Supporting the Coordination of Early Learning and Care Data Systems

CALIFORNIA ALL KIDS Master Plan for Early Learning and Care

KNOWLEDGE BRIEF

Introduction

California's families have recently experienced a series of life-disrupting disasters: destructive wildfire seasons, prolonged power outages, and the global COVID-19 pandemic. In each of these catastrophes, improved access to integrated data systems would have given state leadership considerable insight into families' rapidly changing circumstances, allowing the state to meet families' child care and other needs in real time. The recent crises in California have exposed the lack of comprehensive, integrated, state-maintained early childhood data and intensified the urgency of building a responsive system for both short-term service and long-term success.

These emergencies reinforced for parents, providers, and policymakers that the lack of current, easily accessible data necessary to make decisions and shape policy further complicated the state and local response to public needs. To address child care availability, the California Health and Human Services Agency and Department of Social Services formed partnerships and launched MyChildCare.ca.gov as a resource to families seeking child care during COVID-19 closures. It was a feat of innovation that serves as an example of the possibilities for the future. California should leverage these initial efforts to improve, connect, and better coordinate data about young children in order to increase the use of available information and drive decisions that lead to better outcomes.

Multiple agencies administer California's array of early learning and care programs, each with separate technology and agendas for the programs they administer. The ability to target and improve services increases when data are integrated. The state cannot holistically analyze existing administrative data due to data silos and legal barriers, making it difficult to assess current investments or allocate new resources effectively. Administrative data, such as basic demographics of young children and

the professionals who serve them, are collected and managed in siloed data systems at various levels of government in California, with minimal standardizations, different data quality processes, incongruous timelines, and uncoordinated reporting requirements. Efforts are necessary to coordinate and share these data with key partners to help parents make decisions during their child care search, streamline application processes for workers and families, assist policymakers and partners in targeting early learning and care (ELC) investments, and track child and family outcomes.

The good news is there are significant efforts underway, led by the California Department of Social Services (CDSS) and California Department of Education (CDE) and supported by the federal Preschool Development Grant Birth Through Five Planning and Renewal grants (PDG-R) and other investments. The following brief provides background about the benefits of developing an ELC integrated data system (IDS) and key components needed to support service coordination goals and create accountability systems related to outcomes outlined in the Master Plan. Recommended strategies leverage existing data initiatives and propose the implementation of a data governance body that embeds racial equity as a core value.

Key Early Childhood Policy Questions An Integrated Data System Can Help Answer

1. Are children, birth to age five on track to succeed when they enter school and beyond?
2. Which children have access to high-quality early learning and care programs?
3. Is the quality of programs improving?
4. What are the characteristics of effective programs?
5. How prepared is the early learning and care workforce to provide effective education and care for all children?
6. What policies and investments lead to a skilled and stable early learning and care workforce?

Source: Early Childhood Data Collaborative (2010)

Benefits of Integrating Early Learning and Care Data

In 2018, a national survey[1] assessed the capacity of all 50 states to coordinate and use data to answer key policy questions about their early learning and care programs.[2] Over half (68 percent) of states reported that they were in the process or planning to connect child-level information across their early childhood programs. The survey also found that 86 percent of states moving forward efforts to coordinate their early childhood data reported implementing an IDS to connect and share data to inform decision-making. Data integration is the process of linking multiple data sources from different programs or services. Records are unduplicated, and information about

1 King, C., Perkins, V., Nugent, C., & Jordan, E. (2018). 2018 State of State Early Childhood Data Systems. Bethesda, MD: Child Trends. Early Childhood Data Collaborative.

2 Early learning and care programs surveyed include: Home Visiting, Head Start, Early Intervention (Part C), Preschool Special Education (Part B, 619), State Pre-Kindergarten Programs, and Subsidized Child Care.

individual persons or programs are merged to get comprehensive information from different sources.

States reported using their IDS primarily to share information with stakeholders, generate standard reports to monitor processes, and answer key policy questions identified in their states. While the goal and purpose of IDS vary from state to state, an IDS has the potential to benefit decision-makers in several ways:

1. ***Provide timely, accurate information to parents and providers:*** Integrating ELC data makes it easier for parents to search for providers based on their unique needs and for providers to be matched to families seeking their skills and abilities and the services they offer.
2. ***Ensure access to the right services:*** Integrating ELC data makes it easier for different programs to access and share information with each other. In turn, this makes it easier to coordinate services for families and determine where there might be gaps in available resources.
3. ***Build effective and responsive governmental services:*** Integrating ELC data allows agencies to examine service needs and gaps across communities and evaluate where their investment works best.
4. ***Prepare all children for academic success:*** Integrating ELC data will make it possible to share data between early childhood and K–12 programs to help schools better prepare to have children succeed in school.

Fundamentals and Examples of State Early Childhood Integrated Data Systems

To help guide the development and use of integrated early childhood data systems, the Early Childhood Data Collaborative developed a set of fundamentals of a coordinated data system with input from national experts. These fundamentals are a high-level framework to coordinate siloed data systems, facilitate data sharing across ELC programs, and answer key policy questions about children's development, supply of care, and workforce needs. The 10 fundamentals[3] below outline key recommended components to support the coordination of data collected about children, program sites, and the ELC workforce characteristics over time. Data governance is an important component to guide the development and implementation of data sharing policies. These fundamentals do not occur simultaneously and should be adapted and expanded as needed by states to meet their specific needs:

1. Unique statewide child identifier
2. Child-level demographics and program participation information
3. Child-level data on development
4. Ability to link child-level data with K–12 and other key data systems (e.g., health, social services)
5. Unique program site identifier with the ability to link with children and the ELC workforce
6. Program site structural and quality information

3 King, C. (2017, February). *The 10 Fundamentals of Coordinated State Data Systems.* Child Trends. https://www.childtrends.org/publications/the-10-fundamentals-of-coordinated-state-data-systems

7. Unique ELC workforce identifier with ability to link with program sites and children
8. Individual-level data on ELC workforce demographics, education, and professional development information
9. State governance body to manage data collection and use
10. Transparent practices and policies for privacy protection and security

Examples of states' early childhood IDS:

- Georgia Cross Agency Child Data System[4] coordinates data about children aged birth to five and their families from the Georgia Department of Early Care and Learning, Education, Public Health, Human Services, Division of Family and Children Services, and Georgia Head Start Association. Data are used to identify service gaps, support research, and promote data-informed integrated and aligned policies and practices.
- Minnesota Early Childhood Longitudinal Data System[5] links data from the state's departments of education, health, and human services. Data are collected to document children's enrollment and the outcomes of participation in educational and social programs over time.
- North Carolina Early Childhood Integrated Data System[6] is a single source for integrated early childhood education, health, and social service data. The purpose is to provide comprehensive data to inform policies that promote improved outcomes for all children and families.

Leveraging California's Existing Early Learning Data Systems Initiatives

In the past 10 years, federal, state, and private funding have supported strategic planning to increase the state's capacity to collect, integrate, and share data with key stakeholders. California has made strides to leverage these opportunities to improve and expand the functionality of existing data systems. In 2012, California received a Race to the Top-Early Learning Challenge grant that established a statewide system to assess and track ratings of programmatic quality. Since 2017, CHHS has supported a Research Data Hub to develop a record linkage system that connects information across health and human services programs.[7] In 2018, legislation (AB 2960) mandated the establishment of an online portal to help families find child care and determine their eligibility for financial, food, or housing assistance. As of 2020, over $50 million from the federal Preschool Development Grant Birth Through Five Planning and Renewal grants (PDG-R) was awarded to California to develop and implement a strategic plan. Currently, the PDG-R grant prioritizes the following data system development and integration needs:

1. ***Streamline eligibility process for services.*** The CDSS Statewide Verification Hub (SVH) will provide service delivery entities with the

4 Georgia Cross Agency Child Data System [website], http://www.gacacds.com, (accessed November 2020).

5 Minnesota Early Childhood Longitudinal Data System [website], http://ecIds.mn.gov, (accessed September 2020).

6 North Carolina Early Childhood Integrated Data System [website], https://www.ecids.nc.gov (accessed November 2020).

7 Putnam-Hornstein, E., Ghaly, M., & Wilkening, M. (2020). Integrating Data To Advance Research, Operations, And Client-Centered Services In California. *Health affairs (Project Hope)*, *39*(4), 655–661. https://doi.org/10.1377/hlthaff.2019.01752

necessary data connections and management procedures to determine program eligibility and provide direct or indirect family referrals to ELC services. The SVH can support the eligibility and referral process for ELC services. The SVH could be the vehicle for handling an integrated eligibility and enrollment system. The system will be used across means-tested programs to determine when families who are engaging in state services qualify for additional programs or services and connect them automatically to agencies with access to other resources, such as home visiting, prenatal care, or housing support.

- **Track child enrollment and payments.** The Child Development Management Information System (CDMIS) tracks program enrollment and payments ELC program data. State agencies that administer subsidized ELC programs and related support services, such as CDE and CDSS, utilize separate data systems to track program data. The scope, quality, and accessibility of this data varies depending on the agency. Under PDG-R, the CDMIS will be updated or reconfigured to better meet federal reporting requirements and provide more timely, accurate data to agency administrators.

2. ***Connect families with ELC care that meet their needs.*** The Parent Portal, mandated by AB 2960, will make it possible for parents to access timely, accurate information about available child care and how to identify child care options that meet their child's needs. It will also provide access to other consumer education information, including information about key early childhood services like Medi-Cal; the California Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); developmental screenings; etc. As envisioned, this portal will receive and integrate data from multiple systems, such as Community Care Licensing, Quality Counts California, and local child care resource and referral programs, to provide up-to-date information about available ELC programs.

3. ***Establish an equitable and effective workforce development system.*** The California Early Care and Education Workforce Registry tracks demographics, education, employment, compensation, and training data about a portion of the early learning workforce who voluntarily participate. The current workforce registry is managed by a community-based organization and does not yet include records for the full early childhood workforce. A fully scaled workforce registry should provide data on the workforce training, credentials and professional experience of the entire ELC workforce throughout the state, including family, friend and neighbor providers, licensed family child care homes, center-based staff, Head Start and state preschool settings. Such data would provide valuable feedback to state policymakers regarding the impact of changes to policy, technical support, and workforce with access to desirable training and meaningful career trajectories.

- **Professional Development Platform.** This online platform is in the early development phase, with PDG-R funding dedicated for content development and alignment with existing professional development resources. The platform should enable state leaders to track the supply and

characteristics of ELC professionals and caregivers participating in state-funded professional development and identify areas where additional support is needed. ELC professionals should have access to modularized professional development including topic-specific materials to improve practice, which can then be "stacked" into micro-credentials, credentials, and ultimately into college credits which lead to degrees. The Professional Development Platform and the Workforce Registry must be closely aligned so that professionals can easily access high-quality training and track their progress along a career pathway, as well as seamlessly share their credentials and experience with employers.

4. ***Promote equitable data-driven policies, practices, and resource allocation.*** The CHHS in partnership with the CDE and the CDSS is leading the piloting of an Early Childhood Integrated Data System (ECIDS) as a key step toward improving access to and utilization of ELC data to guide decision-making. The ECIDS will link administrative data from multiple ELC programs. The ECIDS development will occur in phases to incorporate an array of early childhood, health, education, and social services data systems used to provide services to and track participation of children and families. It will also analyze data about the workforce and child care supply. This pilot will help to identify any technical or policy barriers to integrating ELC data and its ultimate connection to the state's longitudinal database to understand children's developmental trajectory through adulthood.

- **California Cradle to Career Data System.** California is in its first phase of developing a state longitudinal data system (SLDS) to capture data from early childhood through workforce. Linking K–12 and higher education data is a critical first step to building the SLDS. The ECIDS should eventually connect to California's SLDS as the early childhood or "cradle" portion of the "Cradle to Career" data system. This will give state leaders a longitudinal view of children as they progress through their early years, into formal schooling, and on into the workforce.

Policy and Implementation Considerations

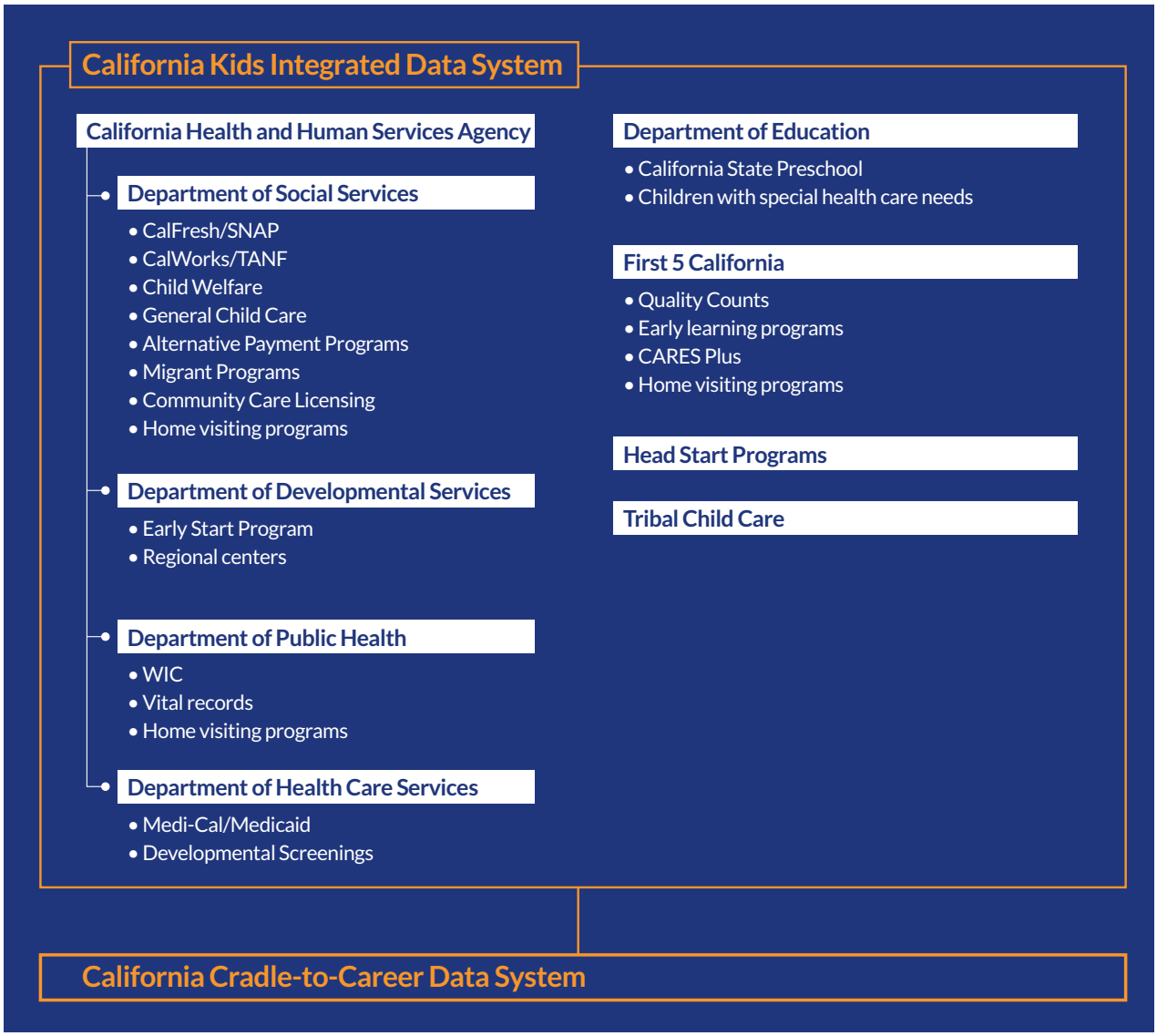
The policy and implementation considerations for the Master Plan build from the previous work described above. For example, PDG-R funding will support the acquisition of technology to facilitate the linkage of data from various early childhood, health, education, and social services databases to examine program participation. The Master Plan puts forth recommendations for the establishment of an equitable governance process overseeing all ELC data systems and a longer-term plan to change data sharing practices to increase the automation and availability of up-to-date ELC data for all stakeholders families, ELC professionals, and policymakers.

The Master Plan proposes to establish an overall governance structure to unify the decision-making process for ELC data coordination efforts and develop a comprehensive ELC data ecosystem. The governance entity will build from the ECIDS pilot by implementing changes in policy and practice to increase programs capacity to share data securely through an automated

process as needed. The integrated data will be used by agencies to support service coordination and real-time data to make decisions.

For the purposes of the Master Plan, this ELC ecosystem or ECIDS will be referred to as the California Kids Integrated Data System (CalKIDS) to signify a system that will leverage all of the current data system efforts across state agencies for children aged birth to five and their families. CalKIDS will be used to promote timely data-driven policies, practices, and resource allocation to support equitable access to ELC services and delivery of services that produce better outcomes for children and families, inclusive of all races, ethnicities, incomes, languages spoken, and communities. Figure 1 maps potential data sources identified through previous stakeholder engagement and Master Plan priorities. The list of programs included in Figure 1 is only a starting point in planning the data integration process. Programs may be funded by state agencies (e.g., Quality Counts), while data may be collected and managed by local entities (e.g., Quality Counts Common Data Elements Files). Depending on stakeholder engagement and how the work is phased, other agencies (e.g., local entities managing workforce training programs), data (e.g., substance abuse), programs (e.g., Family PACT), and data systems (e.g., Desired Results Developmental Profile or DRDP) may also be included. Current data initiatives through PDG-R, such as the Parent Portal, the CDSS Verification Hub, CDE CDMIS, Workforce Registry, and the Professional Development Platform, may share and receive data through CalKIDS as needed.

Figure 1. Potential Data Sources for California Kids Integrated Data System (CalKIDS)



Establish a Data Governance Body

Successfully implementing and sustaining CalKIDS requires a strong data governance body to coordinate data integration efforts across agencies.[8] Data governance bodies guide decisions regarding strategic planning, data collection procedures, security policies, and metrics to track progress toward state goals.[9] Data governance functions include developing data sharing agreements to securely integrate disconnected data and authorizing the use of integrated data for research and planning. Typically, the governance structure consists of agency leadership and other program and community stakeholders with expertise

8 King, C. & Perkins, V. (2019). *How Policymakers Can Support Early Childhood Data Governance.* Early Childhood Data Collaborative. Child Trends.

9 Coffey, M., Chatis, C., Sellers, J., & Taylor, R. (2014). Early Childhood Integrated Data System Toolkit. U.S. Department of Education. National Center for Education Statistics, https://slds.grads360.org/#program/ecids-toolkit

needed to make informed decisions about how best to coordinate and use data integrated across agencies. Governance bodies have the authority to oversee or determine:

1. ***Stakeholder Engagement Plan.*** The data governance body provides a process for ongoing communication and engagement with internal and external stakeholders in the development of the vision and goals of the integrated data system. For example, what questions does it need to answer? Who owns what data? What data are needed to understand the root causes of known disparities? Which populations are being overburdened and which ones are being left out of the plan? It is important that stakeholders represent a wide range of voices from the community. In addition, information shared will need to be tailored for different stakeholders, such as parents and data managers. Be transparent about when stakeholders will be engaged, and develop a timeline of opportunities that is publicly available.
2. ***Data Sharing Practices and Secure Data Integration.*** The process for integrating data from different agencies requires the state to implement data standards and adapt policies to address changes to how data are shared or used. These standards include guidelines for how data are collected, defined, recorded, matched, archived, and, if necessary, disposed of. In some instances, data standards will be needed to facilitate an automated two-way process for sharing data. This will also necessitate that data privacy and security policies required for each agency be met. Data sharing agreements, memoranda of understanding, or individual consent may be required, depending on the data being shared. Initial work should focus on the most mature data systems and practices to establish key systems of record for individuals that are reliable and less likely to change or vary with time.
3. ***Using Data to Advance Equity.*** The data governance body should work with stakeholders to identify system-based and population-based data to guide funding and policy decisions with a focus on equity. System-based data would include information such as the supply of early learning programs, access to child care subsidies, and compensation of early learning professionals. Population-based data would include direct assessments of children's health and learning abilities with a focus on reducing disparities. For example, data could be disaggregated by race and ethnicity, languages spoken, developmental delays, or a priority population for early learning services (e.g., children experiencing homelessness, abuse, or maltreatment). Community-level estimates would be generated from system- and population-based data to understand environmental factors that create opportunities or barriers for children and families living in certain communities. Community-level estimates would document economic (e.g., income inequality), educational (e.g., high school graduation rates), health (e.g., distribution of health providers), and neighborhood (e.g., access to healthy food) characteristics. Population-based data would be used to monitor child outcomes and generate a publicly available annual ELC assessment report. Systems-based metrics would be shared regularly through online dashboards to track state investments and service needs.

The governance body will also be responsible for identifying funding to sustain the ongoing maintenance, technology needs, and staff training for IDS. Members will serve as an important point of contact for the public to address any questions or concerns.

Embed Racial Equity throughout the Governance Process. Advancing racial equity goals outlined in the Master Plan requires implementing a governance body committed to ongoing community engagement, transparency, and use of data to help identify potential underlying structural factors that perpetuate inequity. That commitment requires acknowledging and addressing the effects of structural racism and bias that can affect decisions at each of the following decision points of the data integration process: planning, data collection, data access, development of algorithms/tools, data analysis, reporting, and dissemination.[10] The following guiding principles for conducting research can be used to guide the state's governance process as it makes decisions about the goals and purpose of CalKIDS. These decisions include approaches to stakeholder engagement, data sharing practices, and use of data to advance equity.[11]

1. ***Examine potential biases in current data collection and reporting practices.*** The governance body would be responsible for engaging communities as partners to assess current data collection, integration plans, and data used to inform policies and practices. Transparency about this process is critical for interpreting and reporting the data.
2. ***Go beyond disaggregating data to identify the root causes of disparities.*** In addition to disaggregating data by race and ethnicity, the governance body would engage experts, researchers, and community members to understand the historical context and root causes of disparities. Digging deeper means expanding the use of data from documenting only disparities to examining systemic inequities that fail to reduce disparities.
3. ***Mitigate potential burden and risk of data collection on communities.*** State leaders will need to assess how well changes to data collection practices increase the ease for families and ELC professionals to access and report information through state systems. Decisions to revise data collection and sharing practices should prioritize reducing the burden on communities to provide information and potential risk of people's private information being improperly accessed.
4. ***Ensure there is a balance of burden and benefit for communities.*** The benefits of having accurate data to improve decision-making must be balanced with the burden and potential privacy risks to communities. Determine and communicate how communities will benefit from the development of CalKIDS. This may include equitable access to services or an increased amount of information to guide decision-making for parents, ECE professionals, and communities.
5. ***Approach stakeholder engagement and compensation for input equitably.*** Engage and compensate community members as partners throughout the data integration process. This means having opportunities for the

10 Hawn Nelson, A., Jenkins, D., Zanti, S., Katz, M., Berkowitz, E., et al. (2020). A Toolkit for Centering Racial Equity Throughout Data Integration. Actionable Intelligence for Social Policy. University of Pennsylvania.

11 Adapted from Andrews, K., Parekh, J., & Peckoo, S. (2019). How to Embed a Racial and Ethnic Equity Perspective in Research: Practical Guidance for the Research Process. Child Trends.

community to contribute to the development of IDS and the analysis and interpretation of integrated data.

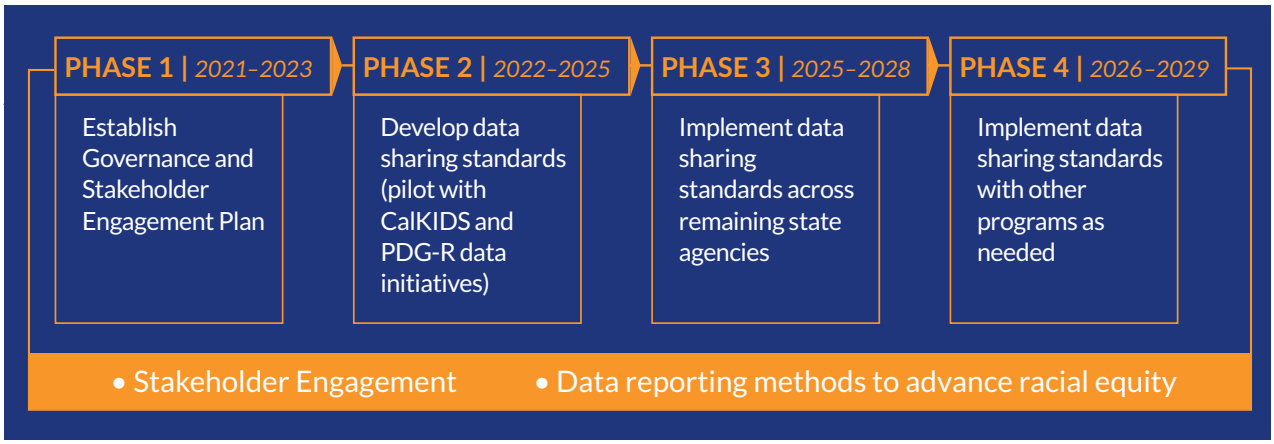
6. ***Guard against the assumptions (implied or explicit) that White is the norm.*** Avoid using outcomes for White children as the norm with which communities of color should be compared or as the standard that they should meet. Ensure measures are tested, relevant, and that they support diverse populations. This includes all measures such as rated quality, workforce standards, and children's learning progress.

These principles should serve as a starting point for transforming the way the state approaches the collection and use of data to advance equity. Ongoing stakeholder engagement facilitated by a governance process is needed to identify potential community concerns or barriers.

Implementation Timeline

We recommend the state implement the above strategies in phases to incrementally expand the data available through CalKIDS. The establishment of a data governance body and stakeholder engagement process will need to be incorporated into existing data initiatives as they move forward to meet current deadlines. These phases may overlap (e.g., within the same 3-year cycle). For example, the CDE and the CDSS could be engaged parallely to implement and revise standards and policies for (1) data dictionaries, (2) data exchange, (3) data privacy, (4) data security, and (5) data archiving. Figure 2 shows a possible phasing of system development based on initial Master Plan goals. Stakeholder engagement, staff training, and principles to advance equity should be embedded throughout the process.

Figure 2. Time Line for CalKIDS Data Integration Process



Conclusion

Data-informed decision-making is essential for building a comprehensive ELC system that supports all families. Current data silos must be broken, and data protocols must be developed and shared across multiple agencies. The Master Plan recommends the development of a comprehensive, timely, and coordinated data infrastructure to advance equitable policies and practices for children aged birth to five, their families, and the early learning and care providers who support them. In addition, it is imperative that this data infrastructure and these policies improve capacity to access and use ELC data to ensure equity. We recommend the development of CalKIDS, a comprehensive ELC data ecosystem, with a governance structure that unifies decision-making for ELC data coordination efforts and promotes equity. Implemented over time, it will ultimately enable data-driven policies, practices, and resource allocation to support equitable access to ELC services and delivery of services that produce better outcomes for children and families, inclusive of all races, ethnicities, incomes, languages spoken, and communities.

Acknowledgments

Author

Carlise King, Early Childhood Data Collaborative

Contributor

Gerrit Westervelt, WestEd