. Teachers can use developmental history to tailor curriculum and care to particular skill development, and policymakers can use the aggregated data to help improve programs. Information on child demographics and program participation connected to developmental data also allows stakeholders to understand how different children, including key subgroups, are progressing. States may evaluate, for example, whether children who are English language learners are progressing appropriately in all developmental domains and make any necessary adjustments to curriculum and ECE workforce training.

*The goal of **Pennsylvania's** Office of Child Development and Early Learning is to regularly assess the development of children from birth to age 5 who receive state-funded early childhood services. Early childhood education and care providers collect child information across seven developmental domains using a research-based, authentic assessment aligned with the state's early learning standards. Currently, children are evaluated multiple times a year in state-funded prekindergarten and Head Start supplemental programs, child care centers with three- or four-star quality ratings, early intervention programs, and Accountability Block Grant programs. Next year, the state plans to include the assessment of family care programs with three- or four-star quality ratings. For more information, see www.pakeys.org/docs/WS Admin 1.pdf.*

4 Ability to link child-level data with K–12 and other key data systems

Linking child-level data with K–12 and other key data systems allows policymakers to track the progress of children over time as well as better understand relationships among ECE programs and other child development programs and services. For example, linked data systems can provide two-way communications between ECE programs and K–12 so that ECE programs know how children progress in K–12 and K–12 programs can tailor instruction to meet individual children's needs when they arrive at school.

Linking select and secure ECE data with other programs and services, like health and child welfare, allows policymakers to understand the relationship between ECE programs and other services that support child development, program administrators to improve the coordination of services with other providers, and the ECE workforce to target and improve services for individual children based on their access to other supports. Linked data systems also can help with referrals, such as the federal mandate in the Child Abuse Prevention and Treatment Act to refer any child under age 3 who is involved in a substantiated case of abuse and neglect to Early Intervention services.
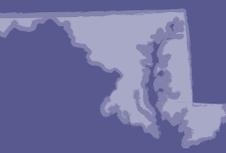
***Maryland's** early childhood data system includes an assessment of school readiness that is administered to all public school kindergarteners. Since 2007, when Maryland established the unique K–12 student identifier, this school readiness information has linked to the K–12 education data system, allowing the longitudinal tracking of child outcomes. The 2010–11 school year will mark the first time Maryland will be able to evaluate longitudinally how readiness at school entry correlates with academic success as measured by 3rd grade test scores. In addition, because information is disaggregated by type of prior care (e.g., Head Start, family child care) and by participation in programs such as special education services, the state can use the longitudinal results to improve state-funded early childhood programs. For more information, see www.marylandpublicschools.org/MSDE/newsroom/publications/school_readiness.htm.*

5 Unique program site identifier with the ability to link with children and the ECE workforce

States need information about program sites to understand who they serve and their impact on children. A unique, statewide program site identifier is a single, nonduplicated number that is assigned to a school, center or home-based ECE provider. States also may assign unique classroom identifiers to identify individual classrooms within a site.

A program site identifier allows states to link data on ECE services to a particular site and track these characteristics over time and across key databases. It also allows states to connect ECE program sites with their staff and the children they serve to better understand the relationships among the site and staff characteristics, child program participation, and child outcomes to inform policy decisions (see box on page 13).

As part of the Early Childhood Information System, 2009 **Connecticut** *legislation mandated the development of a cross-agency unique program identifier for state-funded early childhood care and education programs. A unique identifier will allow state leaders to gain a nonduplicated count of programs, many of which blend and braid various public funding sources, and to assess outcomes for each individual site. For more information, see www. cga.ct.gov/asp/cgabillstatus/CGAbillstatus.asp?selBillType=Bill&bill_ num=2053&which_year=2009.*

adult classroom ratios, curriculum and staff-child interaction measures. Examples of work environment characteristics include the availability of professional development opportunities for staff, wages and benefits, and turnover.

Such data allow states to monitor the availability and quality of ECE program sites and services offered to children and to track this information over time. These data help policymakers better understand the impact of public investments in various quality-improvement initiatives. They also allow states to observe the relationships among various site and staff characteristics and child outcomes.
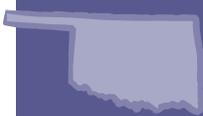
Oklahoma's *Reaching for the Stars is the state's comprehensive quality rating and improvement system for early care and education (ECE) programs. It categorizes providers into four levels of child care program quality, which are denoted by stars. All licensed providers are awarded at least one star. Reaching for the Stars allows policymakers to track programs' licensing status and compliance, as well as quality ratings in the areas of administrative policies, qualifications and training of staff, learning environment, parent involvement, and program evaluation. Currently, more than 4,000 licensed ECE providers participate in Reaching for the Stars. For more information, see www.acf.hhs.gov/programs/opre/cc/childcare_ quality/oklahoma/oklahoma.pdf.*

6 Program site data on structure, quality and work environment

Program site-level information about ECE programs includes data on program structure, quality and work environment characteristics, including ECE workforce information.

Examples of structural data include location; ages of children served; length and duration of the program(s) offered at the site; funding sources; and the availability of special services such as parent participation, mental health consultation or health services. Examples of program quality data include national accreditation information, child-

Common Data Standards: Creating a Common Vocabulary for Sharing and Linking Data

The Common Data Standards Initiative's goal is to identify a list of key K–12 and K–12-to-postsecondary transition variables and agree on standard definitions, code sets, business rules and technical specifications for those variables (expansion into prekindergarten and the workforce will be considered in the future). This agreement will increase data interoperability, portability and comparability across states, districts and higher education organizations. For more information about this initiative, visit www.commondatastandards.org.

7 Unique ECE workforce identifier with ability to link with program sites and children

Coordinated state ECE data systems that include a unique ECE workforce identifier help states better understand information about the adults caring for children. A unique ECE workforce identifier is a single, nonduplicated number that is assigned to individual members of the ECE workforce consistently across program sites and links across key databases. This workforce includes teachers, assistant teachers, aides, master teachers, educational coordinators and directors, and other individuals who care for and educate young children.

A unique ECE workforce identifier allows states to track workforce characteristics over time and connect the workforce to the ECE programs in which they work and the children they serve. The result will be a better understanding of the relationships among the ECE workforce, program site characteristics, the quality of services and child outcomes.

*In **Nevada**, state law requires that all caregivers who work in licensed early care and education (ECE) settings, including family child care, participate in the Nevada Registry, a statewide career development and recognition system. By late 2012, when this requirement is fully phased in, state policymakers will have a nonduplicated list of individuals in the ECE workforce, including where each individual is employed and the individual's status in the state's professional career ladder. For more information, see www.nevada-registry.org.*

8 Individual ECE workforce demographics, including education, and professional development information

Demographics, education and professional development data are important to improve the understanding of how ECE workforce characteristics affect ECE services and child outcomes. These data include race/ethnicity, gender, age, educational attainment, experience in the field, retention and compensation. Data on professional development and training programs are also important, including information on the focus of the program content and delivery, funding sources, financial aid, and monetary rewards for educational attainment.

Demographics, education and professional development data on ECE workforce characteristics allow states to understand who is caring for their youngest children and which children have access

to different types of teachers and caregivers. For example, do the neediest children have access to the most qualified members of the ECE workforce? In addition, information about ECE workforce demographics, education and professional development allows states to understand the relationships among various workforce and program site characteristics and child outcomes. Finally, tracking this information over time also helps policymakers make more strategic decisions about allocating professional development resources and better understand the impact of investments in education and training programs.

***Missouri's** Professional Achievement & Recognition System (PARS) is a database system that collects and verifies early childhood, school-age/after-school, and youth development professionals' education and training information. Additionally, PARS has information on providers' employment by the various settings they work in, including wage, title, employment dates, etc. Data from PARS are used to provide descriptive information about the field (e.g., percentage of lead center staff with a bachelor's degree or higher), set thresholds for quality initiatives, and support administrative tracking functions for the director and state quality initiatives. For more information about PARS, please visit www.OPENInitiative.org.*

9 State governance body to manage data collection and use

In many states ECE programs are governed by multiple state agencies, so establishing a governance body that oversees data collection and use is imperative. The governance body establishes the vision, goals and strategic plan for building, linking and using data to support continuous improvement. It also sets policies to guide data collection, access and use to ensure that:

- Requested data elements are clearly defined, with common data definitions and standards (see box at page 10) and clear rules on data entry and reporting.

- State data collection and record retention policies, statements and laws are followed.

- Staff interacting with data systems are fully trained and appropriate stakeholders have access to limited information — from teachers accessing individual student information to state policymakers analyzing aggregate trends based on longitudinal information. This includes reviewing third-party requests for information and providing data to external researchers as part of the state's research agenda.

- There is a well-developed system to monitor the quality of data submitted, including data spotchecks and site visits to audit the validity of the data.

Members of the governance body should include program administrators and legislative and executive-level advisers who understand the meaning behind the data and how they will be used, rather than solely Information Technology (IT) or data managers. Moreover, aligning this body with the other ECE governance structure(s) like the state's early childhood advisory council and/or P–20 council will more effectively and strategically fulfill these governance functions

New York's Early Childhood Advisory Council brings together key stakeholders and experts to provide strategic direction and advice to policymakers on early childhood issues. A workgroup of the council is leading state efforts to develop the vision and goals for a coordinated data system. The council has commissioned a report on the state's existing data systems and will advise on a long-term governance structure for the coordinated data system. For more information, see www.ccf.state.ny.us/Initiatives/ECACHome.htm.

10 Transparent privacy protection and security practices and policies

As state policymakers build coordinated ECE data systems, states must have transparent policies and statements that articulate how they ensure the security of the data and the privacy and confidentiality of personally identifiable information. These policies and statements should address important issues including who has access to what data, especially identifiable data; how the information is used and linked; the justification for the collection of specific data elements; and how long states retain the information. Coordinating these conversations with the state governance body (see Fundamental 9) ensures the privacy, security and quality of state ECE data systems while allowing appropriate data collection, retention, storage, access and use. Finally, states must also ensure these policies and statements are available publicly and communicated to all stakeholders so states are transparent about the data they are collecting, why and how they are protecting privacy.

*In 2008, **Colorado** legislation mandated the development of an interdepartmental data protocol for the collection, storage, sharing and release of data. The protocol will include directives on the circumstances that allow the sharing and release of data and compliance with all state and federal privacy laws. The legislation can be found at www.leg.state.co.us/CLICS/CLICS2008A/ csl.nsf/fsbillcont3/12CF992B0A83DE6D872573CD0057FEE5?Open &file=1364_enr.pdf. The first report of the Interdepartmental Data Protocol Council can be found at www.colorado.gov/cs/Satellite?blo bcol=urldata&blobheader=application%2Fpdf&blobkey=id&blobta ble=MungoBlobs&blobwhere=1235626747414&ssbinary=true.*

ENSURING APPROPRIATE ACCESS AND BUILDING CAPACITY To Use Data for Continuous Improvement

The 10 ECE Fundamentals outlined in this paper will increase the capacity of state policymakers and other stakeholders to answer critical questions about policy and practice, but that is only the beginning.

To fully realize the potential of coordinated state ECE data systems, state policymakers need to establish policies, practices and structures that ensure appropriate access and help stakeholders use data effectively to guide decisionmaking. Such actions address two goals:

- Ensure timely, user-friendly and appropriate role-based access to data.

- Build the capacity of appropriate stakeholders (e.g., parents, teachers, administrators, policymakers) to use data for continuous improvement.

Ensure Timely, User-Friendly and Appropriate Role-Based Access to Data

Coordinated state ECE data systems are of little value if the information is not accessible to appropriate stakeholders and used for continuous improvement. Ensuring timely, user-friendly access to appropriate stakeholders is as critical to supporting data-driven decisionmaking as the actual data systems themselves. By engaging stakeholders at all levels, states can ensure they design, analyze and present data in ways that meets each stakeholder's informational needs, while protecting privacy.

Different stakeholders have unique informational needs, so data should be presented in a timely, user-friendly way to answer stakeholders' specific questions, including but not limited to those confronting policymakers, parents, teachers, program administrators and the public. For example, states can develop a variety of reports customized to different groups of users, including providing Web-based access to allow users to investigate questions, explore relationships and view data at different levels. Data access and use is also promoted if states minimize delays between collecting data and making them available. Efforts to time the release of data and reports to inform key actions, such as legislative oversight of early childhood programs or parent-teacher conferences, can also promote the use of data.

State data systems need to serve a variety of stakeholders — from parents to legislators — to help them be more effective in their roles. However, not everyone needs access to all of the data. For example, a teacher or parent may need access to identifiable child information, whereas policymakers need only aggregate information. Privacy considerations should be paramount when developing policies for timely and appropriate data access, including the implementation of rules that determine role-based data access.

Build the Capacity of Appropriate Stakeholders To Use Data for Continuous Improvement

Building the capacity of appropriate stakeholders to not only access the data but also understand how to use the information is critical for effective data-driven decisionmaking. States should invest in various forms of training and professional development in data analysis and use, ranging from higher education courses to ongoing professional development programs, and tailor training to specific stakeholders. For example, states can support parents' awareness and understanding of child data to help them foster healthy development and learning. The state's higher education and research communities can also serve as valuable partners in providing education and training to use data to inform decision making, including assessment, analysis and interpretation of information from the data system.

In addition, the state's higher education and research communities can enhance the research capacity of states and provide guidance on correct interpretations of data. While data systems can support an understanding of program effectiveness, they do not replace the important role of program

evaluation studies. State data systems will allow practitioners and policymakers to improve their practice and decisionmaking by highlighting trends and relationships among children's development, program and teacher characteristics. However, while data systems can *suggest* potential factors that correlate with changes in children's development, isolating which of these variables *causes* a specific change in a child's performance typically requires a more intentional research methodology.

Accordingly, supporting program evaluation studies can complement the contribution of coordinated state EC data systems to informing policy decisions that improve ECE program and workforce quality, increase access, and ultimately improve child outcomes. To maximize the potential of a coordinated ECE data system, states should develop partnerships with researchers who can use the state's ECE data system as a foundation for further research. Research findings can then be used to inform policy decisions that improve program and workforce quality, increase access, and ultimately improve child outcomes. By investing in training, professional development and other resources that support data use, states will be able to realize the potential of coordinated state ECE systems for continuous improvement.

Stakeholders Use Data at All Levels for Continuous Improvement

Data are critical to informing not only policy decisions but also decisions made at all levels of states' early care and education (ECE) systems. Because not all stakeholders need identifiable data, access should be tailored based on the key questions and the informational needs of each unique stakeholder group. Below are examples of how stakeholders throughout the ECE system can use data to improve program and workforce quality, increase program access, and ultimately improve child outcomes.

- **Governors and legislators** — identify policy priorities around improving program and ECE workforce quality, increasing program access, and improving child outcomes and prioritize resource allocation (e.g., funds for program improvement or expansion, professional development resources) accordingly.

- **State and local program managers** — identify sites or communities where children are making significant gains and gather and disseminate promising practices among programs and providers.

- **State Advisory Councils** — advise the executive and legislative branches concerning gaps in program access and quality, recommend policy action to increase effective services, and identify strategies for improving child outcomes.

- **Postsecondary educators and professional development trainers** — understand the current composition of the ECE workforce, trends in the demand for new staff, and improvements to training and education programs and ongoing professional development.

- **Public school teachers and principals** — design appropriate curricula and craft individualized experiences to support, enrich or accelerate individual children's learning based on a student's past experience and developmental trajectory.

- **ECE site directors** — target professional development budget to areas where ECE staff or children need further support (e.g., English language acquisition, behavioral and social-emotional development).

- **ECE teachers and staff** — reflect on children's progress and implement strategies to better serve children by making adjustments to teaching practices and the curriculum.

- **Parents** — understand how their individual children are progressing in various domains of development so that they can reinforce certain skills or, if necessary, seek out more intensive interventions.

- **Research organizations** — help state and local policymakers and administrators understand what the data reveal about program effectiveness and develop further research studies that advance early education practices.

- **Other public agencies serving young children** — gain valuable insights about how children's early learning experiences and outcomes can inform the delivery of their services (e.g., health, family support).

THE TIME TO ACT IS NOW

Growing state momentum; increased federal support, including the State Advisory Councils' specific focus on data systems development; and nationwide interest in using data for continuous improvement make this the ideal time for states to build and use coordinated state ECE data systems. As states implement the 10 ECE Fundamentals and make new efforts to improve access and promote use of data, there is great potential for recognizable benefits for ECE programs and professionals, as well as for children, families and communities.

Effective use of data systems will help policymakers improve:

- **Program quality.** State and local program managers will receive timely, accurate and ongoing feedback on the performance of programs in relation to their quality standards — and can identify and adapt strategies and practices from the highest performing providers to improve all programs across the state.

- **ECE workforce quality.** Higher education institutions, state legislators and other leaders will have information on the supply and demand for staff members; a comprehensive picture of professional development opportunities and investments; and an understanding of how well these supports are working to attract, retain and develop an ECE workforce that can help parents prepare every young child for success in school and in life.

- **Access to high-quality programs.** Policymakers and advocates will have a detailed picture of the distribution of the quality of services across neighborhoods, communities and regions of their state and accessible data systems that answer questions such as those about the availability of high-quality programs for infants and toddlers or young English language learners.

- **Child outcomes.** ECE educators will draw on rich, cumulative information on children's strengths and progress in all areas of their development and use this information to plan and adjust curricula, learning experiences and family engagement efforts.

State leaders will benefit from identifying their critical policy questions and assessing their progress toward answering those questions through coordinated ECE data systems. Over the next year, the ECDC will continue to build new partnerships, conduct a 50-state survey, and develop tools and resources to support policy change that advances the development and use of coordinated state ECE data systems. For more information, please visit www.DataQualityCampaign.org.

APPENDIX A
Early Childhood Data Collaborative Stakeholder Outreach

8/3/10 Early Childhood 2010 — Washington, DC

7/29/10 National Center for Education Statistics Summer Data Conference — Bethesda, MD

7/28/10 Pre-K Now Annual Partners Network Meeting — Washington, DC

7/27/10 National Center for Education Statistics National Forum — Bethesda, MD

7/23/10 Buell Early Childhood Fellows — Denver, CO

7/15/10 National Governors Association Early Childhood Policy Academy — Seattle, WA

7/12/10 BUILD Initiative Network of States — Webinar

6/15/10 Council of Chief State School Officers Committee on Next Generation Learners — Minneapolis, MN

6/8/10 U.S. Departments of Education and Health and Human Services Early Childhood 2010 Conference Preview — Webinar

6/15/10 Region VII Head Start and Child Care Partners Conference — Kansas City, MO

6/3/10 Council of Chief State School Officers State Consortium on Early Childhood Standards & Assessments and the National Association of State Early Childhood Specialists in State Departments of Education — Phoenix, AZ

5/6/10 District of Columbia Early Childhood Summit Conference — Washington, DC

4/25/10 Governor's Education Policy Advisers — Miami, FL

4/22/10 Briefing — Washington, DC

3/18/10 New York State Early Childhood Advisory Council — Albany, NY

3/12/10 National Association of Child Care Resource & Referral Agencies National Policy Symposium — Washington, DC

3/5/10 National Center for Education Statistics Management Information Systems Conference — Phoenix, AZ

3/2/10 Interstate Migrant Education Council — Washington, DC

2/22/10 U.S. Departments of Education and Health and Human Services Interagency Work Groups — Washington, DC

2/10/10 Early Childhood Outcomes Center Advisory Meeting — Arlington, VA

2/3/09 Early Childhood Data Working Group Meeting — Washington, DC

2/2/10 National Association for the Education of Young Children Public Policy Forum — Washington, DC

1/27/10 U.S. Departments of Education and Health and Human Services briefing — Washington, DC

1/15/10 Birth to Five Policy Alliance Winter Meeting — San Diego, CA

1/7/10 State Early Childhood Advisory Committees — Webinar

12/17/09 Birth to Five Policy Alliance — Webinar

11/24/09 Local early childhood directors (Fairfax and Arlington Counties, Alexandria, VA and Washington D.C.) focus group — Washington, D.C.

11/23/09 Consultation session on early childhood data & diversity issues — Washington, DC

11/18/09 National Association for the Education of Young Children Annual Conference Pre-Session — Washington, DC

11/3/09 Early Childhood Data Working Group Meeting — Washington, DC

10/29/09 Head Start/State Collaboration Project Directors — conference call

10/27/09 Early Childhood Education State Collaboration on Assessments & Standards — Washington, DC

10/27/09 National Education Data Model Advisory Committee — Washington, DC

10/13/09 Minnesota State Early Childhood Advisory Council Accountability Work Group — Minneapolis, MN

10/6/09 Education Information Management Advisory Consortium Conference — Washington, DC

9/22/09 The National Registry Alliance Annual Conference — Mystic, CT

9/18/09 KIDS Count Annual Conference — Baltimore, MD

8/18/09 Office of Special Education Programs Leadership Conference for State Part C Coordinators — Washington, DC

7/28/09 Pre-K Now Annual Partners Network Meeting — Washington, DC

7/17/09 Council of Chief State School Officers Early Childhood Task Force — Breckenridge, CO

7/16/09 Colorado Early Childhood Leadership Development Program Symposium — Breckenridge, CO

7/12/09 Early Childhood Data Working Group Meeting — Washington, DC

6/23/09 Office of Special Education Programs Early Childhood Outcomes and Overlapping IDEA Parts B & C Data Coordinators — Bethesda, MD

6/11/09 Council of Chief State School Officers Early Childhood Education Assessment Consortium and State Collaborative on Assessment and Student Standards — Orlando, FL

5/27/09 National Child Care Information Center and State Early Childhood Specialists — Webinar

4/28/09 Head Start Fellows — Washington, DC

3/20/09 Connecticut Early Childhood Cabinet Data Subcommittee — Hartford, CT

1/28/09 Mayor's Advisory Committee on Early Childhood — Washington, DC

NOTES

[1] Halle, T., Forry, N., Hair, E., Perper, K., Wandner, L., Wessel, J., & Vick, J. (2009). *Disparities in Early Learning and Development: Lessons from the Early Childhood Longitudinal Study — Birth Cohort (ECLS-B)*. Washington, DC: Child Trends.

[2] Heckman, J., Masterov, D. (2004). *The Productivity Argument for Investing in Young Children* (Working Paper 5, Invest in Kids Working Group). Washington, DC: Committee for Economic Development.

[3] www.finebynine.org/uploaded/file/SECPTAN_Build_PROOF.pdf

[4] 42 USC 9801 et seq. Sec. 642B. (b)(1)(D)(i)(IV) http://eclkc.ohs.acf.hhs.gov/hslc/Program Design and Management/Head Start Requirements/Head Start Act/headstartact.html - 642B

[5] National Research Council. (2008). *Early Childhood Assessments: Why, What, and How.* Washington, DC: The National Academies Press.