

Identifying Home Visiting Data to Integrate with Other Early Childhood Data

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Introduction

Integrating data across early childhood programs¹ allows program staff and administrators, policymakers, and researchers to have a comprehensive picture of early childhood programs. While some states have taken significant steps to integrate data across many early childhood programs, [home visiting data have seldom been included in these data integration efforts](#). The administration of home visiting models is complex, which poses challenges for data integration. A state's home visiting models may be administered by a variety of organizations (e.g., private organizations, nonprofits, public agencies) and at different levels (state or local). Their data may be housed in vendor data systems, in paper or electronic form at individual programs, or in the state's integrated data system. In addition, home visiting data may be recorded and tracked at the child, family, or program level, depending on the requirements of the model and lead organizations.

Data integration between home visiting and other early childhood data is a large undertaking, and state leaders may need a way to organize the information they gather to support this process. Organizing the data makes it possible for state leaders to understand what home visiting data currently exist and how they are linked. States can accomplish this by developing an inventory of existing home visiting data that shows where the data are housed and whether they are already linked or integrated with any other early childhood data. States can then use this inventory to develop a "map" for how these home visiting data can be linked together and eventually integrated with other early childhood data.

The purpose of this resource is to provide a guide that states can use to develop a map of home visiting and other early childhood data. Specifically, this resource outlines how to 1) compile a list of home visiting programs in a state, 2) identify available home visiting data and linkages, and 3) create a data map.

The State-level Home Visiting Integration with Early Childhood Data Systems (SHINE)



project aims to support states in integrating their home visiting data with other early childhood data. SHINE is a project of the Early Childhood Data Collaborative (ECDC), which focuses on the development and use of coordinated state early care and education data systems. This resource was funded by the Heising-Simons Foundation.

¹ Early childhood is the time of child development from prenatal through age 8, with most programs targeting children from birth to age 5. The early childhood system is a set of policies, approaches, and services that are delivered through existing systems, such as education (e.g., pre-K), health care (e.g., immunization), or social services (e.g., subsidies to offset the cost of child care).

When should data be mapped?

State leaders can use this resource at several points during the data integration process. For example, if leaders have already identified policy or research goals and questions to answer, they can create a data map to see whether those questions can be answered using the existing data system. On the other hand, state leaders may find that mapping their data is helpful for deciding which policy or research questions they want to answer.* That is, determining which data can be linked may open the door to goals and questions that leaders had not previously considered. Similarly, after they have created a data map, leaders may need to revise their goals and question if they discover that data or linkages do not exist or are not feasible to use.

* For information on developing critical policy and research questions, please refer to *Developing Policy Questions to Guide Integration of Home Visiting and Other Early Childhood Data*.

Step 1: Compile a list of home visiting programs.

The first step in developing a data map is to identify home visiting programs in the state. Understanding the landscape of home visiting programs in their state can help state leaders plan and carry out the process of integrating these programs' data with other early childhood data. Compiling a list of home visiting programs in the state may take considerable time and effort. However, state leaders can collect this information more efficiently by seeking input from a range of home visiting stakeholders (in the state's health, child welfare, and education departments; hospital networks; community health centers; and higher education institutes). Sources of information state leaders can access to compile a comprehensive list of home visiting programs include the following:

- **Funding administrators:** Home visiting programs can be funded through federal (e.g., through the Maternal, Infant, and Early Childhood Home Visiting [MIECHV] program²), state and local entities (health, child welfare, and/or social services departments), and by private funders (e.g., large hospitals or hospital networks, nonprofits, parent education initiatives, or independently-funded programs). Reaching out to funding administrators to request lists of home visiting programs that receive particular types of funding is a strategy that state leaders can use to identify home visiting programs in their state.
- **Home visiting models or curriculum developers:** State leaders may be most interested in creating a list of programs that use an evidence-based or evidenced-informed model.³ They can do this by collaborating with home visiting model developers to compile a list of programs that are using a specific model (e.g., Nurse-Family Partnership, Healthy Families America, Parents as Teachers). National models often maintain a list of current programs that can be shared with states about programs using a certain model in that state.
- **Partner organizations:** State leaders can reach out to organizations that support special populations to learn about home visiting services that focus on serving specific populations. For instance, by asking tribal leadership about home visiting services offered in their tribe or by seeking information from nonprofits that serve immigrants or refugees, state leaders may discover home visiting services that would not otherwise be identified. Organizations that work with target populations may know of services that their clients are utilizing that could be important to include.

² MIECHV is a federal program that funds the implementation of evidence-based home visiting programs to improve specific outcomes (e.g., preventing child abuse and neglect). For more information, see <https://mchb.hrsa.gov/maternal-child-health-initiatives/home-visiting-overview>.

³ For more information about evidence-based early childhood home visiting programs, see the Home Visiting Evidence of Effectiveness website at <https://homvee.acf.hhs.gov/>.

After state leaders reach out to sources like these and generate a comprehensive list of home visiting programs, they can next decide which programs to focus on for data integration purposes. Home visiting can include many different types of programs and services, so it is important to define the scope of the home visiting services that have data of interest for linking with other early childhood data and identify the programs that meet these parameters. For instance, the state could decide to focus only on home visiting programs that are evidence-based, or only on those that are funded by the state or by MIECHV. For more information about defining the scope of home visiting for data integration, please refer to the Defining Home Visiting Data of Interest for Linking sidebar.

Step 2: Identify available data and linkages.

After identifying the types of home visiting program data to integrate with other data, state leaders should learn more about the specific types of data that are available from these programs. The types of available data can vary greatly, depending on the reporting requirements of each model. Some programs may collect a wide range of data on both children and their parents/guardians, while others may not have much data.

Additionally, it is important to understand the different ways that data are collected and stored. For example, some home visiting models may require data to be collected at the family level, such as when data are tied to the mother, who is the main recipient of home visiting services. Other home visiting models, however, may require data to be collected at the child level. Identifying how the data are collected and stored within each model is important because this information will be needed later in the data integration process, for data matching and for linking with other data sources.

Example of data inventory

Using the compiled list of home visiting programs, state leaders can next create an inventory that includes the information about each program's data that is relevant to data integration (example below). State leaders can adapt this example inventory to meet their specific needs. In addition to the name of the program and any model or network it is connected to, the following categories may be useful for organizing information about the home visiting programs included in the data inventory:

Defining Home Visiting Data of Interest for Linking

A home visitor is an employee who goes into families' homes, where the visitor may provide a range of services to people of all ages. For example, some home visitors provide services for elderly individuals who are home-bound, some evaluate a home's safety, while others provide services to support children's development.

For the purpose of integrating home visiting data, it is important for state leaders to define the scope of the home visiting data of interest to the state. By defining the specific types of home visiting data the state wants to link together or with other early childhood data, state leaders can create a focused list of home visiting programs to inform the data integration process.

State leaders may be most interested in linking the data of home visiting services geared toward improving outcomes that affect young children, even if services are offered to their families. For instance, state leaders may be interested in integrating data related to outcomes such as child development, maternal and child health, family economic self-sufficiency, or a combination of these.

- **Description of how the program stores data.** Data can be linked when it is stored electronically. Understanding how a program’s data are stored is helpful for determining what must be done to link the data. For example, if data are only stored in paper form, they must be recorded electronically before they can be linked with other data.
- **Type of data the program collects.** Data can be collected at different levels because programs may have different target populations or may offer services to different types of stakeholders. For instance, some programs provide services to guardians, whereas others may offer services to children. Additionally, programs may collect data on program administration (e.g., number of visits, total families enrolled), resulting in a wealth of program-level data that may lead to interesting questions when linked with other data.
- **Where the data are housed and who owns/manages the data.** Data may be collected by programs but stored elsewhere (e.g., vendor data system or health network data system). It is important to understand who may own or manage the data and collaborate with the entity that oversees the stored data. Additionally, it may be helpful to indicate whether the program is connected to a model or larger network; models or networks may ask or require programs to store data in a preferred data system or to collect similar data elements across programs.
- **Any existing data linkages.** It is easier to link data that have been previously linked because often the logistics of integrating these data have already been considered. State leaders can also use this information when creating a map of data linkages to understand where data linkages do or do not yet exist.

The example inventory below organizes key information about available home visiting data.

Home visiting program or model	How program stores data (check all that apply)	Type of data collected by program (check all that apply)	Where data are housed, and data owner/manager	Data linkages (check all that apply)
Kids N Families Home Visiting Program-East (Nurse-Family Partnership)	<input checked="" type="checkbox"/> Paper records <input checked="" type="checkbox"/> Electronic records <input type="checkbox"/> Does not collect data <input type="checkbox"/> Unsure	<input checked="" type="checkbox"/> Child data <input checked="" type="checkbox"/> Family data <input checked="" type="checkbox"/> Program data <input type="checkbox"/> Other:	Housed and managed at the program and by a national model database (Efforts to Outcomes) Contact: Jay Stork, health department, jstork@health.state.us	<input type="checkbox"/> Linked with other home visiting data Describe: <input type="checkbox"/> Linked with other EC data Describe: <input checked="" type="checkbox"/> Not linked <input type="checkbox"/> Unsure

Home visiting program or model	How program stores data (check all that apply)	Type of data collected by program (check all that apply)	Where data are housed, and data owner/manager	Data linkages (check all that apply)
Family First (homegrown)	<input type="checkbox"/> Paper records <input type="checkbox"/> Electronic records <input type="checkbox"/> Does not collect data <input checked="" type="checkbox"/> Unsure	<input checked="" type="checkbox"/> Child data <input checked="" type="checkbox"/> Family data <input checked="" type="checkbox"/> Program data <input type="checkbox"/> Other:	Managed by the program; unclear where data are housed. Contact: Emily Flower, Director; director@familyfirst.com	<input type="checkbox"/> Linked with other home visiting data Describe: <input type="checkbox"/> Linked with other EC data Describe: <input type="checkbox"/> Not linked <input checked="" type="checkbox"/> Unsure
Healthy Family Support Network (Healthy Families America)	<input type="checkbox"/> Paper records <input checked="" type="checkbox"/> Electronic records <input type="checkbox"/> Does not collect data <input type="checkbox"/> Unsure	<input type="checkbox"/> Child data <input checked="" type="checkbox"/> Family data <input type="checkbox"/> Program data <input type="checkbox"/> Other:	Housed and managed by national model database only. Contact: Phone: (312) 663-3520	<input checked="" type="checkbox"/> Linked with other home visiting data Describe: NFP <input checked="" type="checkbox"/> Linked with other EC data Describe: Child welfare <input type="checkbox"/> Not linked <input type="checkbox"/> Unsure

State leaders can use the information compiled in the data inventory to determine their next steps. For example, they may need to learn what permissions or agreements are necessary to access the available data. Because home visiting data may have personally identifiable information (PII), gathering the proper permissions is a critical step. Additionally, leaders will need to think through how the available data can be linked. For example, a model may collect family-level data, while the state has child-level data. In this case, it will be necessary to determine if there is enough information in each data source to reliably match the family data in one data source with the child data in the other source to create a link. Finally, leaders may want to understand who may be interested in informing or learning about the linking process—in other words, how they should plan to engage stakeholders in the process. As part of the stakeholder engagement process, leaders may consider establishing a governance entity that oversees which data are linked, how the data are used, and who has permission to use the linked data.

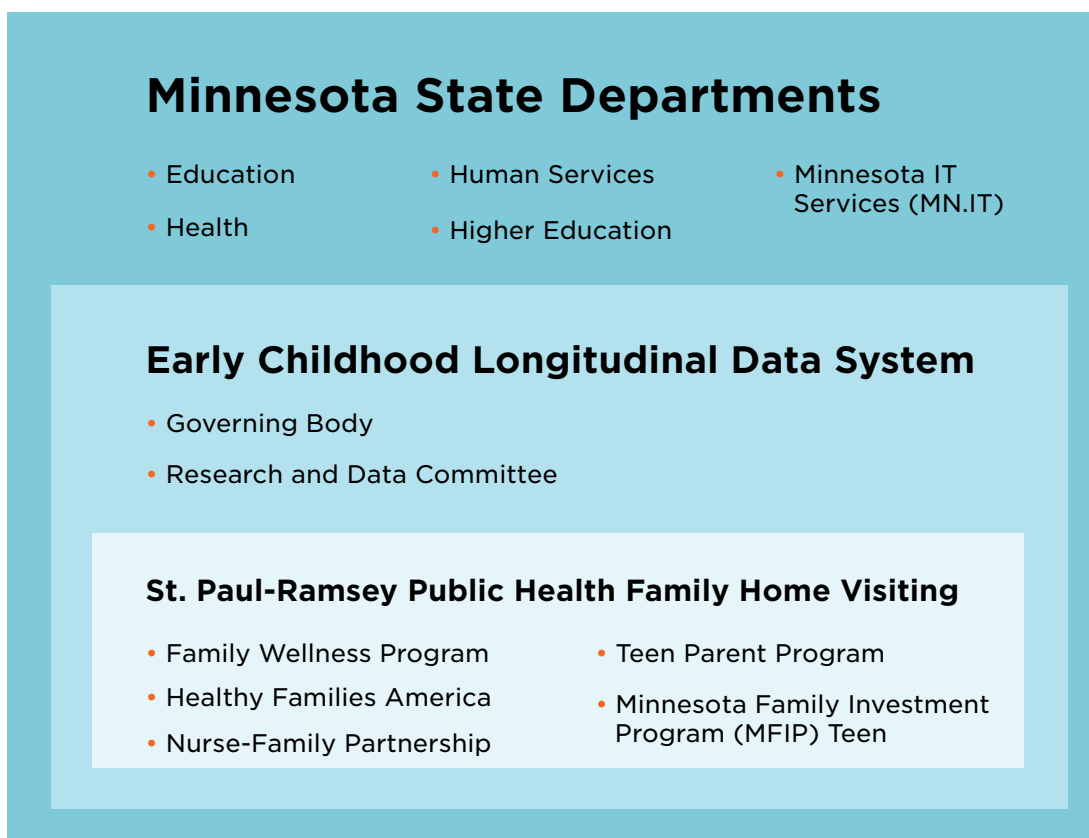
Step 3: Create a visual map of home visiting data.

State leaders can next create a visual map that represents the available home visiting data and how it fits into the larger early childhood data system in their state. There are a variety of ways to visually display where the data are housed, what data linkages exist, and which data are not linked. Two examples of how states have visually mapped their data are shown here.

Option 1. High-level data mapping

Minnesota created a high-level map to demonstrate the types of entities that would govern the data from the four county-level family home visiting programs that the state proposed to integrate into their early childhood longitudinal data system. This high-level map is an easily-understood image that can be shared with stakeholders with varying degrees of familiarity with data integration. Although the map's organization communicates more about Minnesota's governance structure, it also shows how the proposed home visiting data will be embedded into a larger data system.

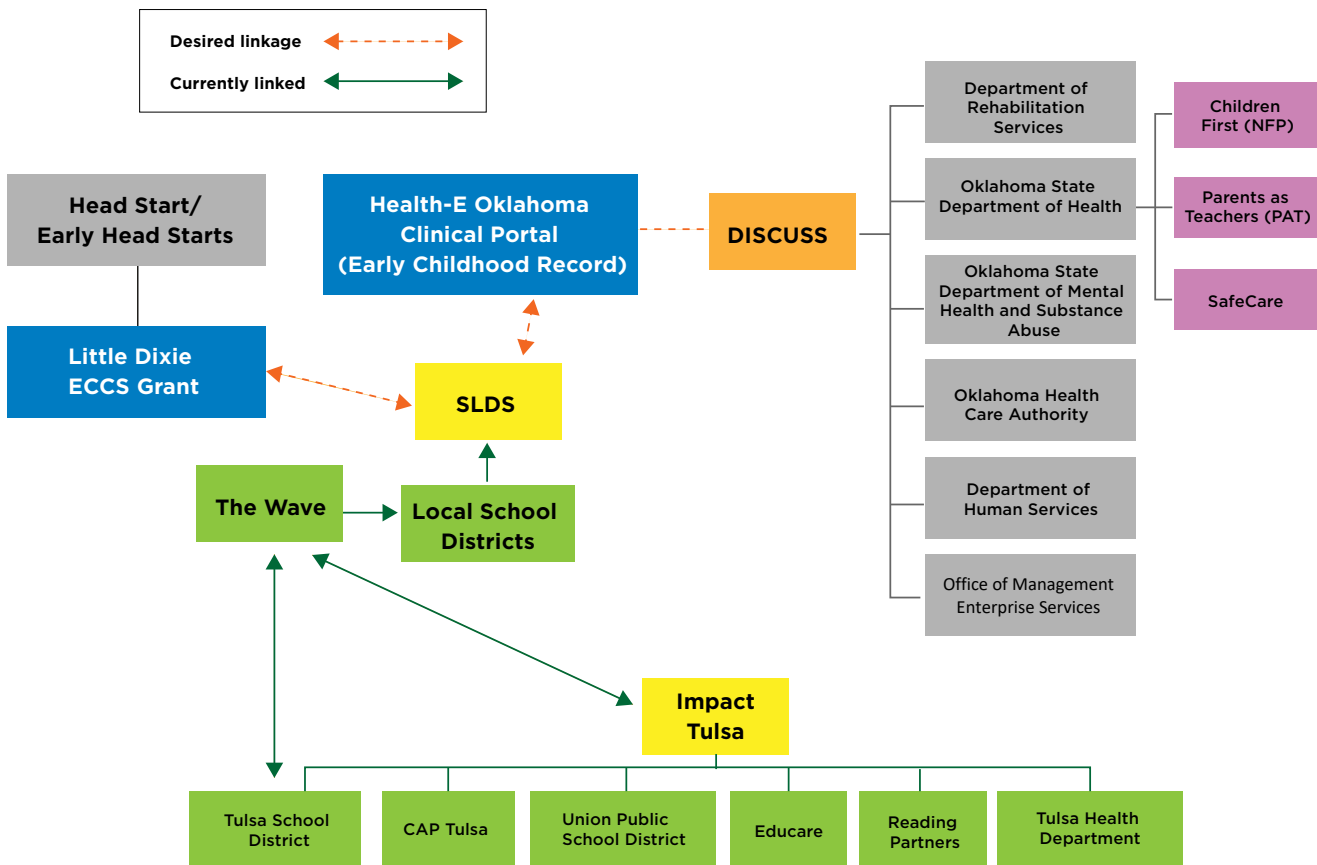
Figure 1. Map of Minnesota's governance structure



Option 2. Detailed linkage map

Oklahoma, which is in the process of integrating early childhood data across the state, created a detailed data map to illustrate how they might want to link home visiting data. This detailed linkage map uses color-coded arrows between data sources to indicate both existing and proposed data linkages (Figure 2). This approach to data mapping allows stakeholders, policymakers, or administrators of the integrated data to understand what has already been done, what upcoming activities are prioritized and planned, and what is still left to do. As part of our technical assistance with Oklahoma, we developed a portion of the map in more detail to show where and how their home visiting data could be linked (see **purple boxes** on the right side of Figure 2).

Figure 2. Oklahoma early childhood data map



Conclusion

Data integration happens in a series of steps. This resource describes three steps that state leaders can take at the beginning of the data integration process: 1) compiling a list of home visiting programs, 2) identifying which data and data linkages are available, and 3) creating a visual display of the available data and linkages. These suggested steps are intended to help state leaders efficiently identify and organize the information they need to start the data integration process. Following these steps may also help state leaders develop products, such as visual maps of data, that can be used to communicate more effectively with key stakeholders about the data integration process. These strategies should be adapted and adjusted based on the state's needs. For more information about home visiting data integration, see ecedata.org.