



# Using Arkansas' Administrative Data to Inform Suspension & Expulsion Prevention Policy Implementation

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**ARISE**

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## Executive Summary

Young children are suspended and expelled from early childhood education programs at high rates. Evidence indicates that this form of exclusion can have negative implications for children's development and later school success (Adamu & Hogan, 2015; U.S. Department of Education, Office for Civil Rights, 2016). In response, the 2014 reauthorization of the Child Care and Development Block Grant requires states to develop policies to prevent the use of exclusionary practices in early childhood programs. As state administrators seek to implement policies that reduce suspension and expulsion, many are interested in learning how to better prepare the workforce to address the behavioral challenges that lead to suspension and expulsion (Connors et al., 2018). The administrators at the Arkansas Division of Child Care and Early Childhood Education (AR DCCECE), which administers the state Child Care Development Block Grant (CCDBG) to support the care of more than 3,500 children birth to age 5 each year, have implemented a set of policies and initiatives intended to support young children's social-emotional (SE) development, reduce the use of exclusionary practices in their Child Care Development Fund (CCDF)-funded programs, and promote overall child care program quality. These initiatives aim to reduce the use of exclusionary practices while giving teachers and providers the necessary tools for creating environments and interactional approaches that support positive social-emotional development.

This report summarizes the existing administrative data infrastructure and recommendations for the Arkansas Suspension and Expulsion Work Group with the next steps to support better use of administrative data. Its purpose is to inform the implementation of Arkansas' expulsion prevention policy and the use of supports that enable providers to meet the needs of children with challenging behaviors. The recommendations in this report are based on our work with the Arkansas Suspension and Expulsion Work Group led by AR DCCECE.

## Recommendations

Taking the following steps will help administrators at the Arkansas Division of Child Care and Early Childhood Education better leverage administrative data to support the effective implementation of suspension and expulsion policies and initiatives:

- **Integrate relevant data from the following existing administrative data systems: Professional Development Registry (PDR), Child Care Licensing and Accreditation System (CCLAS), KidCare, and BehaviorHelp.**
- **Use existing administrative data to inform decisions related to the quality improvement activities implemented across the state.**
- **Leverage the existing dashboard technology to create a dashboard to inform the statewide Suspension and Expulsion Work Group of the supports provided to reduce suspension and expulsion in Arkansas.**



## Recommendations for Arkansas

### **Recommendation 1: Integrate existing administrative data systems so that data relevant for suspension and expulsion practices can inform statewide decisions.**

AR DCCECE collects information relevant to the implementation and effectiveness of suspension and expulsion policies and initiatives in four systems<sup>1</sup>:

- Professional Development Registry (PDR) has 141 data elements that provide descriptive data about the workforce (e.g., education, employment, etc.), including data on early childhood educator professional development (ECE PD) courses offered and taken by providers.
- Child Care Licensing and Accreditation System (CCLAS) has 134 data elements on licensed and unlicensed child care facilities.
- KidCare has 355 data elements on children, families, and centers that receive child care voucher payments needed to define the universe of children in Arkansas.
- BehaviorHelp has data 21 elements on child and provider support requests and the follow up on each case.

Separately, these data provide an incomplete picture of policy and program effectiveness. Integrating these data either in a single system or through common identifiers that permit rapid analysis will connect these pieces into a more complete picture from which the AR Suspension and Expulsion Work Group members can extract timely and actionable insights. Information on the next steps for integration can be found in the “[Next Steps](#)” section of this report.

### **Recommendation 2: Use existing administrative data to inform decisions related to the quality improvement activities implemented across the state.**


AR DCCECE has extensive administrative data and the desired focused and detailed information to guide the implementation of the statewide policy to reduce suspension and expulsion. Specifically, the stakeholders identified the following ways they would like to better use administrative data:

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<sup>1</sup> Additional information about Arkansas’ data systems can be found in [Appendix B](#).

- Create a statewide strategy for delivery of professional development (PD) opportunities that support a reduction in the use of suspension and expulsion practices.
- Align policy requirements across multiple programs.
- Determine appropriate professional development opportunities for educators/staff to meet the needs of children with challenging behaviors and promote all children's social-emotional growth.
- Determine future professional development opportunities needed and advocate for additional resources to create them.
- Decide on appropriate outreach strategies with community early learning program leadership.
- Inform discussions of potential improvements to program offerings.
- Conduct a regional gap analysis.

*\*The information needs of the state administrators do not require specific child-level data but will likely be aggregated across cohorts.*



**Recommendation 3: Leverage the existing dashboard technology to create a data analytic tool to inform the statewide Suspension and Expulsion Work Group of the supports provided to reduce suspension and expulsion in Arkansas.**

AR DCCECE has a robust set of business intelligence tools and currently creates more than 20 analytic tools (e.g., dashboards) across the agency. We recommend that the statewide Suspension and Expulsion Work Group leverage the existing business intelligence platform to display relevant data on the implementation of suspension and expulsion policies in Arkansas. The Arkansas's Implementation of Suspension and Expulsion Reduction Policies (ARISE) team has created a conceptual mock-up of a suspension and expulsion-focused dashboard (see [Appendix G](#)) and will partner with AR DCCECE Information Technology (IT) staff to support its development.



## Considerations for other states' administrators working to use data to inform suspension and expulsion policies

Many states are eager to reduce the use of suspension and expulsion in their early childhood programs (U.S Department of Health and Human Services & U.S. Department of Education, 2014). Arkansas is a leader in this regard. AR DCCECE efforts to track the implementation of suspension and expulsion initiatives provide important lessons learned for other states. Below, we outline a set of considerations for policy makers and state agency leaders interested in using state administrative data to inform the implementation of suspension and expulsion policies.

### **Consideration 1: Do you have an existing governing body with the responsibility for implementation of suspension and expulsion policies and initiatives?**

As a first step, state leaders should identify the group(s) responsible for making decisions about suspension and expulsion policies that could benefit from data on the implementation of these policies. In some states, this will be the early childhood advisory councils; but in others, it will be a team of state administrators. In states where there is not a governing body with oversight of the suspension and expulsion policies, state leaders should convene key stakeholders to determine who is in the best position to provide this oversight. For states that have a group working on the development of suspension and expulsion policy, the task of monitoring future policy implementation with administrative data could be established as a key role for this group. To learn more about early childhood governance (to have responsibility for and authority to oversee the implementation) models and outcomes in early childhood, check out *Early Childhood Governance* (Kagan & Gomez, 2015). In Arkansas, governance is provided by a Suspension and Expulsion Work Group. This group includes state leaders across agencies that serve children ages birth through age 5. In other states, the appropriate group could be the state advisory councils or statewide early childhood governance bodies.

### **Consideration 2: What are the information needs of your governing bodies when implementing suspension and expulsion policies and initiatives?**

The process of determining leaders' information needs can be guided by asking, "What decision(s) would data help you make?" and "What questions, related to these decisions, do you need data to answer?". This

inquiry process focuses on the potential uses of data to inform decisions rather than the limitations of the existing data system. In Arkansas, the group wanted to understand the availability and use of the supports offered throughout the state to support providers. With this information, they hoped to create statewide professional development plans that incorporate supports to reduce suspension and expulsion, identify areas of the state that need additional support to target resources, and determine if new professional development supports would be beneficial for the providers.

### **Consideration 3: What relevant information is captured in state administrative data systems?**

Although only a subset of the state's administrative data are needed to inform the implementation of suspension and expulsion policies, state administrators should review the existing data dictionaries of their early childhood data system. Some states without data dictionaries will need to create them. A data dictionary provides names, definitions, and attributes for the fundamental data elements within a data system. It does not reflect how the data are collected or modeled, but rather serves as a single location to define elements across multiple systems. They typically document what types of information are collected, who provides the information, and how often it can be used to reduce the burden and align conversations between IT and programs about needed data. Key administrative data systems that are relevant to early childhood suspension and expulsion include those with information on programs such as Head Start, State Preschool, IDEA Part C early intervention and Part B, child care licensing, and early childhood workforce registries. Identifying the relevant data is critical in understanding what potential data exist and the quality of information available to inform decisions about the implementation of suspension and expulsion policies. AR DCCECE staff worked to update their data dictionaries and used these resources to identify what administrative data existed and could be used to inform the questions the governing body had identified.

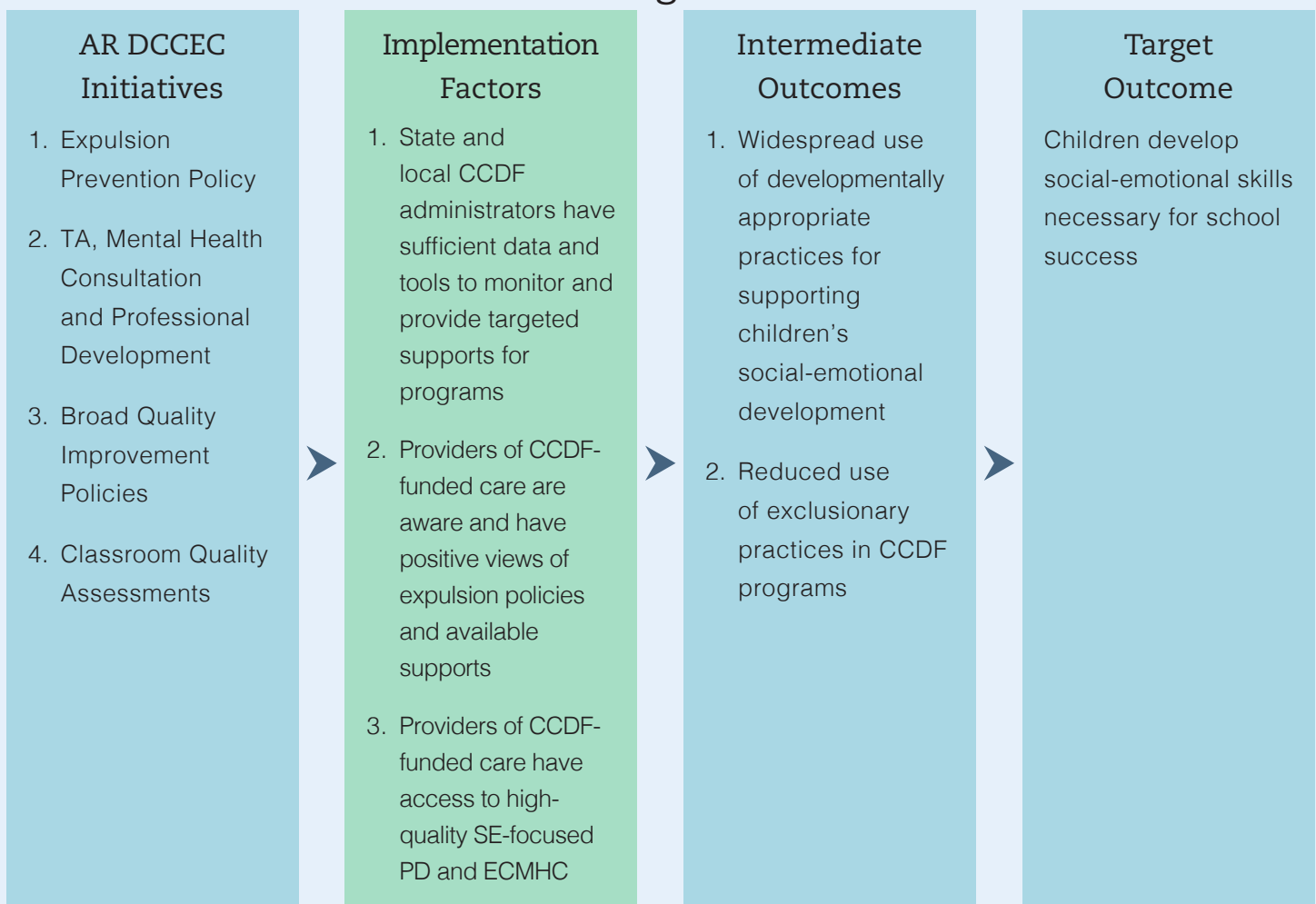
### **Consideration 4: What existing technologies could be leveraged to support development of analytic tools?**

Providing data in a format that allows the governing body to use the administrative data easily is critical to the use of data to inform practice. Technology platforms, such as PowerBI or Tableau, can help policy makers and program leaders overseeing the implementation of suspension and expulsion policies gain actionable insights from the information in their data systems. These platforms support the reporting of data through business intelligence tools and can help communicate data visually so that it can lead to action. Leveraging existing technology can support the display of the relevant data. Using the state's existing technology allowed state leaders in Arkansas to understand the value of dashboards in their decision-making and saved time and money by sharing IT resources.

## Project Description

Arkansas's Implementation of Suspension and Expulsion Reduction Policies is a collaborative research project between the Arkansas Department of Child Care and Early Childhood Education and two research organizations: SRI International (SRI) and the National Center for Children in Poverty (NCCP). ARISE's objective is to obtain new information regarding the three implementation factors that may limit or enhance the potential success of Arkansas' CCDF policies. The first implementation factor is that state and local CCDF administrators have sufficient data and tools to monitor and provide targeted support to programs implementing these initiatives. The second implementation factor is early care and education providers' awareness and positive view of the state's expulsion prevention policy and the available supports. The third factor is early care and education providers' access to high-quality professional development and early childhood mental health consultation.

### ARISE Logic Model



In 2019–2020 project Year 1, the ARISE team focused on understanding (1) What data about providers' use of social-emotional focused quality improvement supports, including coaching and early childhood mental health consultation, are currently being collected?, and (2) Are these data sufficient to support AR DCCECE quality improvement activities? Below, we describe our process and findings in three sections: (1) identification of the relevant administrative data systems, (2) articulate the data necessary to address the information needs of the state partner, and (3) assess the data gaps and evaluate the data quality used to inform the policy decisions. We conclude this report with the next steps for the ARISE project as the team continues to help AR use their data to inform their suspension and expulsion policies.



### Research Question:

What data about providers' use of the full range of social-emotional focused quality improvement supports, including coaching and early childhood mental health, are currently being collected? Are these data sufficient to support AR DCCECE quality improvement activities?

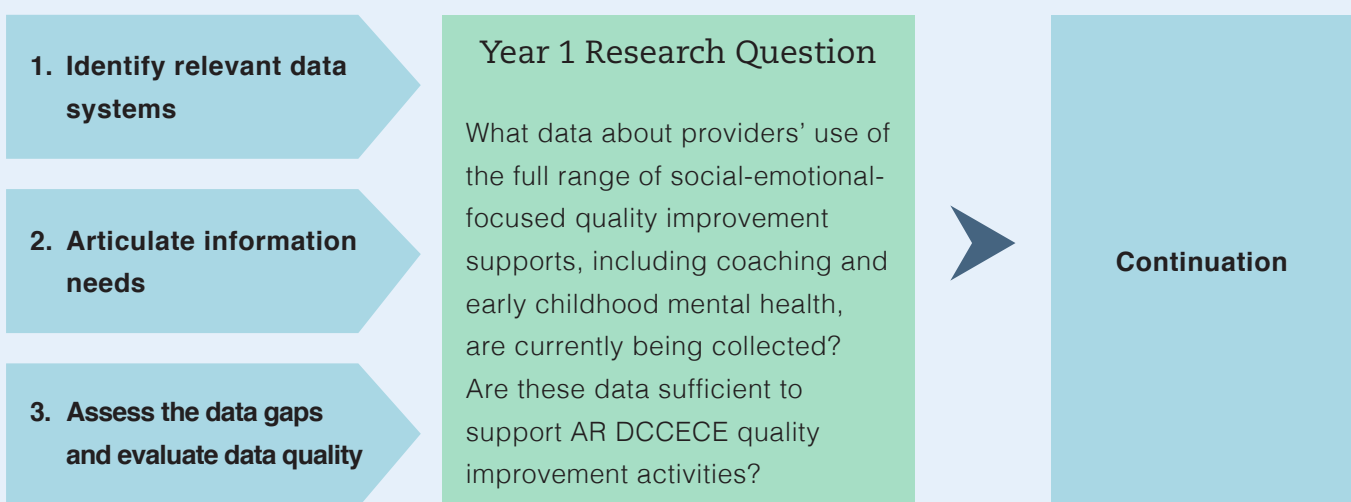


## Our Approach

This report describes the first year of a 4-year project, ARISE, which is a collaboration between SRI, NCCP, AR DCCECE staff, members of the statewide Suspension and Expulsion Work Group, and the technical assistance (TA) providers supporting child care providers in Arkansas. The ARISE team worked with these stakeholders to identify ways to better use administrative data to inform the supports provided to reduce suspension and expulsion across the state. In addition, the ARISE team assessed whether AR leaders had sufficient data to inform their decisions.

We used a three-stage process to assess whether AR DCCECE has sufficient data and tools to monitor and provide targeted support to programs implementing these suspension and expulsion reduction initiatives. These steps were informed by the Year 1 research question. We expect to continue building from the work accomplished to provide tools that address the findings from Year 1. See [Appendix A](#) for more details on the process methodology.

### ARISE Approach to Assessing the Sufficiency of Data to Inform S/E Policies





## Stage 1: Identify relevant data systems

Given the fragmented nature of early care and education in the United States, multiple administrative data systems that could be leveraged to inform program and policy decisions about suspension and expulsion. For example, data from the child care licensing system supplies provider information and could be integrated with data from a professional registry that provides information on the relevant trainings (e.g., social-emotional, unconscious discipline) taken by the provider. According to Lin et al. (2017), preparing and investigating the feasibility of the administrative data is a crucial component before using it to respond to the state information needs. The goal of the first stage of work was to produce a data dictionary for each data system that could be used to understand the data available for informing the implementation of AR's suspension and expulsion policies. Each data dictionary is accompanied by a memo that informs the reader about how to navigate the dictionary and the purpose of the document. A copy of these memos is available in [Appendices C–F](#).



## Stage 2: Articulate the information needs

A brief by the U.S. Department of Education, Institute of Education Sciences, outlines the key steps necessary for using data systems to respond to information needs: (1) identify key end-users, (2) identify key questions, (3) identify specific sub-questions, and (4) identify the data elements that are needed to answer the question(s) (Coffey et al., 2013). In Arkansas, an initial stakeholder meeting was used to gain insights into the information needs of individuals who would use the data. The information needs identified in this meeting were then used to develop two use case tools. The use case is a tool used to consider options for the future analytic functionality needed and articulates how the data could inform decisions (Regenstein, 2017). AR leadership decided that one of the case tools best reflects their data needs, and this version was used to design an initial mockup of the analytic tool.



## Stage 3: Assess the data gaps and evaluate the data quality

Determining sufficiency of the data depends on a well-articulated use case followed by an analysis of data needed to respond to the articulated information needs and the availability of the data for responding. The analysis conducted in this stage identifies the critical data elements related to the identified information needs, aligns the data dictionaries across systems to articulate the available data, and finally reviews the quality of the data elements. Low-quality data will add little value to the analytic tool (Strong et al., 1997), so checking for the highest quality elements is essential. This stage leverages the expertise of state leaders and the stakeholders responsible for implementing the policies. It was representative of the iterative expectations expressed in *Determining the Feasibility of Using State Early Care and Education Administrative Data* (Lin, Maxwell & Forry, 2017).

## Next Steps

The AR Suspension and Expulsion Work Group partners have been involved in tremendous work during 2020. The process of identifying needs with the stakeholders led to the design of a dashboard that leverages the administrative data in a new way. As the project moves into Year 2 in 2021, the ARISE team will accomplish the following:

- **Pilot the analytic tool by using a sample of data and evaluate the data quality.** This is an important step to test the integration of data. When testing, the team can identify areas where the quality of data is strong and where it needs to be improved to provide useful and reliable data to those using the data to inform the decisions.
- **Develop the business requirements for the analytic tool.** Making the design come-to-life requires the conceptual mockup to be translated into business requirements. The business requirements will leverage the vendors' templates to create guidance on how data are to be integrated and the needed functionality and design of the dashboard. The team will translate the conceptual mockup and apply vendor templates in collaboration with partners in AR DCCECE IT.
- **Continue to refine the conceptual mockup based on stakeholder feedback.** Continuing to gather information from the stakeholders will be critical in the use of the dashboard. The ARISE team will join the Arkansas Suspension and Expulsion Work Group twice in 2021 to provide updates and examples of the dashboard in development. Stakeholder feedback gathered at multiple time points will help to refine the tool and ensure it meets the evolving need of the state leaders.



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# Appendix A: Methodology

## Stage 1: Process for identifying relevant data systems.

To understand the potential administrative data that could be informative, the ARISE team started with a review of the data landscape in Arkansas. This involved taking an inventory of AR DCCECE data systems and developing data dictionaries for all relevant programs (see [Appendix B](#)).

**Data system Inventory:** AR DCCECE maintains six data systems that provide policy makers and program leaders with relevant information on young children, their families and providers of early care and education. The ARISE team identified three data systems with information relevant to monitoring the implementation and effectiveness of suspension and expulsion policies: Childcare Licensing and Accreditation System (CCLAS), Professional Development Registry (PDR), and KidCare. CCLAS tracks all registered child care family homes, licensed homes, licensed child care centers, and out-of-school time centers. The information is structured at the site level and includes records regarding background checks, program ownership, Quality Rating and Improvement System (known as Better Beginnings in Arkansas), health, and safety. PDR includes information on the professional development offered to registered early childhood education providers, administrators, and providers of professional development. KidCare includes information of children and families that have applied to the state voucher program. In addition, the ARISE team identified four data systems that are related but would not directly address the research question: What data about providers' use of the full range of social-emotional focused quality improvement supports, including coaching and early childhood mental health, are currently being collected? Are these data sufficient to support AR DCCECE quality improvement activities?

In addition to the data systems managed by AR DCCECE, the University of Arkansas for Medical Sciences (UAMS) is a contracted partner that oversees the implementation of the BehaviorHelp program. BehaviorHelp is a smaller program that provides a single point-of-entry to access support for teachers experiencing behavioral challenges in the classroom. BehaviorHelp's multi-tiered system coordinates key training, technical assistance, and mental health consultation resources in the state with a goal of helping ECE providers quickly and easily access the support that is likely to best match their needs. These data are managed by UAMS; AR DCCECE believes the data collected about BehaviorHelp to be relevant to informing decisions about the implementation of the policies. For purposes of the partnership, the ARISE team treated the BehaviorHelp data as a data system.

**Developed data dictionaries.** A data dictionary is “an agreed-upon set of clearly defined elements, including definitions, and attributes, that comprise an information system. Dictionaries help an organization maintain consistency in its information systems. Database users and managers refer to a data dictionary to find out where specific data are located, whether they were reported correctly, how to use them

appropriately and what their values mean” (Common Education Data Standards, n.d.). The ARISE team worked with AR DCCECE and UAMS to create data dictionaries for the relevant data systems identified through the data system inventory.

For each data system, the ARISE team leveraged any current documentation on the types of data collected. AR DCCECE can pull the data schemas for CCLAS, KidCare, and PDR from the vendor. BehaviorHelp is a cloud-based data collection system, through which data can be extracted into various forms for statistical analyses. The BehaviorHelp program staff provided a codebook consisting of copies of frequently used forms annotated with data element names. Most of the forms used by staff are completed by hand. Designated staff members then enter the data into the cloud-based data system. The codebook provided relevant information to create the BehaviorHelp data dictionary template. The ARISE team modeled the data dictionary based on the national Common Education Data Standard (CEDS) template. This template was used because it could be used with other CEDS tools and provides the largest number of data elements in multiple domains (King & Maxwell, 2017).

The ARISE team and the data managers from AR DCCECE and UAMS defined elements, definitions, and option sets that belong in a data dictionary. Staff also removed indicators, metadata, and any assessment items into additional tabs. Data elements where we had missing information were flagged within the spreadsheet and discussed with state partners. The remaining element names, descriptions, and option sets were clarified with state partners, aligned to CEDS or marked for future internal quality assurance checks. After the completion of each data dictionary, the final spreadsheet was sent to each data system lead via email along with a data dictionary memo. The memo articulated the goals of a data dictionary and provided examples of potential benefits and uses (see [Appendix C–F](#)).

## Stage 2: Process for articulating the information needs of state administrators.

Determining the sufficiency of the data depends on a well-articulated use case followed by an analysis of data needed in order to respond to the articulated information needs and the availability of the data for responding. Articulating information needs can be challenging and unfamiliar to state leaders who have not historically had access to comprehensive descriptive data to inform decisions (Kipnis & Whitebook, 2011; Squires et al., 2011). One of the ways to gather and articulate the information needs is to develop use cases (Regenstein, 2017). A use case is a tool used to consider options for the future analytic functionality needed and articulates the value and actions that can be taken from the data. A brief by the U.S. Department of Education, Institute of Education Sciences, outlines the key steps necessary for using data systems to respond to information needs: (1) identify key end-users, (2) identify key questions, (3) identify specific sub-questions, and (4) identify the data elements that are needed to answer the question(s) (Coffey et al., 2013).

To better understand the information needs related to the implementation of the AR suspension and expulsion policies, the ARISE team facilitated a stakeholder meeting, developed two use cases and designed an initial mockup of the analytic tool.

**Observations and Stakeholder meeting.** In early February of 2020, members of the ARISE team visited Little Rock, Arkansas to meet with AR DCCECE and UAMS stakeholders and gain a deeper understanding of their goals and needs to reduce suspensions and expulsions and increase knowledge about the expulsion policy in CCDBG sites. During the visit, the team attended three meetings where decisions about the implementation of the AR suspension and expulsion policies were made. The first was an Array Central Hub Meeting, a partnership of professional development providers led by A-State Early Childhood Services and UAMS Department of Family and Preventive Medicine funded by AR DCCECE to organize and implement social-emotional supports to ECE programs. Array is comprised of 16 different support programs and services, including BehaviorHelp, that work collaboratively to connect providers to professional development and target resources to help teachers support children with challenging behavior (See [Appendix H](#)). During this meeting, Array Hub members discussed the needs of specific child care programs.

The ARISE team later facilitated a stakeholder meeting with representatives of the statewide Suspension and Expulsion Work Group. In this meeting, our team learned about the current ways data are used to inform exclusionary discipline practices in Arkansas, as well as their goals and information needs. Our team presented best practices with data analytics and gathered information on how the leaders would like to see data used to inform suspension and expulsion practices and policies. In the third meeting, the team members observed a BehaviorHelp management meeting where decisions about individual cases are made and then referred to a multi-tiered system of supports based on child and center needs, which could include technical assistance or early childhood mental health consultation.

**Developed two use cases.** Based on the observations and discussions, the ARISE team identified two needs for an analytic tool: a BehaviorHelp case management tool and a state-wide systems tool to answer questions specific to Arkansas' suspension and expulsion policies and professional development supports. The ARISE team developed separate use case worksheets for each option to outline the need and expected outcomes. These use cases outlined the goals, primary users, key questions, required datasets, functionality, and expected actions for each potential analytic tool.

The case management tool would help the BehaviorHelp management team learn what type of centers and what regions submit BehaviorHelp requests and the efficacy of their services. The statewide systems tool would provide stakeholders with an analytic tool capable of analyzing the effectiveness of statewide suspension and expulsion policies and the efforts of the state's prevention and intervention programs. The state team reviewed the two use cases and decided which would be most appropriate for the state needs. This tool would be used across state agencies to inform policy and program decisions regarding future professional development offerings and community outreach and to review the impact of their suspension and expulsion policies.

**Designed an initial conceptual mockup of the analytic tool.** The ARISE team created a conceptual mockup for the proposed analytic tool. A conceptual mockup focuses on the visual needs of the data but does not include actual data. These mockups were created using Balsamiq, a wireframing software and visualization tool, focused on the suite of options the state has available through their business intelligence platform, PowerBI. The mockup is used to discuss possibilities, test assumptions, and get feedback from stakeholders. The mockup was designed, reviewed internally with the ARISE team (including the state partners), and presented back to the stakeholders for their feedback in September 2020.

## Stage 3. Process for assessing the data gaps and evaluate the data quality

The analysis conducted in this stage identifies the critical data elements, aligns the data dictionaries across systems to articulate the available data, and finally reviews the quality of the data elements.

**Identified the critical data elements needed for the analytic tool and survey sample.** Based on the conceptual model created in the second stage, the ARISE team outlined the necessary data elements needed to populate the analytic tool. The team created an analytic outline using each question and visualization presented in the conceptual mockup, and a list of the relevant data elements needed to create the metric was compiled. The analytic plan included the key questions, the needed data elements, and the algorithm for pulling the data together.

**Aligned data across agencies.** The ARISE team created an integrated data dictionary using the data dictionaries created during the first stage and the identified critical data elements. We leveraged the recommended practices from the CEDS guidance on alignment of data dictionaries, and with the AR DCCECE state team, we decided which elements would be the master data elements used for the analytic tool.

**Identified the preliminary data quality issues.** While developing the four data dictionaries, we identified data quality issues and flagged them for the state partners. The identified issues were discussed in the monthly data team meetings and later incorporated into the data dictionary memos to inform future data collection and reporting. The data quality feedback was rooted in a desire to improve the quality of the state data, and thus the ways in which they share relevant data with decision makers. The introduction of a data dictionary illuminated a productive way to organize and differentiate the data by elements, indicators, and metadata. In addition, the data were reviewed to provide recommendations on practices to bolster consistency, transparency, and sustainability in their data systems (i.e., reducing duplicate elements and adopting clear element names and definitions). In the memos, we cited examples where these data quality practices would benefit from additional data quality reviews.

## Appendix B: Arkansas Data System Inventory

Relevant System Name	Information collected in the data system	Unit of analysis	Frequency updated	Purpose	Agency responsible
<b>KidCare</b>	Demographic information about children and families TANF Transitional Employment Assistance (TEA) Supplemental Security Income (SSI) Veteran's Benefits CCDBG voucher	Child /family	Daily	Determine eligibility for child care assistance	AR DCCECE
<b>Child Care Licensing and Accreditation System (CCLAS)</b>	Child care facility information Contact for director or owner of facility Licensing requirements Better Beginnings child care quality rating Facility payment information	Program	Daily	Verify that child care facilities are meeting minimum licensing requirements	AR DCCECE
<b>Professional Development Registry (PDR)</b>	Professional development courses offered to ECE workforce Instructor information Demographic information about the ECE professional	Early childhood educator	Daily	Track professional development individuals and determine if facility staff is meeting minimum requirements	AR DCCECE
<b>BehaviorHelp</b>	Child level demographics Observed child behavior Child care facility information Better Beginnings child care quality rating Provider and parent contact information Intervention details and outcome Behavioral assessment results	Child/ program	As needed	Tracks training, technical assistance, and mental health consultation provided to reduce challenging behaviors and decrease suspensions and expulsions	UAMS

Relevant System Name	Information collected in the data system	Unit of analysis	Frequency updated	Purpose	Agency responsible
<b>Health and Nutrition</b>	Information about programs that are part of food programs Meals served Reimbursement of provided meals	USDA Food Service Programs	Daily	Tracking meals and reimbursements in child and adult food programs	AR DCCECE
<b>Commodities</b>	Similar to health and nutrition. Different food types	Warehouse shipments to USDA Food Service Programs	Daily	Tracks distribution of food outside the health and nutrition programs	AR DCCECE
<b>CCB (Child Care Billing)</b>	Billing system for reimbursement of child care facilities. Tied to Kid Care	DCCECE Finance	Daily	Tracks billing and reimbursement of child care facilities	AR DCCECE
<b>COPA</b>	ABC Data, child demographic, attendance Listed as Classroom A or Classroom B because teacher rotates	Child level			ADE
<b>E-School</b>	Assessment and grade data for K–12	Child level			ADE
<b>Teacher Ed</b>	PDR for teacher in K–12				ADE

# Appendix C: Data Dictionary Memo for KidCare System



## WHAT IS A DATA DICTIONARY?<sup>1</sup>

A data dictionary provides names, definitions, and attributes for the fundamental data elements within a data system. It also provides varied users a shared understanding of how data will be used and expressed within a given context. A data dictionary does not reflect how the data are collected or modeled, but rather serves as a single location to define elements across multiple systems.

## GOAL OF A DATA DICTIONARY

As the use of data for strategic decision-making in education continues to expand, state agency leaders have been addressing multiple issues regarding the collection, housing, use, and communication of data among various individuals and entities. As state agency leaders and local providers work to integrate data, a dictionary provides relevant information to help with cross-agency conversations about the data process.

## BENEFITS OF A DATA DICTIONARY

A quality data dictionary is something worth sharing with other agencies. Creating a data dictionary provides the following benefits:

- **Consistency.** A well-designed data dictionary can improve the data quality of an organization by ensuring data integrity, eliminating redundancies, increasing consistency, and allowing effective communication in order to correct inconsistencies that arise from a lack of standards across data bases.
- **Transparency.** State agencies that publish their data dictionaries help to support their colleagues in other states by providing examples and guidelines in terms of chosen data elements, metadata, system design, and various other dictionary aspects.
- **Sustainability.** As staff and procedures within a state agency change over time, a comprehensive data dictionary can provide structure for flexible and smart growth. A data dictionary designed with a long-term vision will be able to adapt and adjust to large-scale changes more easily.

## WAYS TO USE A DATA DICTIONARY

- **Communicate information needs with IT.** A data dictionary can help guide the conversation between individuals with programmatic information needs and the IT team that will pull the data but may not be familiar with the nuances of the ECE data. This document contains element descriptions that are accessible to a program and IT staff thus helping them communicate about possible uses.
- **Communicate across agencies.** A data dictionary can identify gaps in data across agencies that could be addressed in order to better inform statewide decisions.
- **Transfer of knowledge.** A data dictionary can help new staff learn about the data they collect and use. This also helps support consistency in the case of staff promotion.
- **Quality purposes.** A well-designed data dictionary can perform automated checks of data accuracy and completeness built into the maintenance processes to reduce redundancies.

<sup>1</sup> Adapted from Common Education Data Standards' Status of State Data Dictionaries





#### HOW TO NAVIGATE THE KIDCARE DATA DICTIONARY

The document is divided into four tabs. The blue tab contains the elements that we have checked, condensed where duplication occurred, and aligned, where possible, to CEDS conventions. These are elements we are likely to reference when moving towards integrating multiple systems.

As discussed above, a data dictionary contains fundamental data elements. The red tab contains KIDCARE database indicators and metadata. An indicator is made up of multiple elements. Metadata is defined as any element provided that contained back-end information related to system function or operation. Thus, indicators and metadata were removed from the data dictionary.

The green tab includes all elements that describe an individual's race or ethnicity. For our future merge, we will need to make sure the way these elements are collected is consistent across all systems.

The gray tab holds items that represent ID numbers used to identify applications, claims, facilities, etc. However, many IDs in KIDCARE are metadata and used on the back end. These items normally are not included in a data dictionary and thus have been separated into a new tab.

In the yellow tab are items that all indicate a date. Some are possibly metadata or indicators; others could be integrated into the KIDCARE data dictionary. We are happy to help provide additional support with this list at a later project timepoint.

The elements in the KIDCARE Data Dictionary document are to be considered a work in progress. ARISE hopes to continue refining the document as the partnership continues. On the following page is a copy of the Tab list found in the 'READ ME' section of the KIDCARE document.



<b>KIDCARE DD</b>				
Includes elements that have been quality checked and will likely be used by future project ARISE needs				
<table border="0" style="width: 100%;"> <tr> <td style="width: 25%; vertical-align: top;"> <p><b>Green highlights:</b> Items that require additional QC</p> </td> <td style="width: 25%; vertical-align: top;"> <p><b>Purple highlights</b> Option sets that require additional information for clarity purposes. Some contain in-line comments with specific questions or concerns.</p> </td> <td style="width: 25%; vertical-align: top;"> <p><b>Yellow highlights</b> Element descriptions that require additional information for clarity purposes.</p> </td> <td style="width: 25%; vertical-align: top;"> <p><b>Peach highlights</b> Elements that might be able to be combined with others. In-line comments provide more explanation.</p> </td> </tr> </table> <p><b>Red text:</b> language directly from the Common Education Data Standards</p> <p><b>Blue text:</b> language from Brent</p>	<p><b>Green highlights:</b> Items that require additional QC</p>	<p><b>Purple highlights</b> Option sets that require additional information for clarity purposes. Some contain in-line comments with specific questions or concerns.</p>	<p><b>Yellow highlights</b> Element descriptions that require additional information for clarity purposes.</p>	<p><b>Peach highlights</b> Elements that might be able to be combined with others. In-line comments provide more explanation.</p>
<p><b>Green highlights:</b> Items that require additional QC</p>	<p><b>Purple highlights</b> Option sets that require additional information for clarity purposes. Some contain in-line comments with specific questions or concerns.</p>	<p><b>Yellow highlights</b> Element descriptions that require additional information for clarity purposes.</p>	<p><b>Peach highlights</b> Elements that might be able to be combined with others. In-line comments provide more explanation.</p>	
<b>Indicators OR Metadata</b>				
Includes indicators and metadata which are typically not a part of data dictionaries				
<b>RaceEthnicity</b>				
Includes items that describe the race or ethnicity of an individual. For our future merge, these items will need additional QC				
<b>IDs</b>				
Includes identification numbers used to identify important elements in KIDCARE, but also for back-end work				
<b>Dates</b>				
Items that indicate a time or date, removed from data dictionary for future QC before merging.				

# Appendix D: Data Dictionary Memo for CCLAS System



## WHAT IS A DATA DICTIONARY? <sup>1</sup>

A data dictionary provides names, definitions, and attributes for the fundamental data elements within a data system. It also provides varied users a shared understanding of how data will be used and expressed within a given context. A data dictionary does not reflect how the data are collected or modeled, but rather serves as a single location to define elements across multiple systems.

## GOAL OF A DATA DICTIONARY

As the use of data for strategic decision-making in education continues to expand, state agency leaders have been addressing multiple issues regarding the collection, housing, use, and communication of data among various individuals and entities. As state agency leaders and local providers work to integrate data, a dictionary provides relevant information to help with cross-agency conversations about the data process.

## BENEFITS OF A DATA DICTIONARY

A quality data dictionary is something worth sharing with other agencies. Creating a data dictionary provides the following benefits:

- **Consistency.** A well-designed data dictionary can improve the data quality of an organization by ensuring data integrity, eliminating redundancies, increasing consistency, and allowing effective communication in order to correct inconsistencies that arise from a lack of standards across data bases.
- **Transparency.** State agencies that publish their data dictionaries help to support their colleagues in other states by providing examples and guidelines in terms of chosen data elements, metadata, system design, and various other dictionary aspects. This data dictionary will also highlight the innovative and collaborative work conducted by the *BehaviorHelp* system.
- **Sustainability.** As staff and procedures within a state agency change over time, a comprehensive data dictionary can provide structure for flexible and smart growth. A data dictionary designed with a long-term vision will be able to adapt and adjust to large-scale changes more easily.

## WAYS TO USE A DATA DICTIONARY

- **Communicate information needs with IT.** A data dictionary can help guide the conversation between individuals with programmatic information needs and the IT team that will pull the data but may not be familiar with the nuances of the ECE data. This document contains element descriptions that are accessible to a program and IT staff thus helping them communicate about possible uses.
- **Communicate across agencies.** A data dictionary can identify gaps in data across agencies that could be addressed in order to better inform statewide decisions.
- **Transfer of knowledge.** A data dictionary can help new staff learn about the data they collect and use. This also helps support consistency in the case of staff promotion.
- **Quality purposes.** A well-designed data dictionary can perform automated checks of data accuracy and completeness built into the maintenance processes to reduce redundancies.

<sup>1</sup> Adapted from Common Education Data Standards' Status of State Data Dictionaries



#### HOW TO NAVIGATE THE CCLAS DATA DICTIONARY

The document is divided into three tabs. The green tab contains the elements that we have checked, condensed where duplication occurred and aligned, where possible, to CEDS conventions. These are elements we are likely to reference when moving towards integrating multiple systems.

In the yellow tab are elements we would like you to consider for additional quality checks. We are happy to help provide additional support with this list at a later project timepoint.

As discussed above, a data dictionary contains fundamental data elements. The red tab contains CCLAS database indicators and metadata. An indicator is made up of multiple elements. Metadata is categorized as any element provided that contained back end functioning information or information related to the operation of the system. Thus, indicators and metadata were removed from the data dictionary.

The elements in the CCLAS Data Dictionary document are to be considered a work in progress. ARISE hopes to continue refining the document as the partnership continues. Below is a copy of the Tab list found in the 'READ ME' section of the class document.

#### Element of Interest

Includes elements that have been quality checked and will likely be used by future project ARISE needs

#### Need QA

Recommended QA Elements

#### Indicator and Metadata

Includes indicators and Metadata which are typically not a part of data dictionaries

# Appendix E: Data Dictionary Memo for PDR System



## WHAT IS A DATA DICTIONARY?<sup>1</sup>

A data dictionary provides names, definitions, and attributes for the fundamental data elements within a data system. It also provides varied users a shared understanding of how data will be used and expressed within a given context. A data dictionary does not reflect how the data are collected or modeled, but rather serves as a single location to define elements across multiple systems.

## GOAL OF A DATA DICTIONARY

As the use of data for strategic decision-making in education continues to expand, state agency leaders have been addressing multiple issues regarding the collection, housing, use, and communication of data among various individuals and entities. As state agency leaders and local providers work to integrate data, a dictionary provides relevant information to help with cross-agency conversations about the data process.

## BENEFITS OF A DATA DICTIONARY

A quality data dictionary is something worth sharing with other agencies. Creating a data dictionary provides the following benefits:

- **Consistency.** A well-designed data dictionary can improve the data quality of an organization by ensuring data integrity, eliminating redundancies, increasing consistency, and allowing effective communication in order to correct inconsistencies that arise from a lack of standards across data bases.
- **Transparency.** State agencies that publish their data dictionaries help to support their colleagues in other states by providing examples and guidelines in terms of chosen data elements, metadata, system design, and various other dictionary aspects. This data dictionary will also highlight the innovative and collaborative work conducted by the *BehaviorHelp* system.
- **Sustainability.** As staff and procedures within a state agency change over time, a comprehensive data dictionary can provide structure for flexible and smart growth. A data dictionary designed with a long-term vision will be able to adapt and adjust to large-scale changes more easily.

## WAYS TO USE A DATA DICTIONARY

- **Communicate information needs with IT.** A data dictionary can help guide the conversation between individuals with programmatic information needs and the IT team that will pull the data but may not be familiar with the nuances of the ECE data. This document contains element descriptions that are accessible to a program and IT staff thus helping them communicate about possible uses.
- **Communicate across agencies.** A data dictionary can identify gaps in data across agencies that could be addressed in order to better inform statewide decisions.
- **Transfer of knowledge.** A data dictionary can help new staff learn about the data they collect and use. This also helps support consistency in the case of staff promotion.
- **Quality purposes.** A well-designed data dictionary can perform automated checks of data accuracy and completeness built into the maintenance processes to reduce redundancies.

<sup>1</sup> Adapted from Common Education Data Standards' Status of State Data Dictionaries



**HOW TO NAVIGATE THE PDR DATA DICTIONARY**

The document is divided into four tabs. The blue tab contains the elements that we have checked, condensed where duplication occurred, and aligned, where possible, to CEDS conventions. These are elements we are likely to reference when moving towards integrating multiple systems.

In the yellow tab are items that all indicate a date. Some are possibly metadata or indicators; others could be integrated into the PDR data dictionary. We are happy to help provide additional support with this list at a later project timepoint.

As discussed above, a data dictionary contains fundamental data elements. The red tab contains PDR database indicators and metadata. An indicator is made up of multiple elements. Metadata is defined as any element provided that contained back-end information related to system function or operation. Thus, indicators and metadata were removed from the data dictionary.

The gray tab holds items that represent ID numbers used to identify PDR members, facilities, course codes, etc. However, many IDs in PDR are metadata and used on the back end. These items normally are not included in a data dictionary and thus have been separated into a new tab.

The elements in the PDR Data Dictionary document are to be considered a work in progress. ARISE hopes to continue refining the document as the partnership continues. Below is a copy of the Tab list found in the 'READ ME' section of the PDR document.

<b>PDR DD</b>	
	Includes elements that have been quality checked and will likely be used by future project ARISE needs
<b>Dates</b>	
	Includes all instances of a 'date' in the PDR database. These are likely to be further reviewed by ARISE staff in the future
<b>Indicators OR Metadata</b>	
	Includes indicators and Metadata which are typically not a part of data dictionaries
<b>IDs</b>	
	Includes identification numbers used to identify important elements in PDR, but also for back-end work



# Appendix F: Data Dictionary Memo for BehaviorHelp System



## WHAT IS A DATA DICTIONARY?<sup>1</sup>

A data dictionary provides names, definitions, and attributes for the fundamental data elements within a data system. It also provides varied users a shared understanding of how data will be used and expressed within a given context. A data dictionary does not reflect how the data are collected or modeled, but rather serves as a single location to define elements across multiple systems.

## GOAL OF A DATA DICTIONARY

As the use of data for strategic decision-making in education continues to expand, state agency leaders have been addressing multiple issues regarding the collection, housing, use, and communication of data among various individuals and entities. As state agency leaders and local providers work to integrate data, a dictionary provides relevant information to help with cross-agency conversations about the data process.

## BENEFITS OF A DATA DICTIONARY

A quality data dictionary is something worth sharing with other agencies. Creating a data dictionary provides the following benefits:

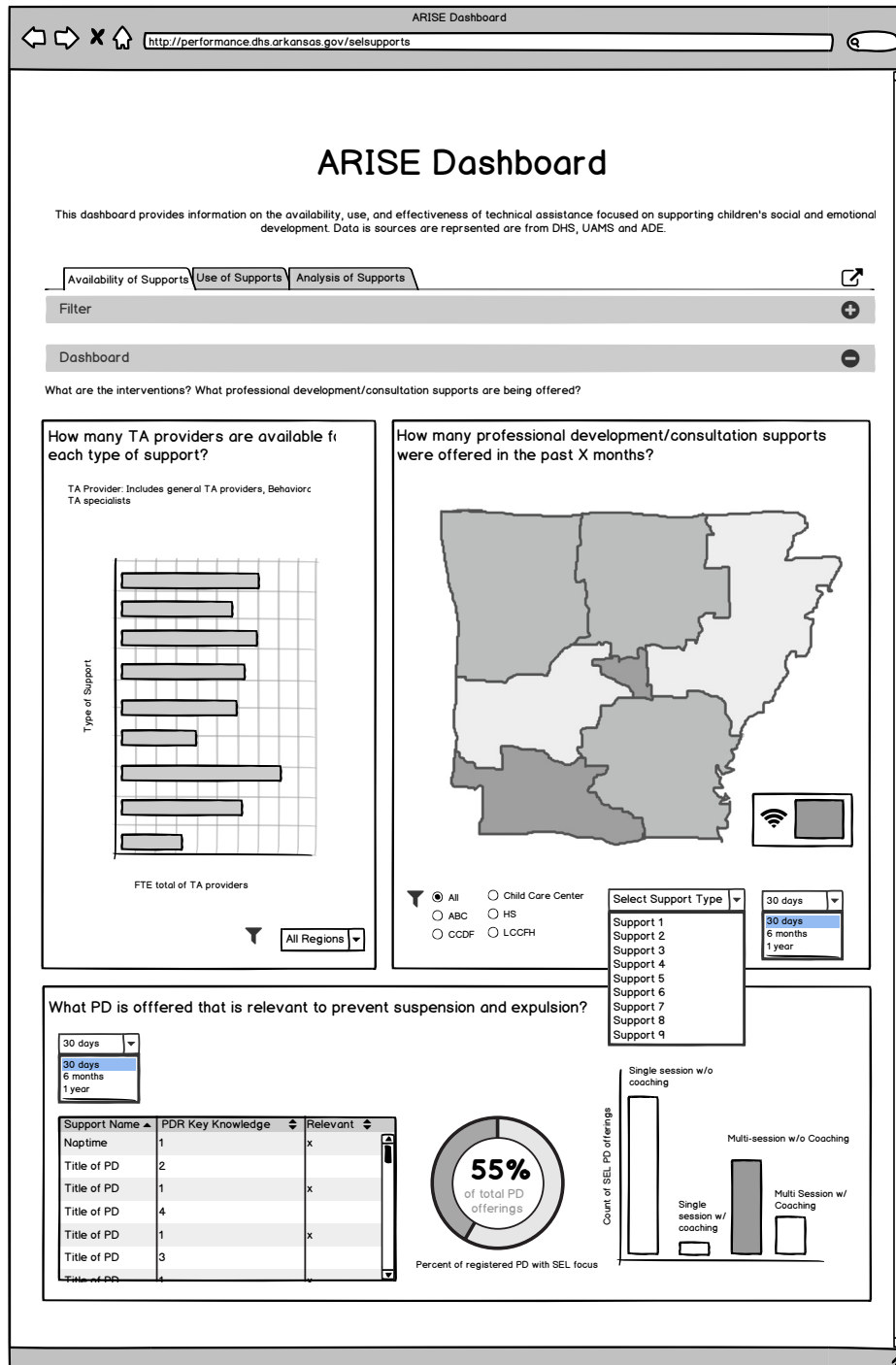
- **Consistency.** A well-designed data dictionary can improve the data quality of an organization by ensuring data integrity, eliminating redundancies, increasing consistency, and allowing effective communication in order to correct inconsistencies that arise from a lack of standards across data bases.
- **Transparency.** State agencies that publish their data dictionaries help to support their colleagues in other states by providing examples and guidelines in terms of chosen data elements, metadata, system design, and various other dictionary aspects. This data dictionary will also highlight the innovative and collaborative work conducted by the *BehaviorHelp* system.
- **Sustainability.** As staff and procedures within a state agency change over time, a comprehensive data dictionary can provide structure for flexible and smart growth. A data dictionary designed with a long-term vision will be able to adapt and adjust to large-scale changes more easily.

## WAYS TO USE A DATA DICTIONARY

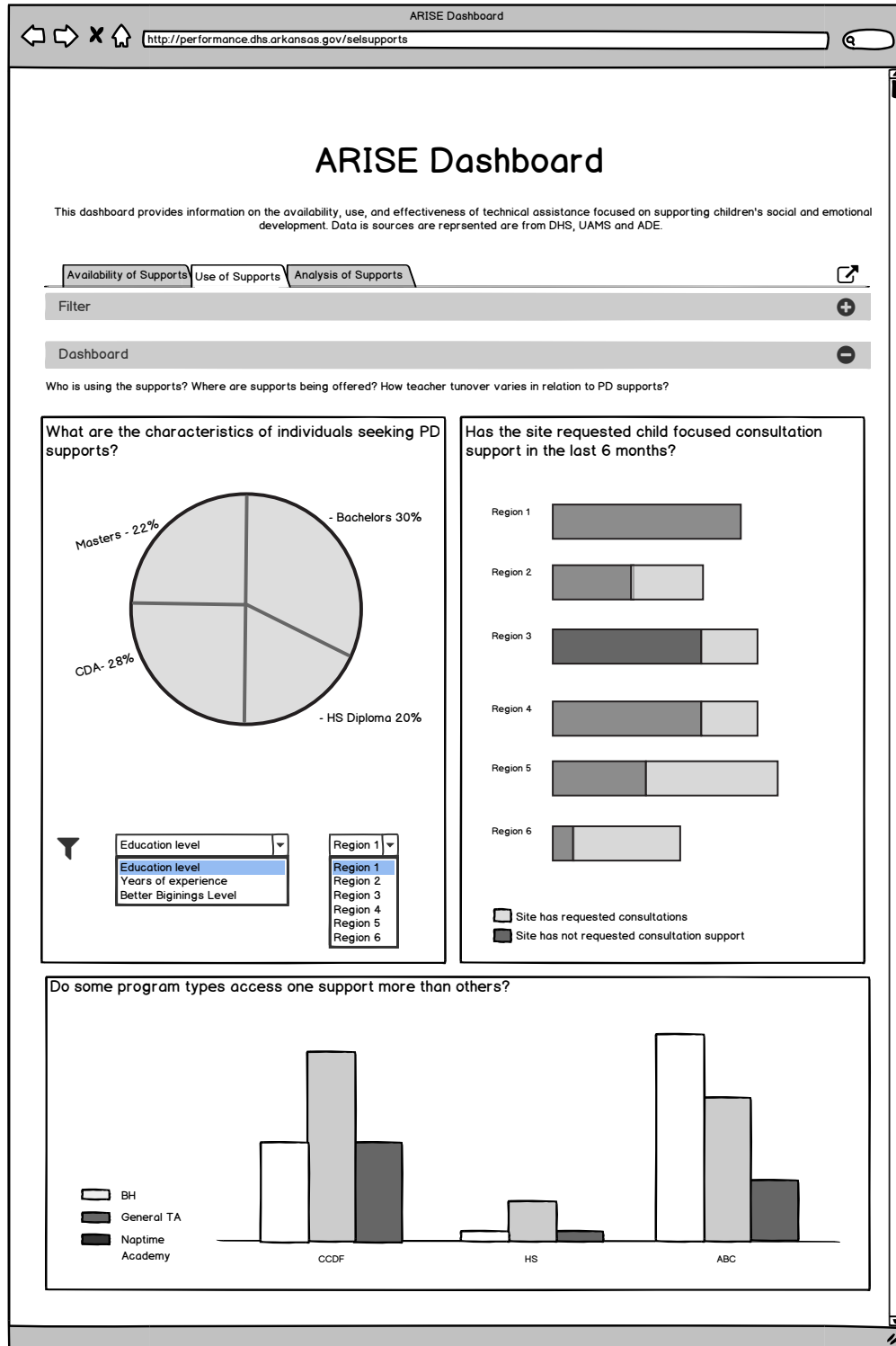
- **Communicate information needs with IT.** A data dictionary can help guide the conversation between individuals with programmatic information needs and the IT team that will pull the data but may not be familiar with the nuances of the ECE data.
- **Communicate across agencies.** A data dictionary can identify gaps in data across agencies that could be addressed in order to better inform statewide decisions.
- **Transfer of knowledge.** A data dictionary can help new staff learn about the data they collect and use. This also helps support consistency in the case of staff promotion.
- **Quality purposes.** A well-designed data dictionary can perform automated checks of data accuracy and completeness built into the maintenance processes to reduce redundancies.

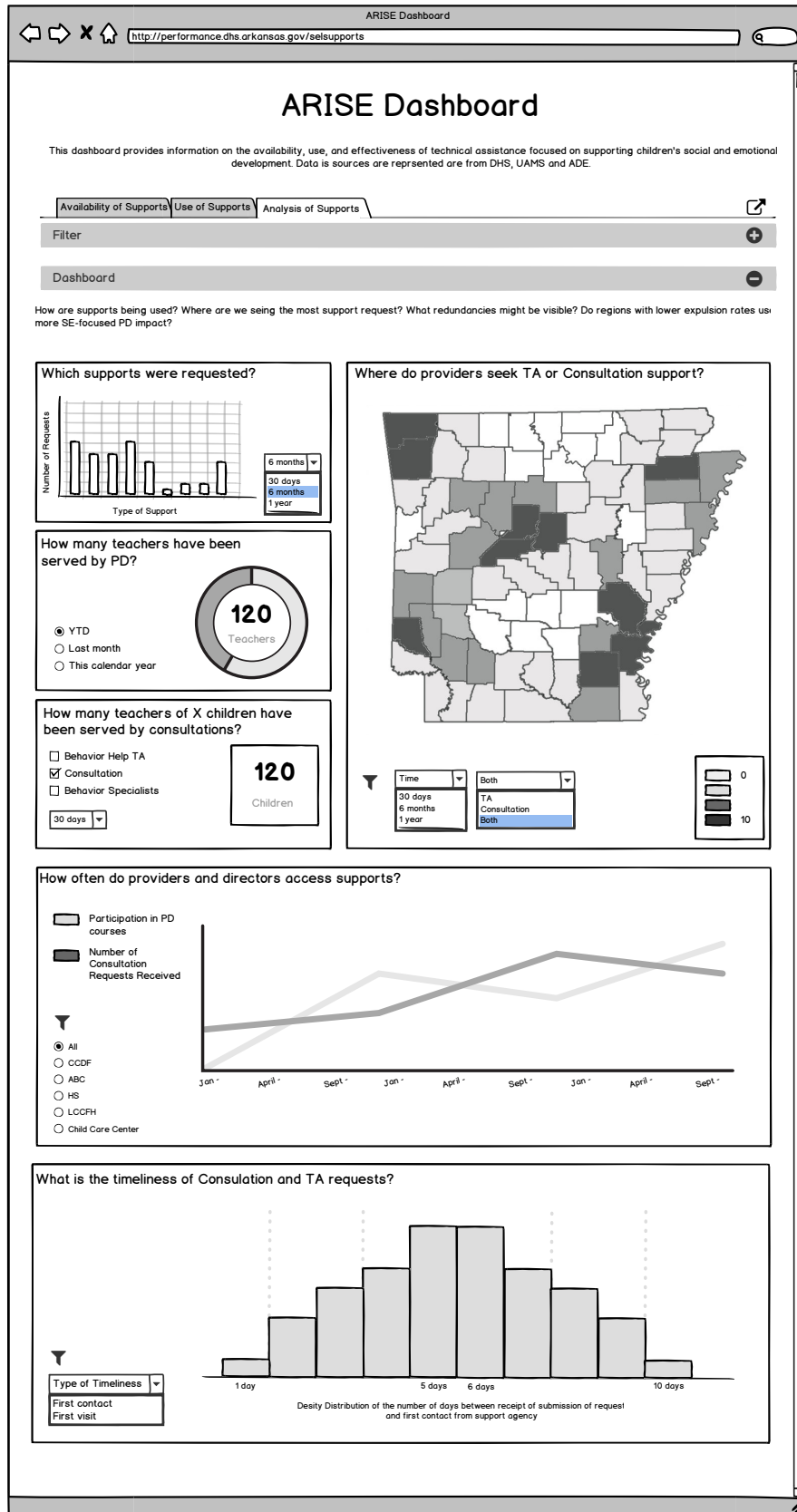
<sup>1</sup> Adapted from Common Education Data Standards' Status of State Data Dictionaries

# Appendix G: Conceptual Diagram









# Appendix H: Array Structure



## Structure

Array is a partnership between A-State Early Childhood Services and UAMS Department of Family & Preventive Medicine with collaborators from around the state.

The partnership is funded by The Arkansas Department of Human Services Division of Child Care and Early Childhood Education (DCCECE).

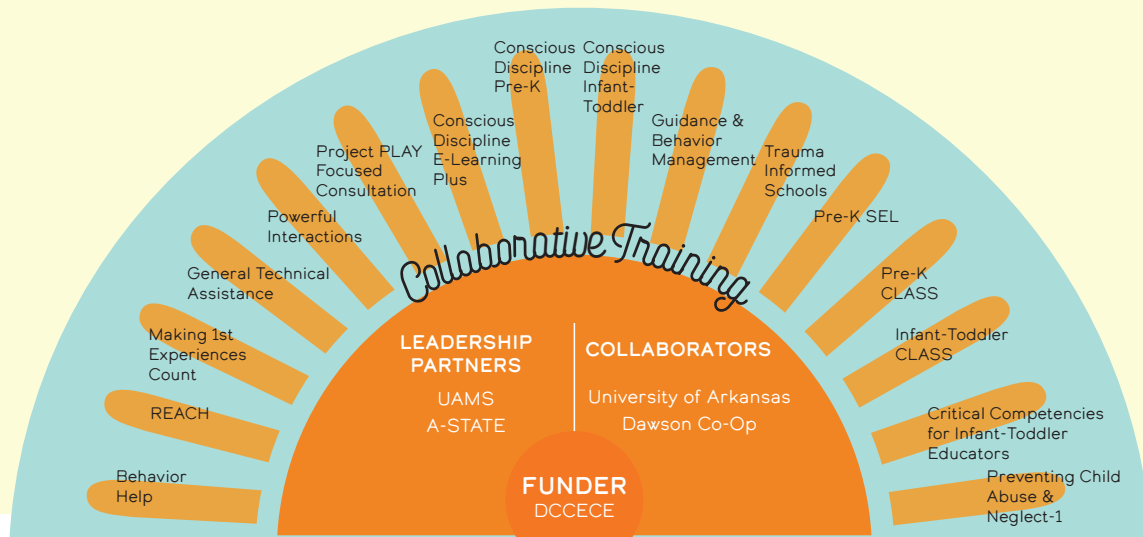
Array will organize and implement a continuum of services to improve the quality of social-emotional supports in early childhood education programs in designated state regions.

### UAMS & A-STATE ARE RESPONSIBLE FOR

- Providing needs assessment and consultation to help directors make professional development plans for their programs.
- Coordinating across a continuum of training with on-site implementation support in the social-emotional domain.
- Measuring and reporting progress to DCCECE.
- Organizing collaboration with other agencies providing support for professional development in social-emotional domain.

### COLLABORATION INVOLVES

- Participation in regional hub meetings.
- Training and coaching early childhood education programs or parents following Array hub referral.
- Participation in program evaluation efforts.



# SRI Education

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