

PRESCHOOL DEVELOPMENT GRANT BIRTH THROUGH FIVE

Statewide Early Childhood Needs Assessment:

Unduplicated Counts Project – Report



NORTHERN ILLINOIS UNIVERSITY

**Center for
Governmental Studies**

Outreach, Engagement and Regional Development



Education Systems Center

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Acknowledgments and Disclaimers

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List of Abbreviations

- Center for Prevention Research and Development at the University of Illinois at Urbana-Champaign (CPRD)
- Child Care Assistance Program (CCAP)
- Child Care Management System (CCMS)
- City of Chicago Department of Family & Support Services (DFSS)
- Early Childhood Block Grant (ECBG)
- Early Intervention (EI)
- Education Systems Center at Northern Illinois University (EdSystems)
- Federal Poverty Line (FPL)
- Governor’s Office of Early Childhood Development (GOECD)
- Healthy Families Illinois (HFI)
- Illinois Department of Human Services (DHS)
- Illinois Head Start Association (IHSA)
- Illinois Longitudinal Data System (ILDS)
- Illinois State Board of Education (ISBE)
- Individualized Education Program (IEP)
- IEP-Student Tracking and Reporting (I-STAR)
- Individuals with Disabilities Education Act (IDEA)
- Individuals with Disabilities Education Act Part B, Section 619 (Section 619)
- Master Client Index (MCI)
- Maternal, Infant, and Early Childhood Home Visiting (MIECHV)
- Northern Illinois University (NIU)
- Northern Illinois University Center for Governmental Studies (CGS)
- The Ounce of Prevention Fund (The Ounce)
- Parents Too Soon (PTS)
- Preschool Development Grant Birth through Five (PDG B-5)
- Preschool for All (PFA)
- Preschool for All Expansion (PFA-E)
- Prevention Initiative (PI)
- Service Year (SY)
- Student Information System (SIS)
- Unduplicated Counts Project (Project)

Executive summary

Overview

Establishing unduplicated counts of children served by early childhood programs is key to understanding the Illinois early childhood ecosystem. Funded by a federal Preschool Development Grant Birth through Five grant and undertaken by a team from Northern Illinois University, the Early Childhood Unduplicated Counts Project uses Illinois Longitudinal Data System (ILDS) infrastructure to link child-level records across state agency systems to describe the population of children receiving selected publicly funded early childhood services in Illinois. Services include funding streams or programs administered by the Illinois Department of Human Services (DHS) and the Illinois State Board of Education (ISBE), and are listed below.

Birth-to-Three programs	Three-to-Five programs
Childcare Assistance Program (CCAP)	Childcare Assistance Program (CCAP)
Early Intervention (EI)	Preschool for All (PFA)
Healthy Families Illinois (HFI)	Preschool for All Expansion (PFA-E)
Maternal, Infant, and Early Childhood Home Visiting (MIECHV)	Individuals with Disabilities Education Act Part B, Section 619 (Section 619)
Prevention Initiative (PI)	

Purposes

The Project serves two primary purposes. First, it establishes unduplicated counts of children ages birth through five served by the selected DHS and/or ISBE programs across time and geography. These counts provide the agencies and other interested stakeholders with clear statewide, cross-agency baselines of service provision to identify gaps in reach, inform resource allocation, and support more rigorous research analyses. Second, it seeks to develop recommendations that would promote alignment in data collection, naming, linkage, and analysis to support greater understanding of access to early childhood care and education services through an unduplicated count.

Key findings

Project findings include counts and proportions of children served by DHS or ISBE programs during service years 2016, 2017, and 2018. Findings focus on specific populations served by various programs, including CCAP and PI, Home Visiting (HFI and MIECHV) and PI, EI and PI, and CCAP and EI among birth-to-three programs; and CCAP and PFA as well as CCAP and PFA-E among three-to-five programs. A service year (SY) is defined as the 365-day period from July 1 to June 30, and service receipt is defined as a child receiving program services at any point during a given year.



Birth-to-Three programs

- The service overlap between CCAP and PI decreased over time, from approximately 4.6 percent (n = 3,182) of children in SY 2016 to 2.2 percent (n = 1,522) in 2018.
- In SY 2018, CCAP served more Black children (n = 21,896), and in greater proportion (approximately 92.9% of the Black CCAP-or-PI population), than either Hispanic children (n = 6,722, or 70.8%) or White children (n = 12,141, or 80.3%).
- Approximately 28.5 percent (n = 11,969) of the CCAP-or-PI population statewide was served by an ExceleRate Gold or Silver program in SY 2018.
- Among children served by either PI or one of HFI or MIECHV, the counts for Black children ($\Delta = -1,922$) and Hispanic children ($\Delta = -1,261$) fell between SY 2017 and 2018, while counts for White children ($\Delta = +162$) increased slightly.
- In SY 2018, EI served nearly twice and four times as many White children (n = 22,575) as it did Hispanic children (n = 11,322) and Black children (n = 5,765), respectively.

Three-to-Five programs

- The population of children served by CCAP or PFA decreased between SY 2016 (N = 105,361) and 2018 (N = 101,228), including year-over-year decreases in counts served by CCAP.
- The proportion of the CCAP-or-PFA population served solely by PFA increased ($\Delta = +2.2$ percentage points) from SY 2016 to 2018.
- Across years, the population of three and four year olds served by CCAP or PFA represented roughly 80 percent of the U.S. Census-estimated population living in households below 185 percent of the Federal Poverty Line.
- Approximately 1.0 percent (n = 767) of children served by PFA or PFA-E in SY 2018 were served by both programs.
- In SY 2018, CCAP alone served approximately 41.2 percent (n = 12,106) of Black children compared to 15.1 percent (n = 4,134) of Hispanic children and 20.5 percent (n = 7,318) of White children.
- Approximately 63.9 percent (n = 69,551) of the CCAP-or-PFA/PFA-E population statewide was served by an ExceleRate Gold or Silver program in SY 2018.

Caveats and concerns

The Project analysis carries caveats and concerns, including that:

- Its broad definitions of service receipt and service year do not necessarily align with program-specific definitions;
- Demographic data elements continue to suffer from quality concerns as well as large numbers of missing values;
- Intended data sources, like Head Start, were not included;
- Children served by contracted CCAP providers were likely undercounted;
- Its findings are descriptive only;
- Its findings are limited by cell-size suppression and disclosure proofing; and
- Its poverty-related findings are based upon U.S. Census estimates.

Recommendations

Treat Project findings as a marker of progress

The early childhood community should consider Project findings as evidence of the progress of the ILDS and its participating agencies. Now incorporating records from over a half-dozen different early childhood programs, administered by two different agencies, the Project represents a key ILDS achievement. Its findings inform policy making and reflect systemic data improvements within and across DHS and ISBE.

Act on the P-20 Council's Education & Workforce Data Task Force recommendations

State agencies and other stakeholders should consider the P-20 Council's Education and Workforce Data Task Force a call to continue strengthening inter- and intra-agency data systems. In one of its spring 2019 final report recommendations, the Task Force recommends improving State data capacity and quality. Enhancing capacity and quality remains challenging in early childhood, but imminent federal grant investments should expedite ecosystem-wide efforts over the next several years.

Incorporate Early Head Start and Head Start data

Future iterations of the Project should incorporate data from Head Start and Early Head Start. These programs serve a substantial number of children under the age of five in Illinois, including many children who are served by multiple publicly funded services. Establishing Head Start-inclusive unduplicated counts would mark a major achievement for inter-agency data sharing in Illinois, and it would position the state as a leader in the early childhood data systems space. Currently pursuing data vendor-specific pilot integrations, IHSA and CPRD appear well positioned to share Early Head Start and Head Start data soon.

Enhance Project with data better describing DHS and ISBE programs

The Project should add and disaggregate data that better describe the selected DHS and ISBE early childhood programs. Pending data availability and quality, suggested enhancements include:

- Disaggregating counts by type of provider setting;
- Ensuring systematic incorporation of records from both contracted and non-contracted CCAP providers;
- Expanding analysis of home visiting programs;
- Distinguishing between PI center-based and home visiting services; and
- Enhancing integration and analysis of IDEA Part B, Section 619 data.



Introduction and Background

Establishing unduplicated counts of children served by early childhood programs is key to understanding the early childhood ecosystem in Illinois. These counts help reveal whether services are reaching populations of need, and how—questions prioritized in the Illinois Early Learning Council’s Research Agenda. And their establishment represents a technical achievement built on robust and operational inter-agency data systems.

Only a select few states have reached the unduplicated count milestone in early childhood, and Illinois’ progress has focused upon publicly funded early childhood services. These services consist of an overlapping set of programs and funding sources. Anecdotal evidence suggests that a substantial number of children interact with multiple programs concurrently. Until recently, state data systems have been unable to describe this population in aggregate.

Funded by the Preschool Development Grant Birth through Five grant (PDG B-5) awarded by the U.S. Department of Health and Human Services, the Early Childhood unduplicated counts project (“The Project”) reflects Illinois’ progress towards an unduplicated count in early childhood. Undertaken by a team from Northern Illinois University (NIU), including the Center for Governmental Studies (CGS) and Education Systems Center (EdSystems), the Project links child unit-level records across state agency systems to describe the population of children receiving selected publicly funded early childhood services in Illinois. Services include programs administered by the Illinois Department of Human Services (DHS) and the Illinois State Board of Education (ISBE). Programs include the Child Care Assistance Program (CCAP)¹, Early Intervention (EI)², Healthy Families Illinois (HFI)³, and Maternal, Infant, and Early Childhood Home Visiting (MIECHV)⁴ at IDHS; and Prevention Initiative (PI)⁵, Preschool for All (PFA)⁶, and Preschool for All Expansion (PFA-E)⁷ as well as Individuals with Disabilities Education Act (IDEA) Part B, Section 619 (Section 619)⁸ at ISBE. Please refer to the footnotes for information describing each program. Please also note that program and funding stream are used interchangeably for the purposes of this report.

The Project serves two primary purposes. First, it establishes unduplicated counts of children ages birth through five served by the selected DHS and/or ISBE programs across time and geography. These counts provide the agencies and other interested stakeholders with clear statewide, cross-agency baselines of service provision to identify gaps in reach, inform resource allocation, and support more rigorous research analyses. Second, it seeks to develop recommendations that would promote alignment in data collection, naming, linkage, and analysis to support greater understanding of access to early childhood care and education services through an unduplicated count.

This report outlines the results from the Project, with an emphasis on service years 2016, 2017, and 2018. Service year (SY) is defined as the 365-day period from July 1 to June 30, and service receipt is defined as a child receiving program services at any point during a given year. Project findings include counts and proportions of children served by DHS and/or ISBE programs at state and county levels, where possible. These and other findings inform general recommendations that could strengthen future state-level matching work.

¹ Illinois Department of Human Services, Family & Community Services (2020). *Child Care Assistance Program (CCAP)*. Retrieved from <http://www.dhs.state.il.us/page.aspx?item=30355>

² Illinois Department of Human Services, Family & Community Services (2020). *Early Intervention*. Retrieved from <http://www.dhs.state.il.us/page.aspx?item=30321>

³ Illinois Department of Human Services, Family & Community Services (2020). *Health Families Illinois*. Retrieved from <http://www.dhs.state.il.us/page.aspx?item=30263>

⁴ United States Health Resources & Services Administration, Maternal & Child Health (2020). *Home visiting*. Retrieved from <https://mchb.hrsa.gov/maternal-child-health-initiatives/home-visiting-overview>

⁵ Illinois State Board of Education, Early Childhood (2020). *Prevention Initiative*. Retrieved from <https://www.isbe.net/Pages/Birth-to-Age-3-Years.aspx>

⁶ Illinois State Board of Education, Early Childhood (2020). *Preschool For All (PFA)*. Retrieved from <https://www.isbe.net/Pages/Preschool-For-All.aspx>

⁷ Illinois State Board of Education, Early Childhood (2020). *Preschool expansion model*. Retrieved from <https://www.isbe.net/Pages/Preschool-Development-Grant-Expansion-Grant.aspx>

⁸ Illinois State Board of Education, Early Childhood (2020). *Early childhood special education*. Retrieved from <https://www.isbe.net/Pages/Early-Childhood-Special-Education-Services.aspx>

Research Questions and Data

Research Questions

The Project is a component of a broader statewide birth-to-five early childhood needs assessment being completed for PDG B-5. Primary research questions pursued by the Project are as follows.

- Across the state of Illinois and within each of county, including regions within Cook County, how many children birth through five received early childhood services from programs administered by DHS, ISBE, Head Start, and/or the City of Chicago during SY 2017 and 2018?
- Across the state of Illinois and within each county, what percentage of the overall birth through five population and the birth through five population in poverty (<185% Federal Poverty Line (FPL)) received early childhood services from programs administered by DHS, ISBE and/or Head Start during SY 2017 and 2018?
- What are the demographic characteristics of children receiving these services? How do these characteristics vary between programs? Demographic characteristics include Geography, Race/Ethnicity, Low-Income status, English Language Learner status, Disability status, and Homelessness.
- What number and percentage of children (birth through three and three through five) are served by providers rated in ExceleRate—the state’s system for measuring and improving the quality of early learning providers—and at the various levels in ExceleRate? How do these numbers and percentages vary by program funding stream (e.g. CCAP, PFA, etc.)?

The Project addresses each of the questions at least in part. Notably, it does not include Early Head Start, Head Start, or Parents Too Soon (PTS) data as planned. Due to data sharing-related delays in its timeline, it prioritizes county-level data for SY 2018. Given widely missing or poor-quality household income information, it uses lagging poverty population estimates. And lastly, suppression of cell counts less than or equal to ten limited the extent to which data could be disaggregated.

Data sources

The Project uses child-level data—ranging from basic demographic data elements to associated early childhood provider information—from several distinct data sources falling under DHS or ISBE purview. At DHS, the Child Care Management System (CCMS) currently holds records for children served by non-contracted CCAP providers. Records from EI and HFI are held within the Cornerstone system, while Visit Tracker—a system designed and maintained by DataKeeper Technologies—stores MIECHV records. The Center for Prevention Research and Development at the University of Illinois at Urbana-Champaign (CPRD) works with Visit Tracker on behalf of the Governor’s Office of Early Childhood Development (GOECD). Each of these sources is an operational system.

ISBE’s operational Student Information System (SIS) contains records for children served by Early Childhood Block Grant (ECBG) programs PI, PFA, and PFA-E as well as students enrolled in the public K-12 system. Its web-based I-STAR, or IEP-Student Tracking and Reporting, system houses records for children and students receiving special education services, including receipt of an Individualized Education Program (IEP) through Section 619.

Concerning the number of children living in poverty, the CGS team used data from the U.S. Census Bureau’s American Community Survey and Population Estimates Program, published on the Illinois Early Childhood Asset Map, to establish the total population in poverty (<185% FPL). The Census data are estimates as of 2016 and 2017, the most recent year available. The Project provides approximate state-level rates of service receipt in 2016 and 2017 relative to the estimated population in poverty for those respective years, and it provides a rough state-level calculation for 2018 using the 2017 estimate.

Linkage method

The CGS team linked data across DHS- and ISBE-administered programs using the Master Client Index (MCI), a set of inter-agency unique identifiers that CGS maintains on behalf of the Illinois Longitudinal Data System (ILDS). The team matched records to the MCI using a one-to-one exact record match with allowance for slight variations in no more than two demographic data elements, e.g. first name and data of birth. Relatively few of the records received for the Project did not match with the MCI.

Caveats and Concerns

Definition of service receipt and year

Constrained by data availability and quality, the Project's definition of service receipt cannot adequately describe the experiences of children interacting with the same program(s) at different points, or in different locations, during a given SY. As a result, Project findings should be considered point-in-time unduplicated counts of children served at any point during a SY as of the last day of that year. Regarding year, the Project uses the State fiscal year, which does not necessarily align with how specific programs define themselves or report data. For example, MIECHV reports data to the federal government each Federal fiscal year, which runs from October 1 to September 30.

Missing or invalid data elements

Missing or invalid demographic data elements proved common across Project data sources. As in past phases of the unduplicated counts work, low income status, English language learning, and homelessness data elements are missing in large numbers. DHS and ISBE do not necessarily collect this information for all programs included in the Project, but the lack of availability means that the Project findings do not describe those subgroups.

Race/ethnicity data are also widely missing, meaning the Project focuses on the three largest groups: Black, Hispanic, and White. Regarding CCAP, its race/ethnicity data element proved of questionable quality such that the CGS team was not confident in its use for SY 2016. Following a 2017 DHS update of the CCMS race/ethnicity codes, the team did not encounter similar concerns for SY 2017 and 2018 data. For CCAP and other DHS programs, in the rare instances where a record's race/ethnicity code did not align with the race/ethnicity code from the linked ISBE record, the team defaulted to the ISBE code.

The ExceleRate provider rating data element in the CCAP records was both unclearly coded and of limited availability. The CGS team clarified the codes with DHS staff and established, at the county level and for CCAP or ECBG funding streams, counts of children served by Gold or Silver Circle providers. However, the team's ability to disaggregate by funding stream was limited by missing data and counts less than or equal to ten.

Data unavailable or not received

Data from Early Head Start, Head Start, and PTS programs were either unavailable or not received for the Project. Despite plans for this and prior phases of the Project, the CGS team has yet to include Early Head Start and Head Start records in the unduplicated counts work. The Illinois Head Start Association (IHSA) and its data administrator, CPRD, are building a data system to house and share records from Early Head Start and Head Start grantees statewide. Inter-agency data integration depends upon individual entities being capable of sharing records, and such capability remains a goal for IHSA. It and CPRD continue to make steady progress, but an integrated Head Start system has yet to reach an operational level such that it can provide data for the Project.

IHSA and CPRD face several notable challenges in the data systems space. First, in Illinois, [Early] Head Start grantees are funded by federal dollars and thus not required to report data, child-level or aggregate, to state entities like IHSA. Second, given the nature of Head Start, IHSA must establish a separate data sharing agreement with each individual grantee. Third, multiple data vendors operate in the Head Start space, with Illinois grantees contracting with ChildPlus, COPA, Teaching Strategies GOLD, and others for data systems and reporting support. And fourth and ultimately, building an integrated data system takes time under the smoothest of circumstances, and the prior challenges combined with general data quality questions have slowed progress.

The Ounce of Prevention Fund (Ounce) serves as the DHS grantee overseeing PTS and thus houses PTS program data in its OunceNet system. This structure complicates and adds time to the data sharing process for external parties like NIU. Despite the best efforts of DHS, Ounce, and EdSystems staff, the requested PTS records were not received by the CGS team in time for inclusion in this iteration of the Project.

Likely undercount of children served by DHS-contracted CCAP site providers

The Project likely undercounts the number of children served by DHS-contracted CCAP site providers, including services administered directly by the City of Chicago. DHS currently stores service-related information for its contracted CCAP providers in systems separate from CCMS, which is the Project's sole comprehensive source for CCAP records. Further, that information is stored in a format that is not conducive to sharing for external purposes like the Project. Information describing children served in CCAP contract slots may or may not appear in CCMS, though not on a systematic basis. Regarding the City of Chicago, the NIU team's experience suggests that CCMS may not communicate regularly with the City Department of Family & Support Services (DFSS) system holding CCAP records. DHS contracts with the City to administer CCAP with a group of Chicago-based providers. A direct data sharing agreement between the City and NIU—an attempt to ensure that City-administered CCAP provider data would be included—was not completed in time for inclusion in this iteration of the Project.

Descriptive analysis

Project findings describe the population of children served by a selected set of early childhood programs, across service years and only at aggregate levels. Aggregate data can mask underlying patterns within and across subgroups or children, and the Project does not attempt to investigate such patterns. Beyond establishing counts of children served, the CGS team did not perform statistical analyses.

Cell-size suppression and disclosure proofing

Cell-size suppression and disclosure proofing limit the extent of disaggregated Project findings. In keeping with legal requirements for public data disclosure, in the data tables it created and shared for the Project, the CGS team suppressed all cells with counts less than or equal to ten as well as all cells that could possibly be used to determine the contents of cells with counts less than or equal to ten. This practice effectively disclosure proofs the tables, removing the possibility of identifying individual or small groups of children—often from vulnerable populations—being served by the early childhood programs of interest. Regardless of necessity, suppression meant that, in compiling the Project report, EdSystems staff used primarily suppressed data. The suppression is particularly apparent upon disaggregation and thus limits the findings describing certain programs, subgroups, and counties.

Poverty estimates

The Project again attempted to use child-level programmatic data that describe household income or similar information, but as in past attempts, these data were either largely missing or suffering from quality concerns. For the programs used in the Project, income-related information is typically self-reported by families and thus inherently unreliable. In addition, large numbers of records are missing those data. Though proxies like free-or-reduced-price-lunch eligibility are available for certain data sets, they are not available across agencies. Combined, these issues have limited the team's use of programmatic poverty-related data for the Project.

Unable to rely upon child-level data across agencies, the Project uses the freshest, though still lagging poverty estimates (<185% FPL) available from the U.S. Census Bureau's American Community Survey and Population Estimates Program. These estimates describe 2016 and 2017, and Census estimates for 2018 will only become available in early 2020. The Project provides state-level rates of service receipt in 2016 and 2017 relative to the estimated population in poverty for those years, and it provides a state-level approximation for 2018 using the 2017 poverty estimate.

Please refer to the Appendix for a memo expanding on these and other systemic data issues encountered by NIU staff over the course of the three Project phases.

Findings — Birth-to-Three Programs

All Project findings focus on a selected group of programs: CCAP, EI, HFI, and MIECHV from DHS; and PFA, PFA-E, PI, and Section 619 from ISBE. Findings do not describe the entire Illinois early childhood ecosystem, which encompasses this group of programs but also additional state programs, Head Start, and any privately-funded services.

Birth-to-three programs include CCAP, EI, HFI, and MIECHV from DHS; and PI from ISBE. Project findings focus on the overlaps between CCAP and PI, HFI & MIECHV and PI, EI and PI, and CCAP and EI. Table 1 contains counts of children served in SY 2016, 2017, and 2018, by program. There are no clear trends across all programs, with counts for CCAP and PI showing relative dips in SY 2017, HFI counts decreasing each year, and MIECHV and EI counts increasing each year. Shown in the last column, the unduplicated count of children served by at least one of the programs also dips in 2017 (N = 104,172) before an approximate 4,500 child increase in 2018 (N = 108,707).

Table 1: Count of children ages birth to three receiving services, by program, 2016-2018

Year	Total CCAP	Total PI	Total HFI	Total MIECHV	Total EI	Total CCAP or PI or HV* or EL
2016	58,205	13,626	2,064	524	40,441	105,186
2017	56,994	12,761	1,529	687	41,015	104,172
2018	57,304	14,268	1,394	733	42,593	108,707

Sources: DHS CCMS, Cornerstone; DataKeeper Technologies Visit Tracker; ISBE SIS

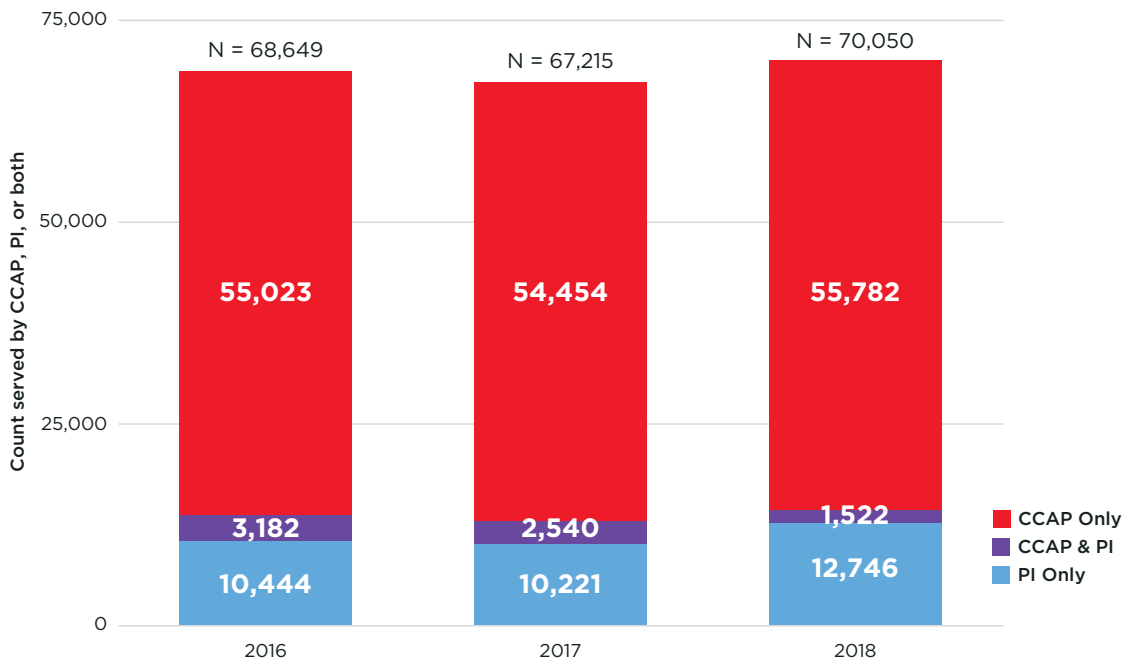
Notes: *Home Visiting (HV) combines HFI and MIECHV; last column is unduplicated across programs

Child Care Assistance Program (CCAP) and Prevention Initiative (PI)

CCAP and PI serve children starting at birth to three years of age. For the purposes of the Project, CCAP-served children below age three as of September 1st of a given year are considered in the birth-to-three population. For example, for SY 2016, a child who turned three years old prior to September 1st, 2015 would not be considered part of the population.

Figure 1 shows the counts of children served by CCAP, PI, or both programs during SY 2016 (N = 68,649), 2017 (N = 67,215), and 2018 (N = 70,050). The number of children in solely CCAP-funded slots centered at roughly 55,000 across SY 2016 through 2018. Less than one-fifth of those numbers in 2016 (n = 10,444) and 2017 (n = 10,221) were served by PI only, though the count in PI only rose by nearly a quarter, to n = 12,746, in 2018. Year-over-year, the number of children served by both CCAP and PI decreased, from 3,182 in 2016 to 2,540 in 2017 to 1,522 in 2018. In 2018, exclusive CCAP enrollment and exclusive PI enrollment both rose, though PI showed a larger increase as reflected in the growth in its proportion in Figure 2 below.

Figure 1: Count of children ages birth to three served by CCAP, PI, or both, 2016-2018

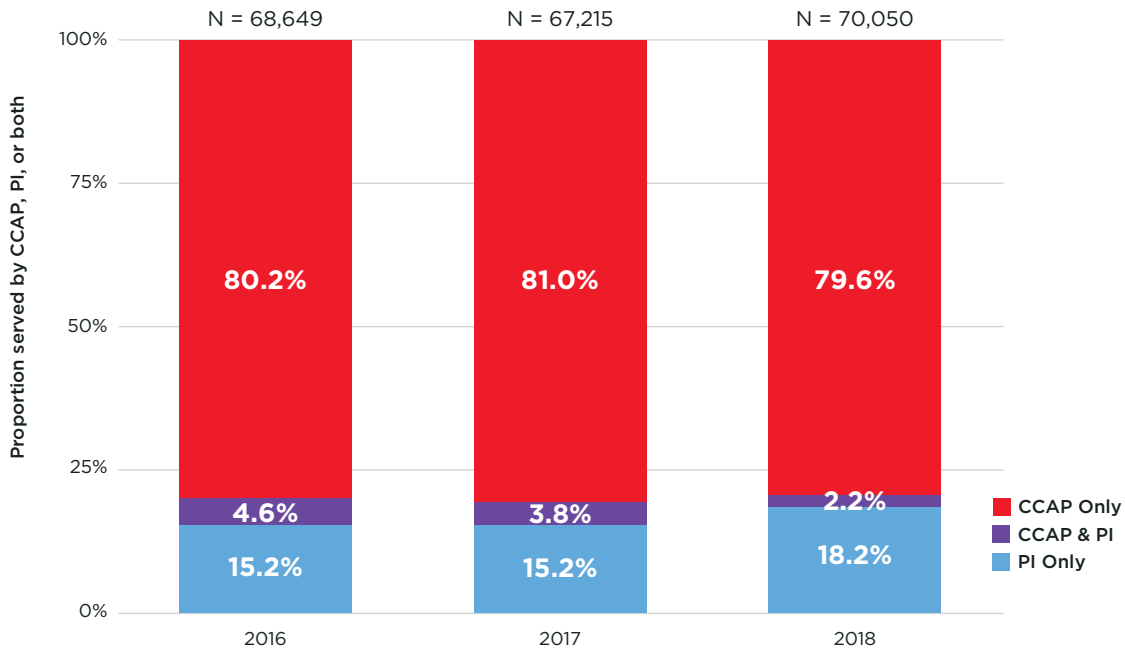


Notes: Population consist of children ages 0-3 served by either CCAP or PI; Y-axis is truncated
Sources: DHS CCMS; ISBE SIS

Finding — Birth-to-Three Programs

Figure 2 displays, for the population served by CCAP, PI, or both programs, the proportion of children served by each program in a SY. During 2016 (N = 68,649) and 2017 (N = 67,215), CCAP served roughly 85.0 percent of this population, with over four out of five children enrolling in slots funded by that program only. PI served roughly 20.0 percent and 19.0 percent of children, respectively, during those years, and the overlaps in CCAP and PI hovered around 4.0 percent. In 2018 (N = 70,050), the proportion served by CCAP fell to approximately 82.0 percent, with the overlap in children served by both CCAP and PI decreasing by roughly half, to approximately 2.2 percent. That year, the proportion served by PI only increased to approximately 18.2 percent from approximately 15.2 percent of the population in both 2016 and 2017.

Figure 2: Proportion of children ages birth to three served by CCAP, PI, or both, 2016-2018

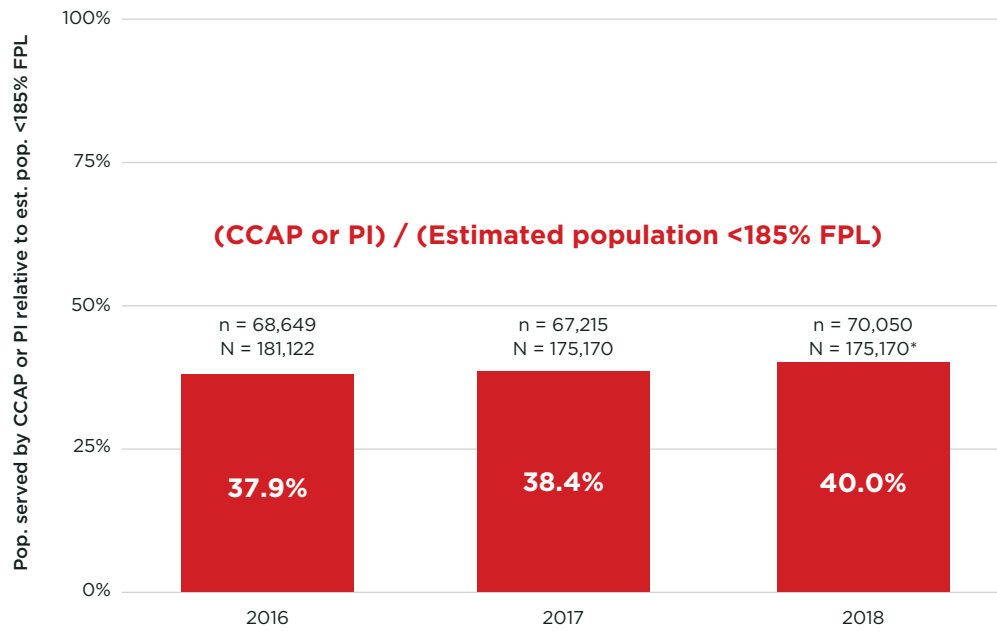


*Notes: Population consist of children ages 0-3 served by either CCAP or PI; Y-axis is truncated
Sources: DHS CCMS; ISBE SIS*

Finding — Birth-to-Three Programs

Figure 3 looks at the CCAP-or-PI population (n) as a proportion of the U.S. Census estimate of the birth-to-three population living in households below 185 percent FPL (N). Proportions rose from approximately 37.9 percent in 2016 (n = 68,649, N = 181,122) to approximately 38.4 percent in 2017 (n = 67,215, N = 175,170) then approximately 40.0 percent in 2018 (n = 70,050, N = 175,170*). Please note that the 2018 proportion recycles the 2017 poverty estimate given the Census has yet to release its 2018 estimate.

Figure 3: Population of children ages birth to three served by CCAP or PI as a proportion of the estimated birth-to-three population living in households below 185 percent of the Federal Poverty Line, 2016-2018

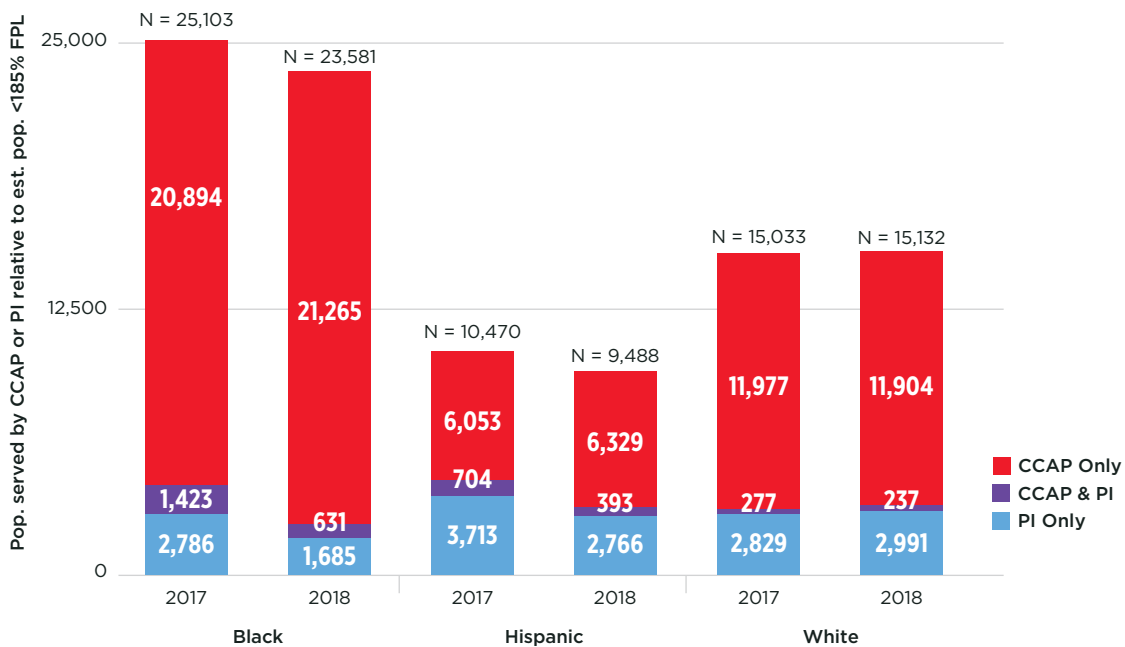


*Notes: Population consists of children ages 0-3 served by either CCAP or PI; 2018 approximation uses 2017 Census estimate as denominator
Sources: DHS CCMS; ISBE SIS; U.S. Census ACS (IECAM)*

Finding — Birth-to-Three Programs

Focusing on SY 2017 and 2018, there are clear differences by racial/ethnic group in the number of children served by CCAP or PI. Figure 4 shows that, during 2017 and 2018, more Black children (n = 25,103 in 2017 and n = 23,581 in 2018) were served by CCAP or PI than were White children (n = 15,033 in 2017 and n = 15,132 in 2018) or Hispanic children (n = 10,470 in 2017 and n = 9,488 in 2018). Counts skewed towards CCAP, with counts of Black ($\Delta = -1,001$) and Hispanic children ($\Delta = -947$) served solely by PI decreasing year-on-year. By contrast, “PI only” counts for White children ($\Delta = +162$) increased. Please note that Project findings focus on Black, Hispanic, and White children. Though the Project considered additional racial/ethnic groups, a combination of cell-size suppression and missing data limited the use of counts for those groups for this report.

Figure 4: Count of children ages birth to three served by CCAP, PI, or both, by race/ethnicity, 2017-2018

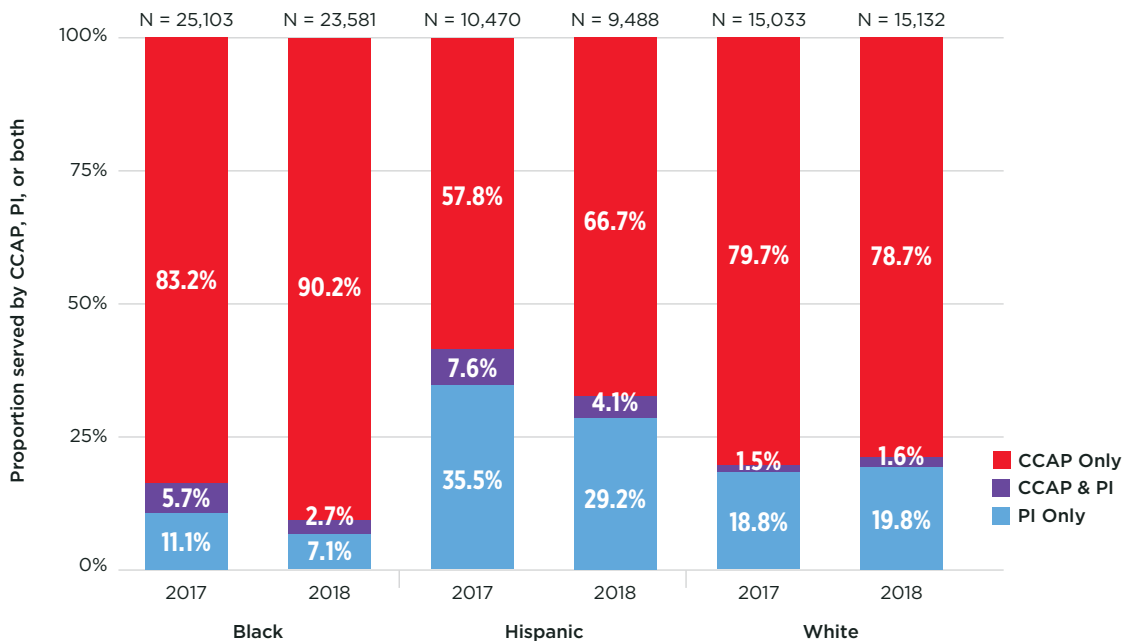


Notes: Population consists of children ages 0-3 served by CCAP or PI; Y-axis is truncated
Sources: DHS CCMS; ISBE SIS

Finding — Birth-to-Three Programs

As displayed in Figure 5, Black children were overwhelmingly served by CCAP alone, with approximately 83.2 percent and approximately 90.2 percent in those slots in SY 2017 and 2018, respectively. By contrast, weaker majorities of Hispanic children—approximately 57.8 percent in 2017 and approximately 66.7 percent in 2018—enrolled in solely CCAP-funded slots. Proportions for CCAP only among White children fell in between their counterparts, at roughly 79.0 percent each year. Year-on-year, the breakdown of proportions remained largely the same for White children, and it skewed more heavily towards CCAP for both Black and Hispanic children. Further, the proportions of children of color served by both CCAP and PI decreased by several percentage points in 2018 compared to minimal change in the same proportion for White children.

Figure 5: Proportion of children ages birth to three served by CCAP, PI, or both, by race/ethnicity, 2017-2018



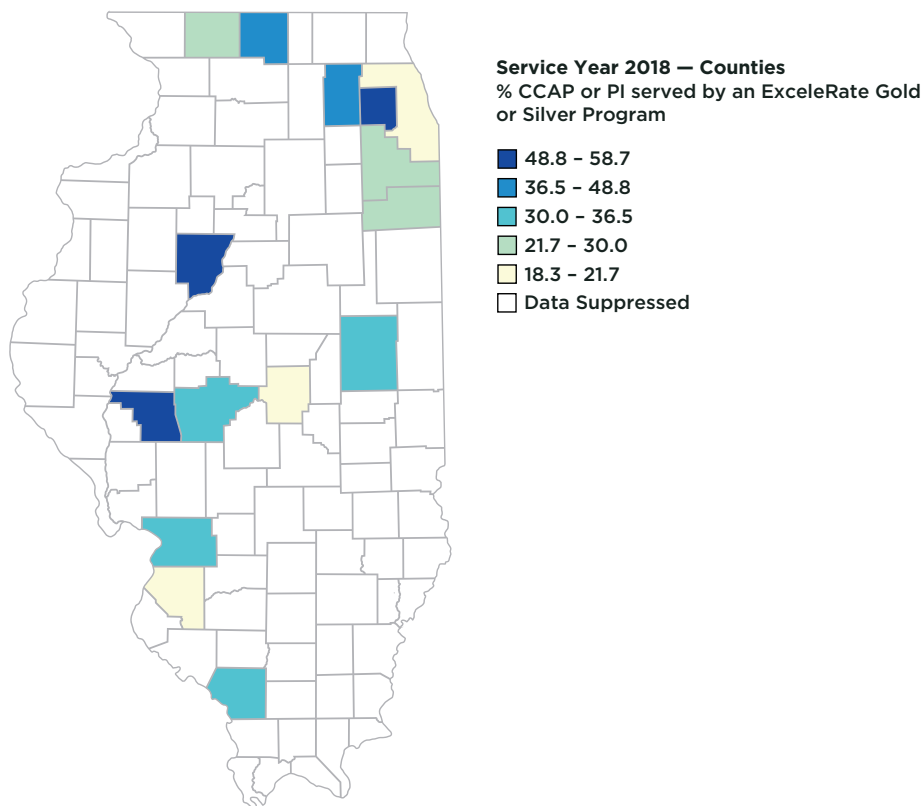
Notes: Population consists of children ages 0-3 served by CCAP or PI
Sources: DHS CCMS; ISBE SIS

ExceleRate Gold or Silver

Illinois' quality recognition and improvement system, ExceleRate, recognizes quality improvement efforts by providers through its Circle of Quality designations: Licensed, Bronze, Silver, and Gold. Silver and Gold represent the two highest circles. Statewide, in SY 2018, approximately 28.5 percent (n = 11,969) of children served by CCAP or PI (N = 70,050) were served by Gold or Silver programs.

Figure 6 shows the proportion of the CCAP-or-PI population served by Gold or Silver programs, by county. DuPage, Morgan, and Peoria counties had the highest proportions of CCAP-or-PI-served children in Gold or Silver settings in 2018, with between approximately 50.0 and 60.0 percent of children served. Kane and Winnebago counties also had relatively high proportions. Figure 6 is based on data tables with a cell-size suppression threshold of $n \leq 10$. This level of suppression and related disclosure proofing resulted in many counties—more counties than expected—being impacted. Further investigation of the county-level data is necessary in future iterations of the Project.

Figure 6: Proportion of children ages birth to three served by CCAP or PI and served by ExceleRate Gold or Silver programs, by county, 2018



Notes: Service year runs from July 1 to June 30; categories are determined using Jenks natural breaks; counties with data suppressed had CCAP, PI, or related cells with $N \leq 10$.

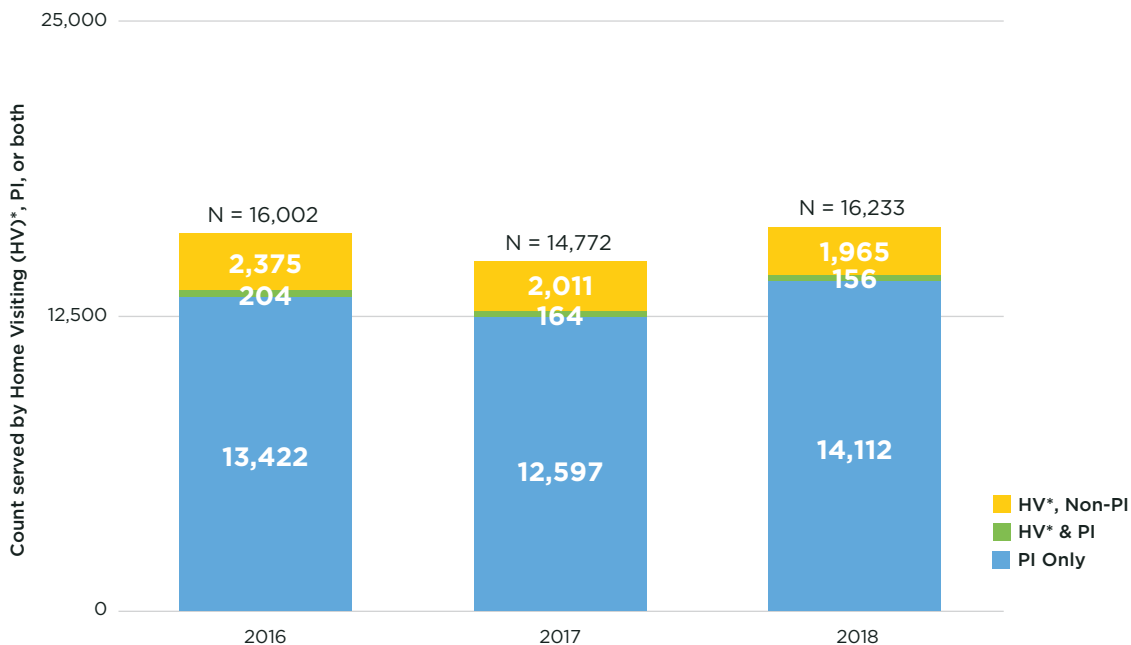
Sources: DHS CCMS; ISBE SIS

Home Visiting (Health Families Illinois (HFI) & Maternal, Infant, and Early Childhood Home Visiting (MIECHV)) and Prevention Initiative (PI)

HFI, MIECHV, and PI serve children from birth to three years old. All three programs include a home visiting component. DHS oversees HFI, GOECD implements MIECHV, and ISBE administers PI. To avoid the possibility of suppression at the state level, the Project analysis combines counts for HFI and MIECHV into a single category referred to as “Home Visiting”. In addition, the Project could not distinguish between the center-based and home-visiting components of PI. Distinctions between HFI and MIECHV as well as center-based and home-visiting PI should be considered for future iterations of the work.

Figure 7 depicts the Home Visiting-or-PI population served by either or both programs during SY 2016, 2017, and 2018. There was a dip in 2017 in the total number of children in the population, with the total decreasing from N = 16,002 in 2016 to N = 14,772 in 2017 before rebounding to N = 16,233 in 2018. The counts for PI only, which served most children in this population each year—at n = 13,422, n = 12,597, and n = 14,112 in 2016, 2017, and 2018, respectively—drove the changes in the overall total. Overlaps in Home Visiting and PI were minimal, peaking in 2016 at n = 204 and falling to n = 164 and n = 156 during the subsequent two years.

Figure 7: Count of children ages birth to three served by HV*, PI, or both, 2016-2018

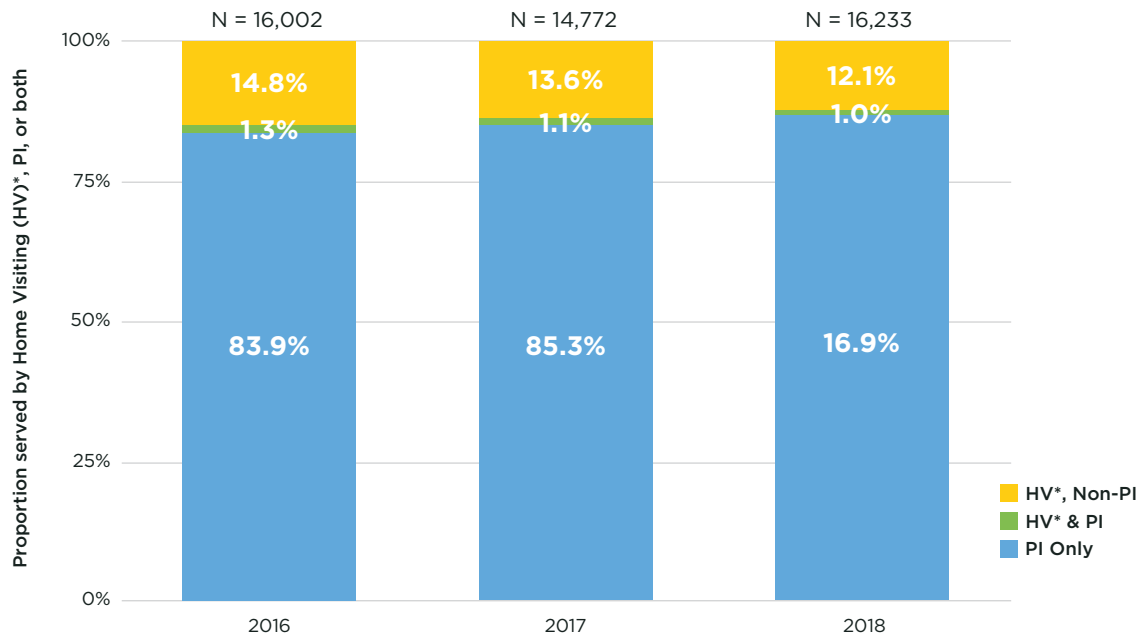


Notes: Population consists of children ages 0-3 served by Home Visiting* (HFI & MIECHV) or PI; Y-axis is truncated
 Sources: DHS Cornerstone; DataKeeper Technologies Visit Tracker; ISBE SIS

Finding — Birth-to-Three Programs

Figure 8 displays the proportion of children served by one of the Home Visiting programs, PI, or both during SY 2016, 2017, or 2018. Over that period, a growing proportion of children were served solely by PI, increasing from approximately 83.9 percent in 2016 (N = 16,002) to approximately 85.3 percent in 2017 (N = 14,772) and approximately 86.9 percent in 2018 (N = 16,233). The proportion receiving Home Visiting services alone decreased in response, from approximately 14.8 percent in 2016 to approximately 12.1 percent in 2018. The approximate overlap between programs remained relatively stable across years.

Figure 8: Proportion of children ages birth to three served by HV*, PI, or both, 2016-2018

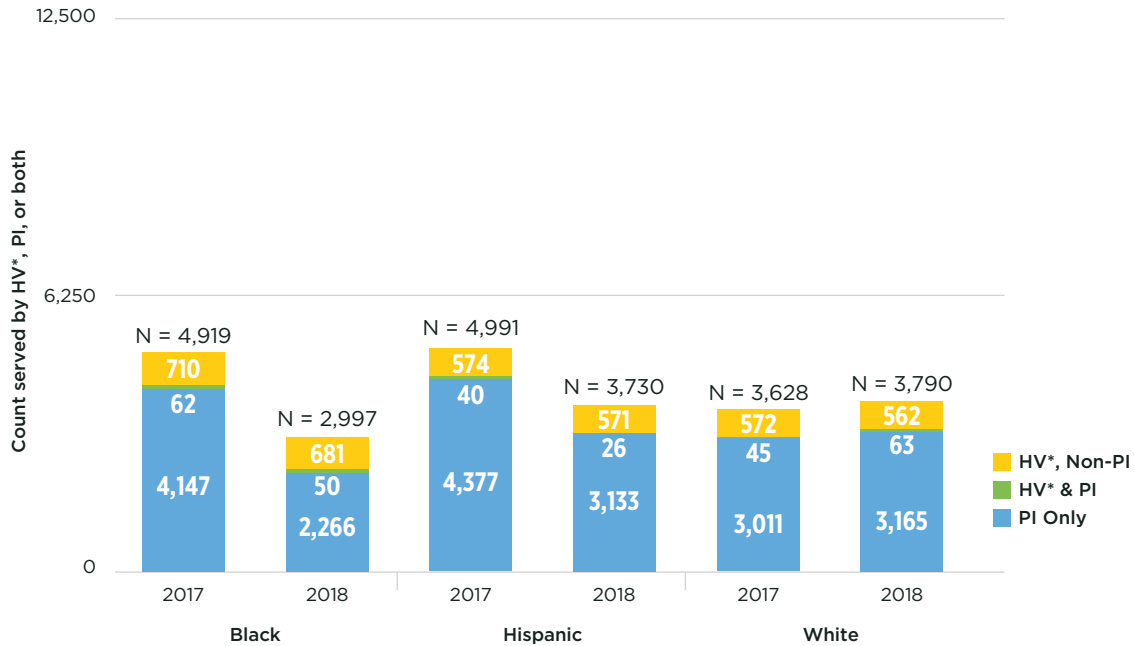


Notes: Population consists of children ages 0-3 served by Home Visiting (HFI & MIECHV) or PI; Y-axis is truncated
Sources: DHS Cornerstone; DataKeeper Technologies Visit Tracker; ISBE SIS*

Finding — Birth-to-Three Programs

Figure 9 mirrors the counts displayed in Figure 7 in that PI enrollment shaped total enrollment among the Home Visiting-or-PI population regardless of racial/ethnic group. Black ($\Delta = -1,881$) and Hispanic children ($\Delta = -1,244$) showed marked decreases from SY 2017 to 2018 in the number served solely by PI. These decreases contrasted with the slight increase ($\Delta = 154$) among White children. For all groups, in each year, PI served strong majorities of the population. Please note that Project findings focus on Black, Hispanic, and White children. Though the Project considered additional racial/ethnic groups, a combination of cell-size suppression and missing data limited the use of counts for those groups for this report.

Figure 9: Count of children ages birth to three served by HV*, PI, or both, by race/ethnicity, 2017-2018

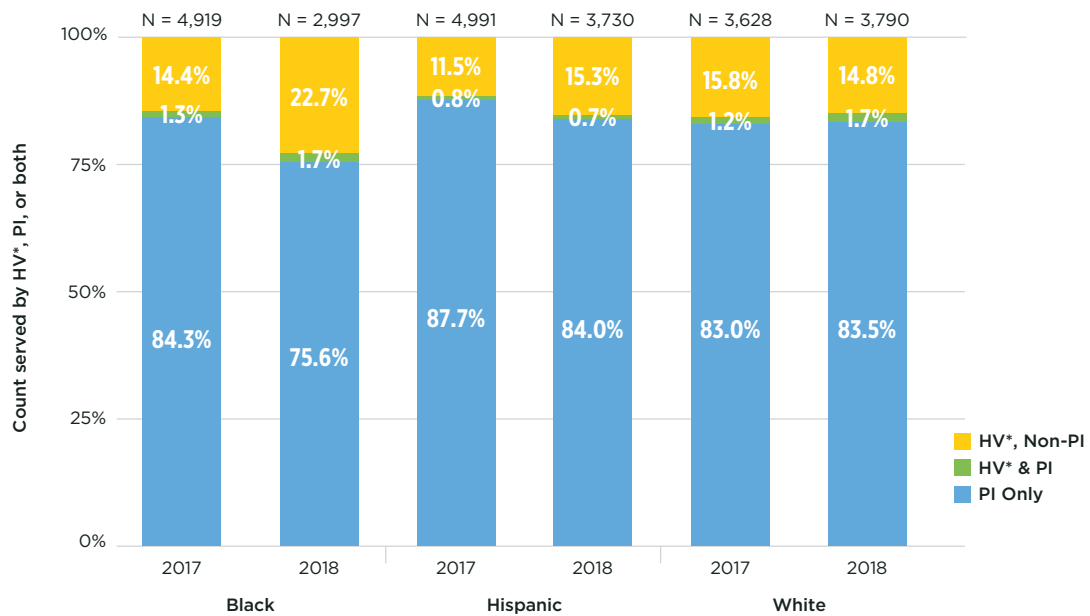


Notes: Population consists of children ages 0-3 served by Home Visiting (HVI & MIECHV) or PI; Y-axis is truncated
Sources: DHS Cornerstone; DataKeeper Technologies Visit Tracker; ISBE SIS

Finding — Birth-to-Three Programs

Proportions served by Home Visiting or PI in SY 2017 and 2018 were roughly similar across selected racial/ethnic groups (Black, Hispanic, or White). Figure 10 depicts group differences, with the most notable being the increase ($\Delta = 8.3$ percentage points) in 2018 in the proportion of Black children served solely by a Home Visiting program. Hispanic children also saw an increase in the same proportion, from approximately 11.5 percent in 2017 to 15.3 percent in 2018. By contrast, White children saw a decrease, or an increase in the proportion served by PI, from approximately 15.8 percent to approximately 14.8 percent.

Figure 10: Proportion of children ages birth to three served by HV*, PI, or both, by race/ethnicity, 2017-2018

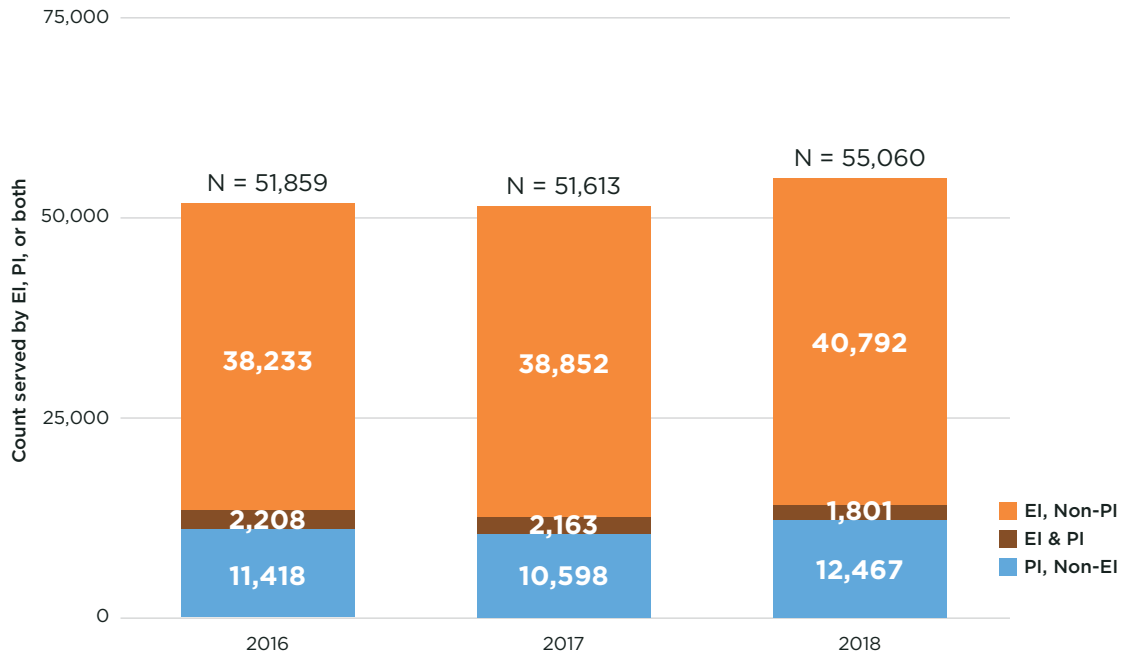


Notes: Population consists of children ages 0-3 served by Home Visiting (HVI & MIECHV) or PI; Y-axis is truncated
Sources: DHS Cornerstone; DataKeeper Technologies Visit Tracker; ISBE SIS

Early Intervention (EI) and Prevention Initiative (PI)

EI and PI serve children from birth to three years old. As shown in Figure 11, the EI-or-PI population was served primarily by EI alone during SY 2016 (N = 51,859), 2017 (N = 51,613), and 2018 (N = 55,060). The number of children served by EI alone increased from n = 38,233 in 2016 to n = 40,792 in 2018. The number in PI only also increased over the same period, from n = 11,418 to n = 12,467. Overlaps between the programs decreased over time, from n = 2,208 in 2016 to n = 1,801 in 2018.

Figure 11: Count of children ages birth to three served by EI, PI, or both, 2016-2018

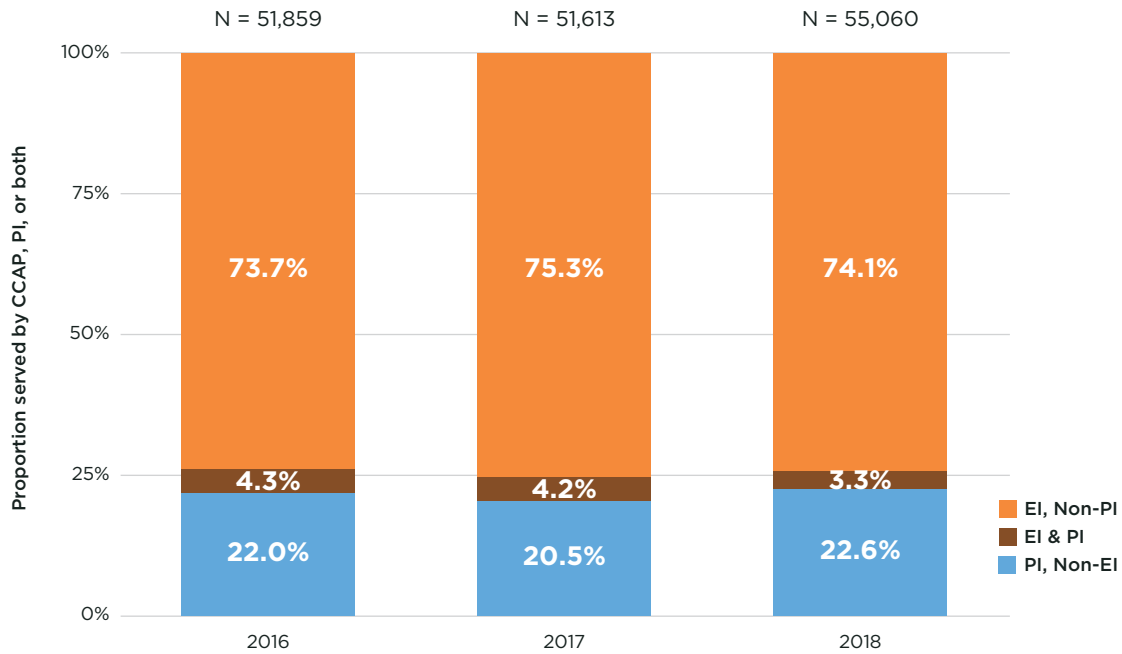


*Notes: Population consists of children ages 0-3 served by either EI or PI; Y-axis is truncated
Sources DHS Cornerstone; ISBE SIS*

Finding — Birth-to-Three Programs

Figure 12 displays the proportion of the population in EI or PI that was served by either or both programs. For each SY, nearly three quarters of the population was served by EI only. The proportion in PI only moved from approximately 22.0 percent in 2016 to approximately 20.5 percent in 2017 to approximately 22.6 percent in 2018. And the overlap sat at just over 4 percent in 2016 and 2017 before contracting to approximately 3.3 percent in 2018.

Figure 12: Proportion of children ages birth to three served by EI, PI, or both, 2016-2018

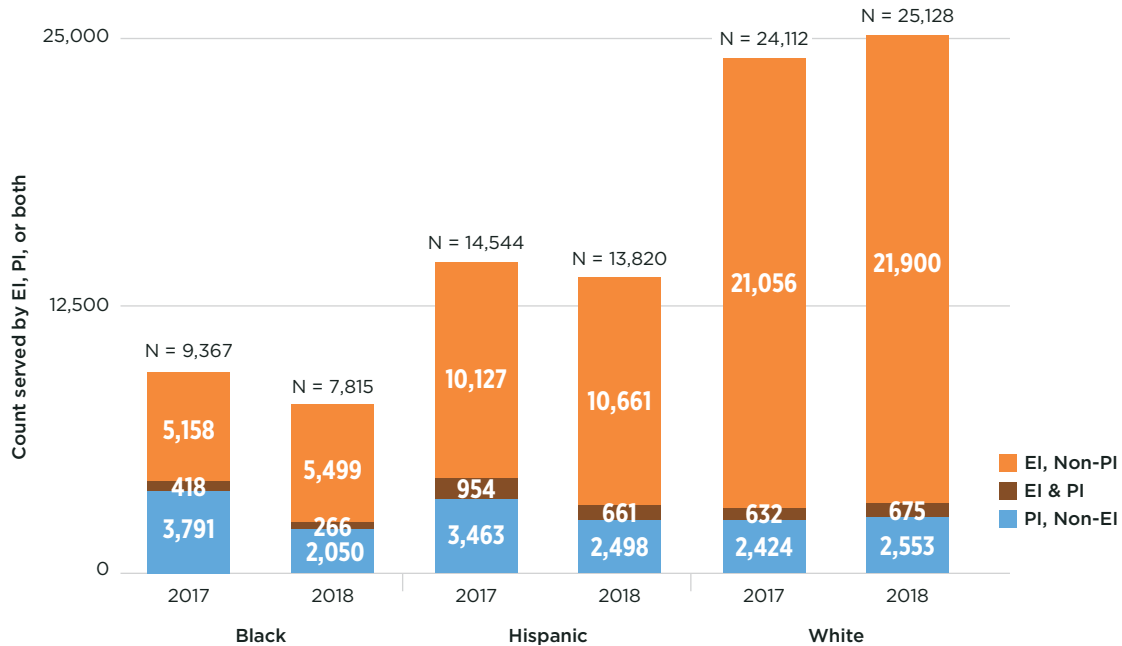


*Notes: Population consists of children ages 0-3 served by either EI or PI; Y-axis is truncated
Sources DHS Cornerstone; ISBE SIS*

Finding — Birth-to-Three Programs

Figure 13 reflects how all three racial/ethnic groups were served primarily by EI, though White children were served in much higher numbers, at roughly 22,000 children each SY. Counts, though smaller relative to the same for White children, stayed relatively similar across years for Black children (n ~ 5,500) and Hispanic children (n ~ 10,500). Year-over-year, “PI only” counts decreased for Black and Hispanic children, respectively, and increased slightly for White children. Please note that Project findings focus on Black, Hispanic, and White children. Though the Project considered additional racial/ethnic groups, a combination of cell-size suppression and missing data limited the use of counts for those groups for this report.

Figure 13: Count of children ages birth to three served by EI, PI, or both, by race/ethnicity, 2017-2018

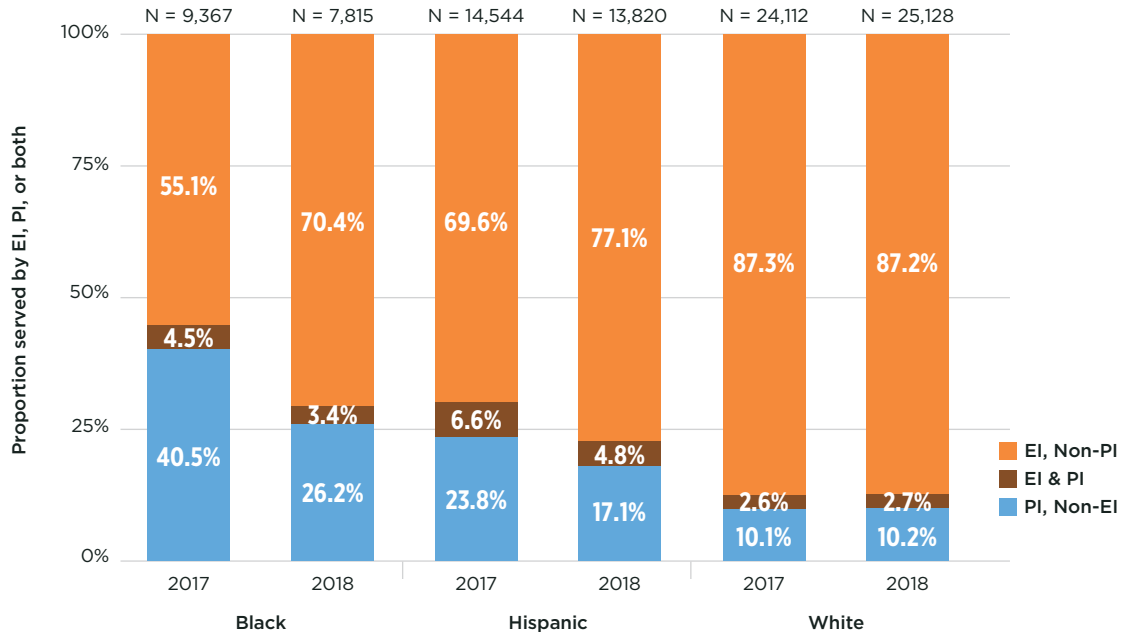


Notes: Population consist of children ages 0-3 served by either EI or PI; Y-axis is truncated
Source: DHS Cornerstone; ISBE SIS

Finding — Birth-to-Three Programs

For proportions, like the counts, Figure 14 displays how Black, Hispanic, and White children tended to be served by EI alone, though there were clear differences in magnitude across groups. In SY 2017, approximately 87.3 percent of White children were served by EI only, compared to approximately 69.6 percent of Hispanic children and approximately 55.1 percent of Black children. In 2018, Black and Hispanic children showed increases in the same proportion, increasing to approximately 70.4 percent and approximately 77.8 percent, respectively; White children held steady at approximately 87.2 percent. Year-over-year, the overlap between EI and PI decreased for Black and Hispanic children and remained relatively static for White children.

Figure 14: Proportion of children ages birth to three served by EI, PI, or both, by race/ethnicity, 2017-2018



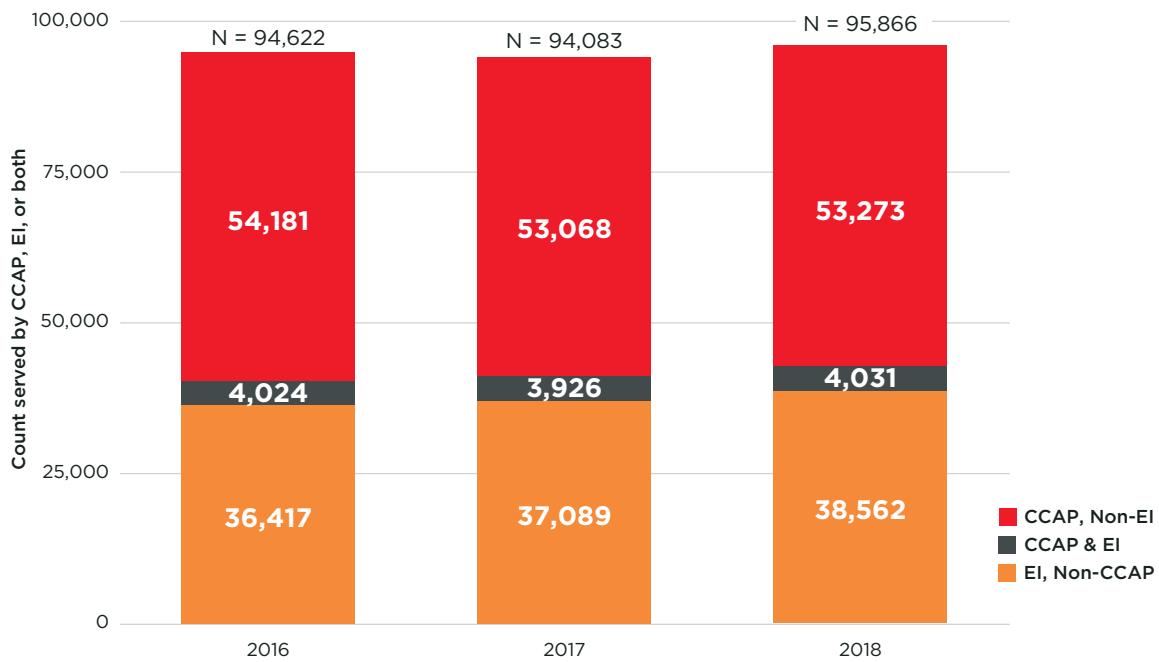
Notes: Population consists of children ages 0-3 served by either EI or PI

Sources: DHS Cornerstone; ISBE SIS

Child Care Assistance Program (CCAP) and Early Intervention (EI)

CCAP and EI serve children starting at birth to three years of age. Figure 15 shows how counts of children served by CCAP, EI, or both programs stayed relatively stable across SY 2016, 2017, and 2018. The number of children in solely CCAP-funded slots decreased from n = 54,181 in 2016 to n = 53,068 in 2017 before a slight rebound to n = 53,273 in 2018. The number of children served by both CCAP and EI was approximately four thousand each year. Over time, the number of children served solely by EI increased from n = 36,417 in 2016 to n = 37,089 in 2017 to n = 38,562 in 2018. Overall, the CCAP-or-EI population grew by approximately 1,200 children over the two-year period, from N = 94,622 in 2016 to N = 95,866 in 2018.

Figure 15: Count of children ages birth to three served by CCAP, EI, or both, 2016-2018

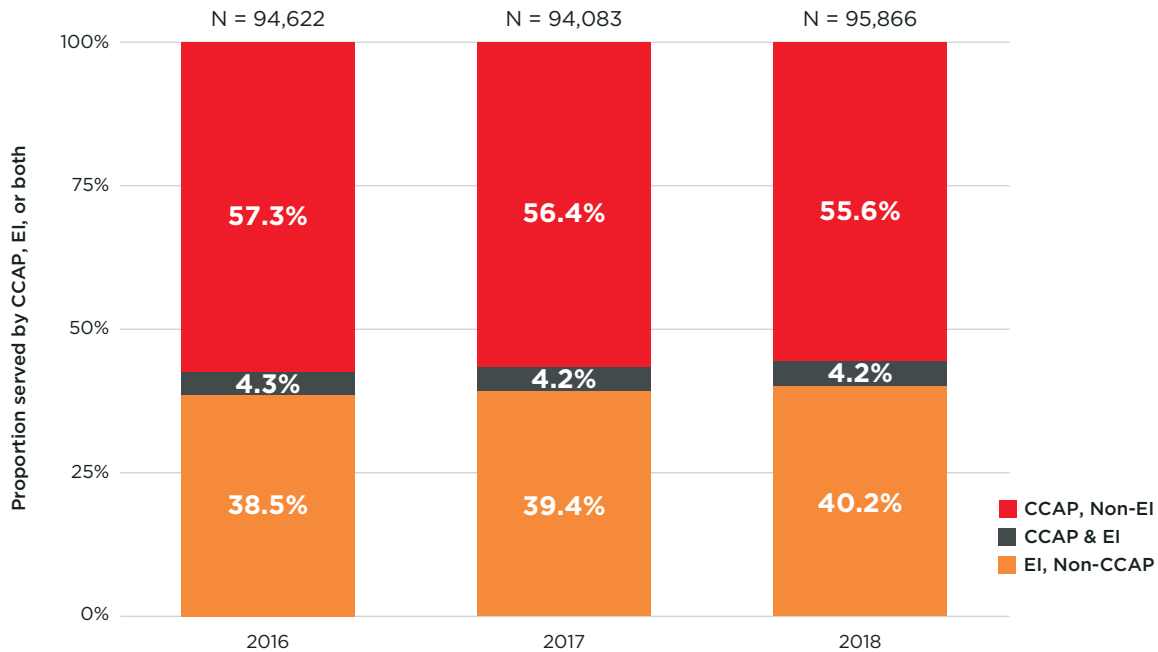


Notes: Population consists of children ages 0-3 served by CCAP or EI
 Sources: DHS CCMS; DHS Cornerstone

Finding — Birth-to-Three Programs

Figure 16 displays the proportion of children served by CCAP, EI, or both during 2016, 2017, or 2018. Over that period, as with the counts, the proportions of the CCAP-or-EI population served by either or both programs stayed relatively similar. The proportion served solely by CCAP decreased from approximately 57.3 percent in 2016 (N = 94,622) to approximately 56.4 percent in 2017 (N = 94,083) to approximately 55.6 percent in 2018 (N = 95,866). In turn, the proportion served solely by EI alone increased each year, from approximately 38.5 percent in 2016 to approximately 39.4 percent in 2017 to approximately 40.2 percent in 2018. The approximate overlap between CCAP and EI was approximately 4.2 percent each year.

Figure 16: Proportion of children ages birth to three served by CCAP, EI, or both, 2016-2018

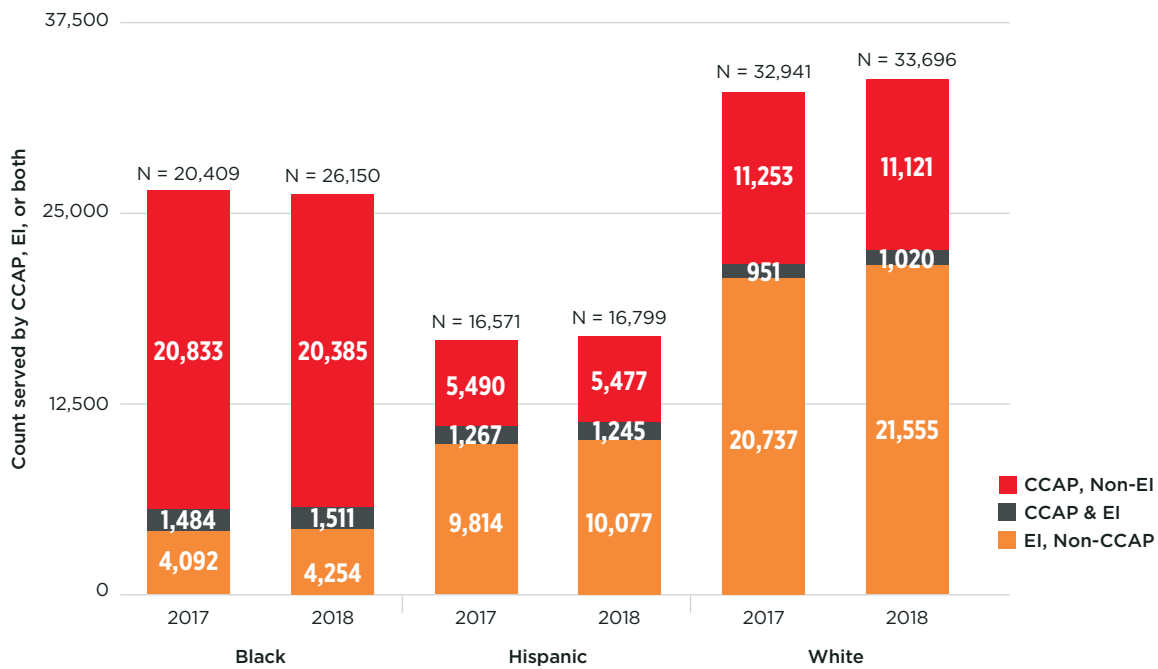


*Notes: Population consists of children ages 0-3 served by either CCAP or EI
Sources: DHS CCMS; DHS Cornerstone*

Finding — Birth-to-Three Programs

Figure 17 shows that, during 2017 and 2018, more White children (n = 32,941 in 2017 and n = 33,696 in 2018) were served by CCAP or EI than were Black children (n = 26,409 in 2017 and n = 26,150 in 2018) or Hispanic children (n = 10,470 in 2017 and n = 9,488 in 2018). Counts for “CCAP only” decreased, and counts for “EI only” increased year-over-year across all three groups. However, the within-group breakdowns by program showed clear differences, with CCAP alone serving nearly twice as many Black children (n = 20,833 in 2017 and n = 20,385 in 2018) as White children (n = 11,253 in 2017 and n = 11,121 in 2018). “CCAP only” counts for Hispanic children (n = 5,490 in 2017 and n = 5,477 in 2018) were roughly a quarter and half the size of the same counts for Black and White children, respectively. For EI alone, the counts of White children served (n = 20,737 for 2017 and n = 21,555 in 2018) were roughly twice as high as the same counts for Hispanic children (n = 9,814 in 2017 and n = 10,077 in 2018) and nearly five times as high as the same counts for Black children (n = 4,092 in 2017 and n = 4,254 in 2018). Please note that Project findings focus on Black, Hispanic, and White children. Though the Project considered additional racial/ethnic groups, a combination of cell-size suppression and missing data limited the use of counts for those groups for this report.

Figure 17: Count of children ages birth to three served by CCAP, EI, or both, by race/ethnicity, 2017-2018

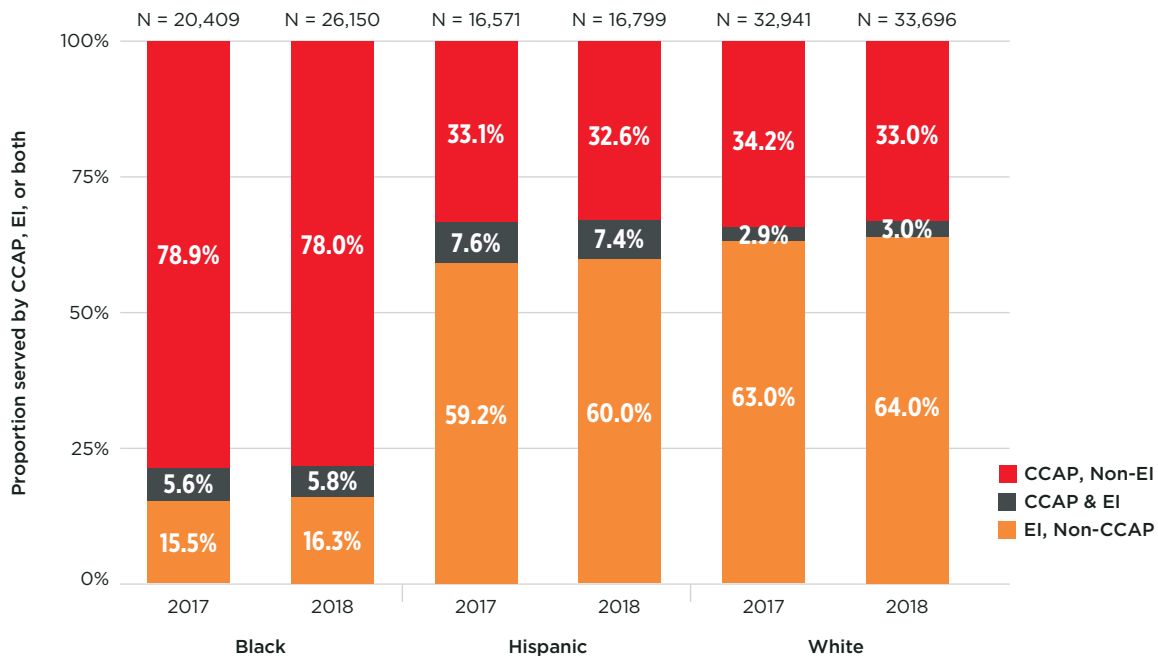


Notes: Population consists of children ages 0-3 served by either CCAP or EI
Sources: DHS CCMS; DHS Cornerstone

Finding — Birth-to-Three Programs

Racial/ethnic proportions reflect the counts. Figure 18 displays strong majorities of Black children in the CCAP-or-EI population being served by CCAP only, with approximately 78.9 percent in 2017 and approximately 78.0 percent in 2018. Proportions in CCAP alone were less than half as large among Hispanic children (approximately 33.1% in 2017 and approximately 32.6% in 2018) and White children (approximately 34.2% in 2017 and approximately 33.0% in 2018), respectively. In turn, Hispanic and White children were served by EI alone in greater proportions—roughly 60 percent for each group in each year—than were Black children.

Figure 18: Proportion of children ages birth to three served by CCAP, EI, or both, by race/ethnicity, 2017-2018



Notes: Population consists of children ages 0-3 served by either CCAP or EI
Sources: DHS CCMS; DHS Cornerstone

Finding — Three-to-Five Programs

Three-to-five programs include CCAP from DHS; and PFA, PFA-E, and IDEA Part B, Section 619 from ISBE. Project findings focus on the overlaps between CCAP and PFA, CCAP and PFA-E, and PFA and PFA-E, with disaggregation of the CCAP-or-PFA population by IDEA Part B, Section 619 status. Table 2 contains counts of children served in SY 2016, 2017, and 2018, by program. The “Total CCAP or PFA” column includes unduplicated counts of children served by CCAP, PFA, or both. CCAP-funded enrollment fell by roughly 3,400 between 2016 and 2017 before stabilizing in 2018, while PFA enrollment held relatively steady at just over 70,000 children. Enrollment in CCAP or PFA decreased by about 7,000 between 2016 and 2017. PFA-E enrollment grew each year following its initial implementation, from approximately 3,041 children in 2016 to approximately 6,481 children in 2018. Membership in Section 619 also grew each year, with approximately 21,227 children receiving an Individualized Education Program per Section 619 in 2018. Lastly, at least 69,551 children received CCAP- or PFA/ PFA-E-funded services from an ExceleRate Gold or Silver program in 2018.

Table 2: Count of children ages three to five receiving services, by program, 2016-2018

Year	Total CCAP	Total PFA	Total PFA-E	Total Section 619	Total CCAP or PFA	Total CCAP or PFA/PFA-E served by an ExceleRate Gold or Silver program
2016	47,083	72,317	3,041	18,344	105,361	N/A
2017	43,701	70,091	4,578	20,889	100,764	N/A
2018	43,701	71,502	6,481	21,227	101,228	69,551

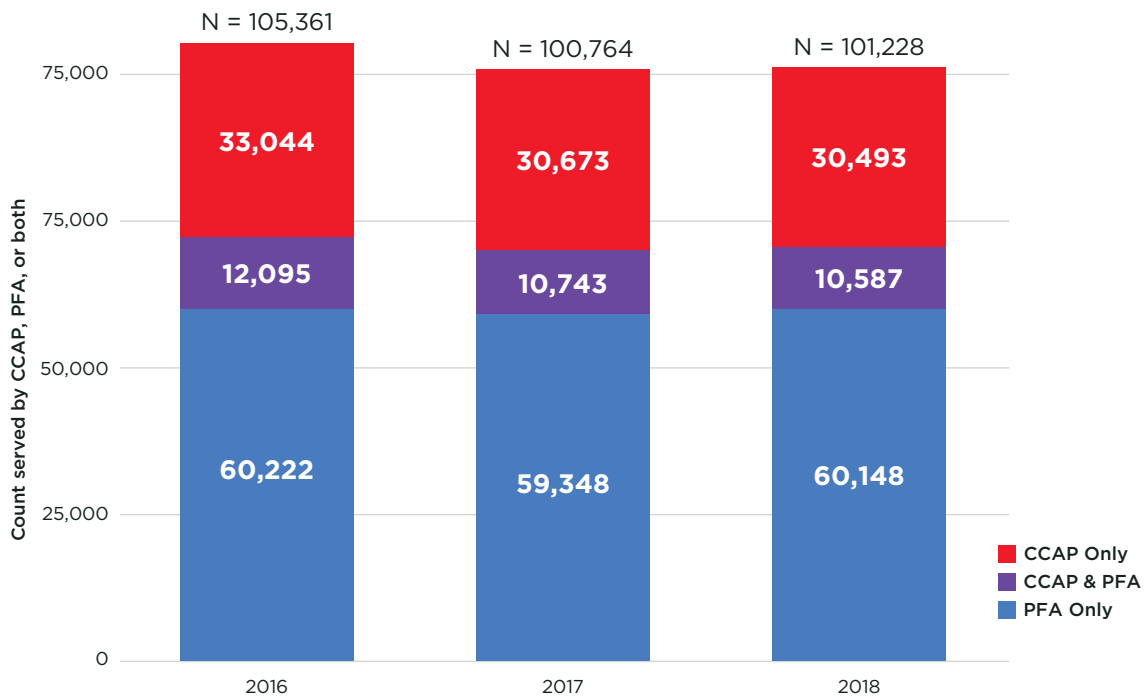
Notes: The “Total CCAP or PFA” and “Total CCAP or PFA/PFA-E served by an ExceleRate Gold or Silver program” columns are unduplicated across programs
Sources: DHS CCMS; ISBE I-STAR, SIS

Child Care Assistance Program (CCAP) and Preschool for All (PFA)

The Project considers CCAP-served children ages three or four years old as of September 1st of a given year to be part of the three-to-five population. For example, for SY 2016, a child who turned five years old prior to September 1st, 2015 would not be considered part of the population.

Figure 19 displays the populations of three-or-four-year-old children served by CCAP, PFA, or both programs during 2016 (N = 105,361), 2017 (N = 100,764), and 2018 (N = 101,228). There was relatively stable enrollment in PFA only from 2016 (n = 60,222) to 2017 (n = 59,348) to 2018 (n = 60,148). Decreases in the overall number of children served track with decreases in CCAP-funded enrollment, both CCAP only and coupled with PFA, across years. The number of children in solely CCAP decreases from n = 33,044 in 2016 to n = 30,673 in 2017 to n = 30,493 in 2018, while the number in both CCAP and PFA falls from n = 12,095 in 2016 to n = 10,743 in 2017 to n = 10,587 in 2018. Please note that this figure describes PFA and does not include PFA-E data.

Figure 19: Count of children ages three or four served by CCAP, PFA, or both, 2016-2018

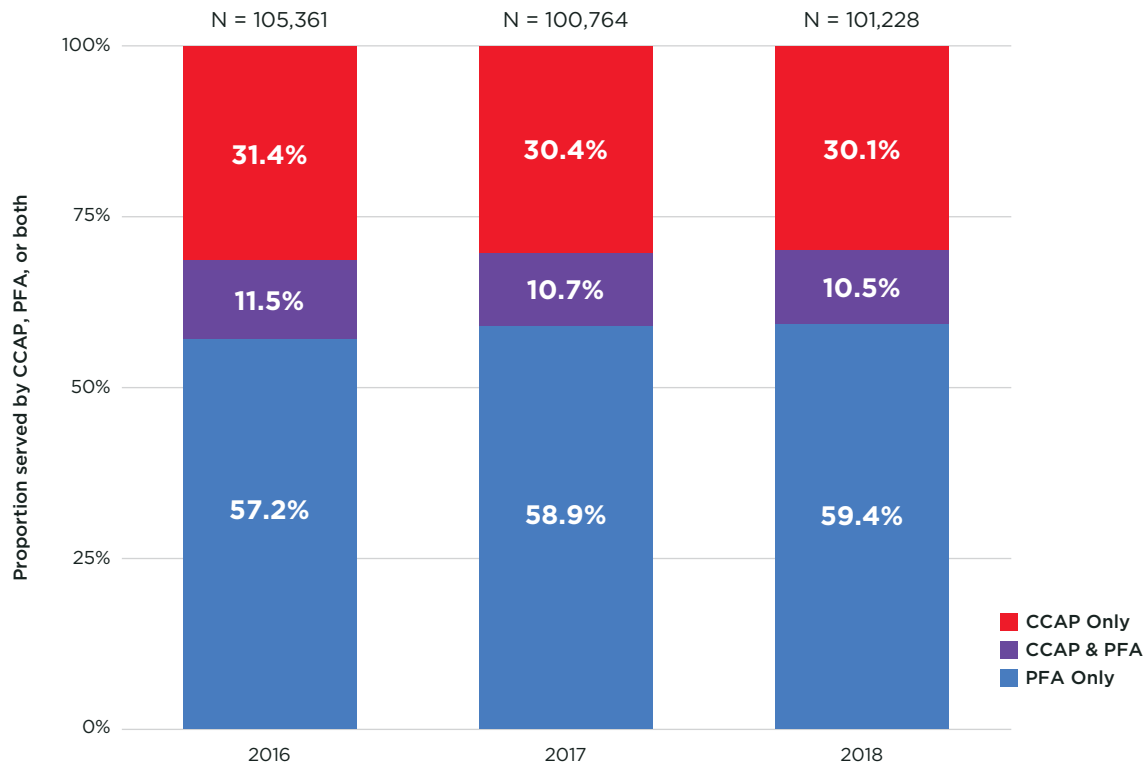


Notes: Population consists of children ages 3 or 4 served by either CCAP or PFA
 Sources DHS CCMS; ISBE SIS

Finding — Three-to-Five Programs

Figure 20 displays the proportions of children served by CCAP, PFA, or both programs during 2016 (N = 105,361), 2017 (N = 100,764), and 2018 (N = 101,228). CCAP alone served approximately 31.4, 30.4, and 30.1 percent of the CCAP-or-PFA population in each respective year. Those decreases were mirrored by year-over-year increases in the proportion served by PFA only. Increases for PFA only were approximately 1.7 percentage points from 2016 to 2017 and approximately 0.5 percentage points from 2017 to 2018. The proportion served by both CCAP and PFA decreased from approximately 11.5 percent in 2016 to approximately 10.7 percent in 2017 to approximately 10.5 percent in 2018. Please note that this figure describes PFA and does not include PFA-E data.

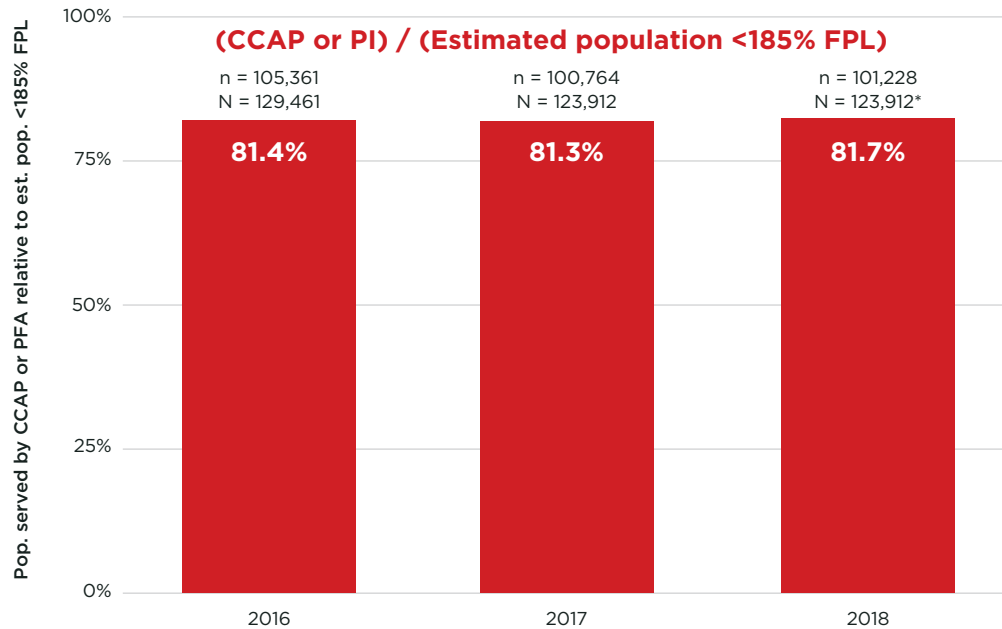
Figure 20: Proportion of children ages three or four served by CCAP, PFA, or both, 2016-2018



*Notes: Population consists of children ages 3 or 4 served by either CCAP or PFA
Sources: DHS CCMS; ISBE SIS*

Figure 21 shows the population of children ages three or four served by CCAP or PFA as a proportion of the Census estimate living in households below 185 percent FPL for 2016 (n = 105,361, N = 129,461), 2017 (n = 100,764, N = 123,912), and 2018 (n = 101,228, N = 123,912*). Overall, in each year, the CCAP or PFA population (n) represented roughly 80 percent of the estimated population in poverty (N), which is over two times higher than the same annual ratio for the CCAP or PI population. Please note that 2018 recycles the 2017 poverty estimate given the Census has yet to release its 2018 estimate.

Figure 21: Population of children ages three or four served by CCAP or PFA as a proportion of the estimated three-or-four population living in households below 185 percent of the Federal Poverty Line, 2016-2018

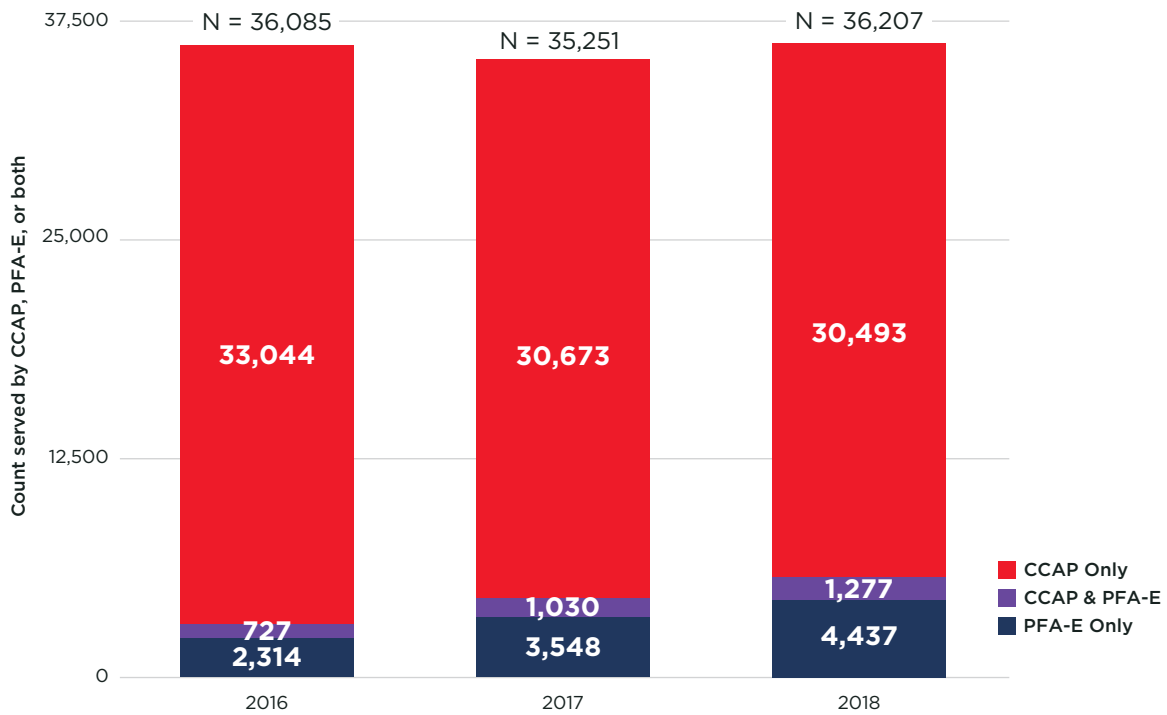


Notes: Population consists of children ages 3 or 4 served by either CCAP or PFA; 2018 approximation uses 2017 estimate as denominator. Sources: DHS CCMS; ISBE SIS; U.S. Census ACS (IECAM)

Child Care Assistance Program (CCAP) and Preschool for All Expansion (PFA-E)

Figure 22 depicts the CCAP-or-PFA-E population served by either or both programs during SY 2016, 2017, and 2018. The overall population count sat between roughly 35 and 36,000 across years, with N = 36,207 in 2018. Children served by CCAP—alone or along with PFA-E—made up a strong majority of the population each year, though the counts decreased from n = 33,771 in 2016 to n = 31,703 in 2017 before rebounding to n = 31,770 in 2018. The counts for “PFA-E only” increased from n = 2,314 in 2016 to n = 3,548 in 2017 to n = 4,437 in 2018. Likewise, the number of children served by both CCAP & PFA-E increased year-over-year, rising from n = 727 in 2016 to n = 4,437 in 2018. Please note that this figure describes PFA-E and does not include PFA data.

Figure 22: Count of children ages three or four served by CCAP, PFA-E, or both, 2016-2018

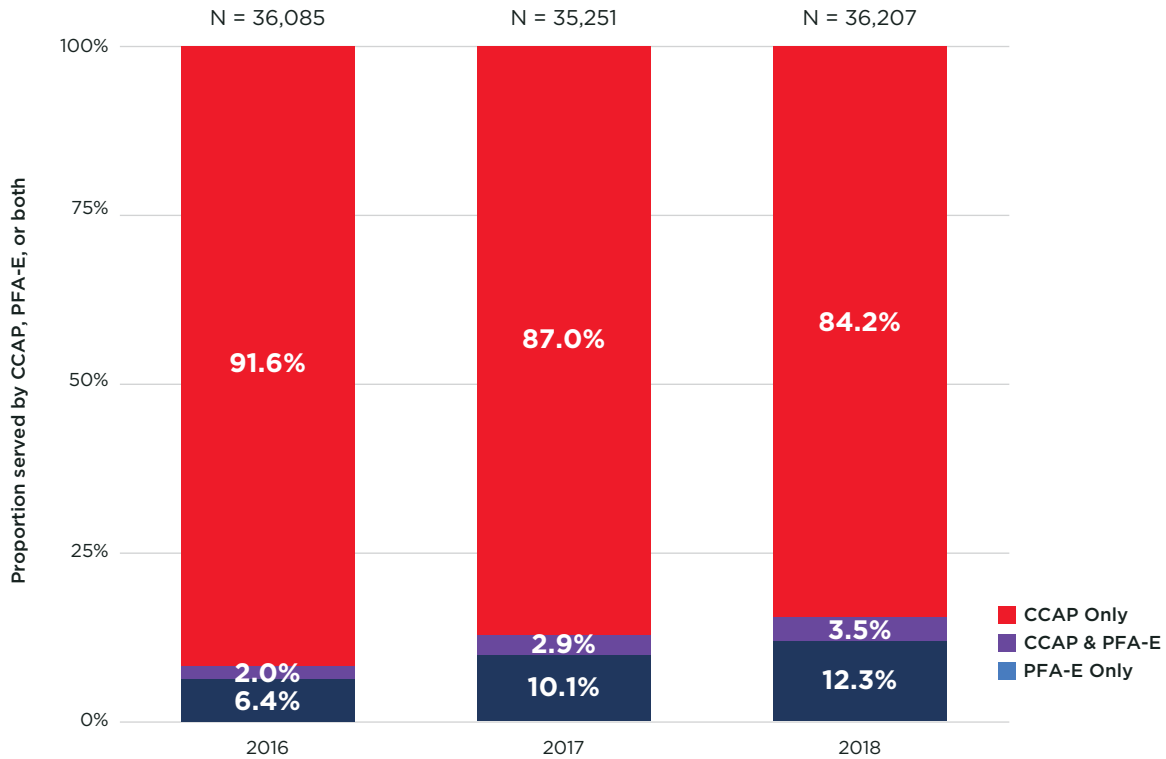


Notes: Population consists of children ages 3 or 4 served by either CCAP or PFA-E
 Sources: DHS CCMS; ISBE SIS

Finding — Three-to-Five Programs

Figure 23 displays the proportion of the CCAP-or-PFA-E population that was served by either or both programs. As reflected by the counts, strong majorities of the population in each year were served by CCAP, and primarily CCAP alone (2016: approximately 91.6%; 2017: approximately 87%; 2018: approximately 84.2%), though the majorities decreased over time. The other proportions increased each year, from approximately 6.4% in 2016 to approximately 10.1% in 2017 to approximately 12.3% in 2018 for PFA-E alone, and from approximately 2.0% in 2016 to approximately 2.9 percent in 2017 to approximately 3.5 percent in 2018. Please note that this figure describes PFA-E and does not include PFA data.

Figure 23: Proportion of children ages three or four served by CCAP, PFA-E, or both, 2016-2018

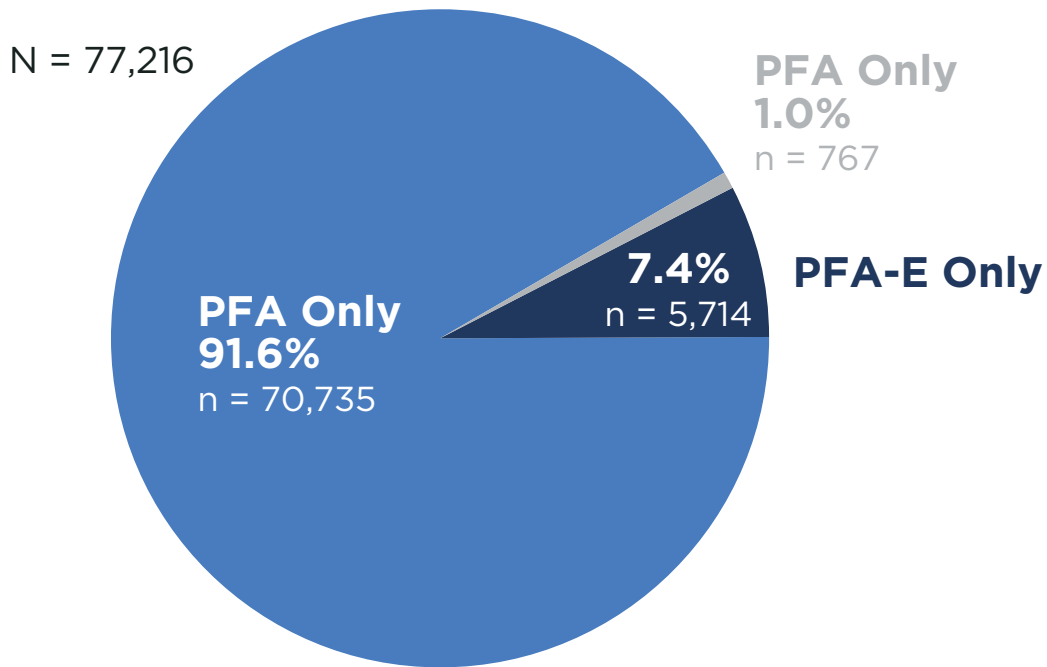


Note: Populations consists of children ages 3 or 4 served by either CCAP or PFA-E
Sources: DHS CCMS; ISBE SIS

Preschool for All (PFA) and Preschool for All Expansion (PFA-E)

Some children are served by both PFA and PFA-E. Figure 24 breaks down the PFA-or-PFA-E population (N = 77,216) by program, displaying proportions and counts for SY 2018. Approximately 91.6 percent (n = 70,735) of the population that year was served solely by PFA, with approximately 7.4 percent (n = 5,714) served by PFA-E alone. The overlap between programs was approximately 1.0 percent (n = 767).

Figure 24: Proportion of children ages three or four served by PFA, PFA-E, or both, 2018

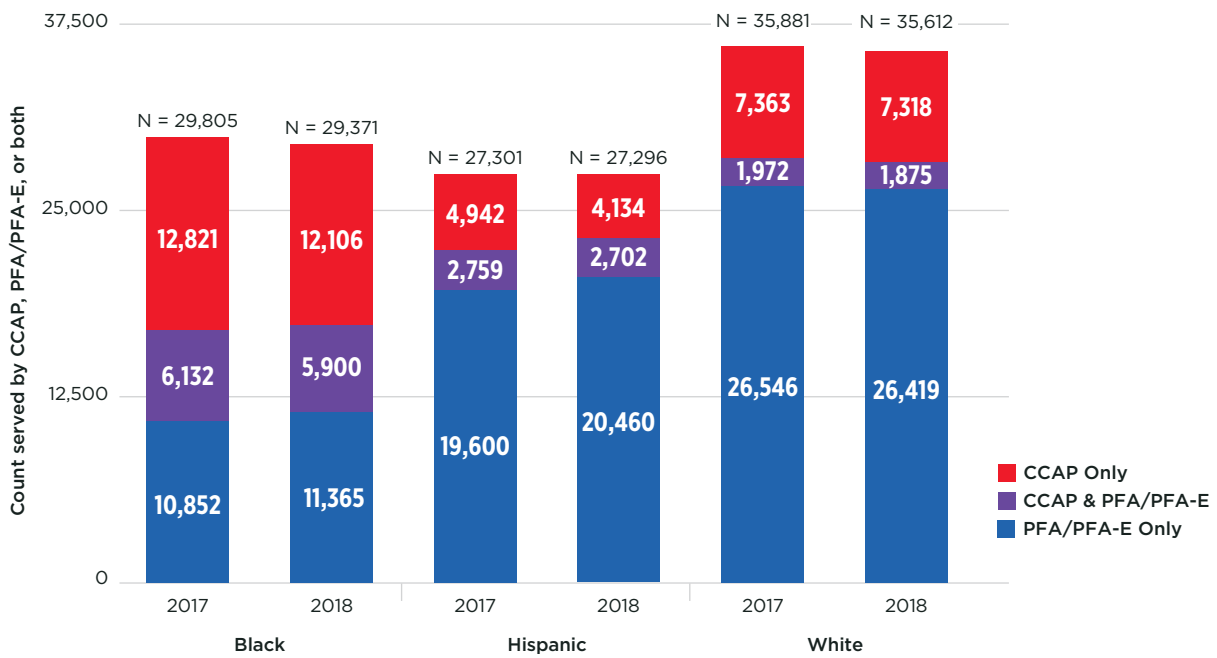


*Notes: Population consists of children ages 3 or 4 served by either PFA or PFA-E
Source: ISBE SIS*

Additional CCAP, PFA, and PFA-E findings

For disaggregation by race/ethnicity, PFA data were combined with PFA-E data in order to establish sufficiently sized counts. Figure 25 shows that CCAP or PFA/PFA-E served roughly 29,000 Black children, 27,000 Hispanic children, and 36,000 White children in SY 2017 and 2018. Regardless of racial/ethnic group, counts of children served dropped slightly year-over-year. And regarding CCAP as well as the overlap between CCAP and PFA/PFA-E, in both years, Black children were served in higher numbers than were Hispanic and White children combined. By contrast, Hispanic children and White children were served by PFA/PFA-E in larger numbers relative to Black children. Please note that Project findings focus on Black, Hispanic, and White children. Though the Project considered additional racial/ethnic groups, a combination of cell-size suppression and missing data limited the use of counts for those groups for this report.

Figure 25: Count of children ages three to five served by CCAP, PFA/PFA-E, or both, by race/ethnicity, 2017-2018

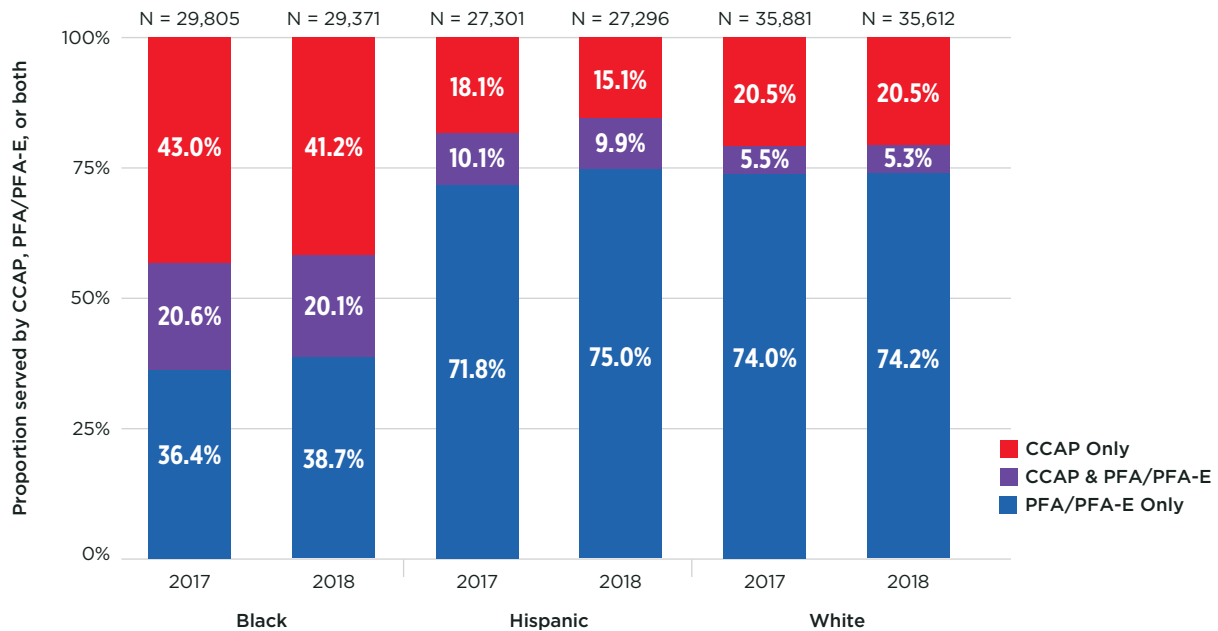


Notes: Population consists of children ages 3 or 4 by CCAP or PFA/PFA-E
 Sources: DHS CCMS; ISBE SIS

Finding — Three-to-Five Programs

Figure 26 provides proportions served by program in 2017 and 2018. As with ECBG counterpart PI, in both years, PFA/PFA-E served Hispanic and White children in larger proportions—over roughly 80 percent of both groups—than Black children—around 60 percent each year. Black children skewed more heavily towards CCAP, with approximately 43 percent and approximately 41.2 percent served by CCAP alone in 2017 and 2018, respectively. Relative to the other two groups, they also had larger overlaps across programs, at around 20 percent each year.

Figure 26: Proportion of children ages three to five served by CCAP, PFA/PFA-E, or both, by race/ethnicity, 2017-2018



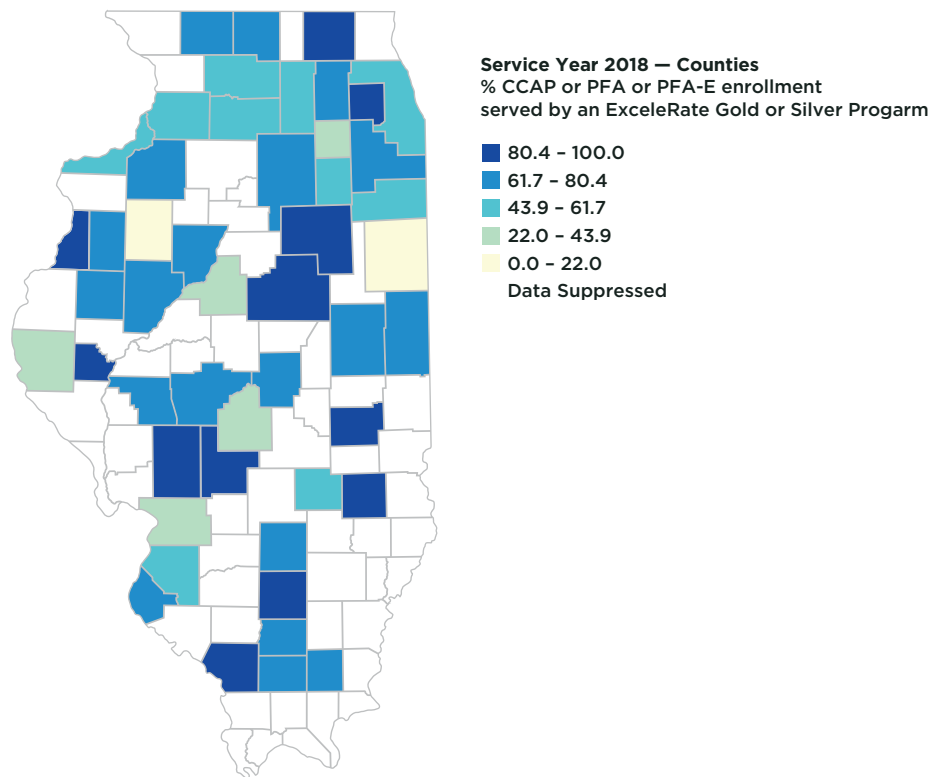
Notes: Population consists of children ages 3 or 4 served by CCAP or PFA/PFA-E
Sources: DHS CCMS; ISBE SIS

ExceleRate Gold or Silver

Gold and Silver represent the two highest circles of quality for ExceleRate. Statewide, in SY 2018, approximately 63.9 percent (n = 69,551) of children served by CCAP or one of PFA and PFA-E (N = 108,897) were served by Gold or Silver programs. Figure 27 displays, at the county level, the proportion of children served by CCAP, PFA, or PFA-E and by an ExceleRate Gold or Silver program. The highest category ranges from approximately 80.4 to 100 percent and includes McLean, McHenry, and DuPage Counties serving at least 1,000 children in the CCAP-or-PFA-or-PFA-E population. Counties in the next category, with approximately 61.7 to 80.4 percent of the population served by a Gold or Silver program, includes Peoria, Sangamon, Macon, Kane, Winnebago, Will, and Champaign Counties serving at least 1,000 children. In Cook County, roughly 60 percent of children in the population were served by Gold or Silver.

Figure 27 is based upon data tables with a cell-size suppression level of n <= 20 for CCAP or PFA/PFA-E program totals and n <= 10 otherwise, e.g. number of children served by CCAP alone. These levels and related disclosure proofing resulted in more counties than expected having data suppressed. Further investigation of the county-level data is necessary in future iterations of the Project.

Figure 27: Proportion of children ages three to five served by CCAP or PFA/PFA-E and served by an ExceleRate Gold or Silver program, by county, 2018



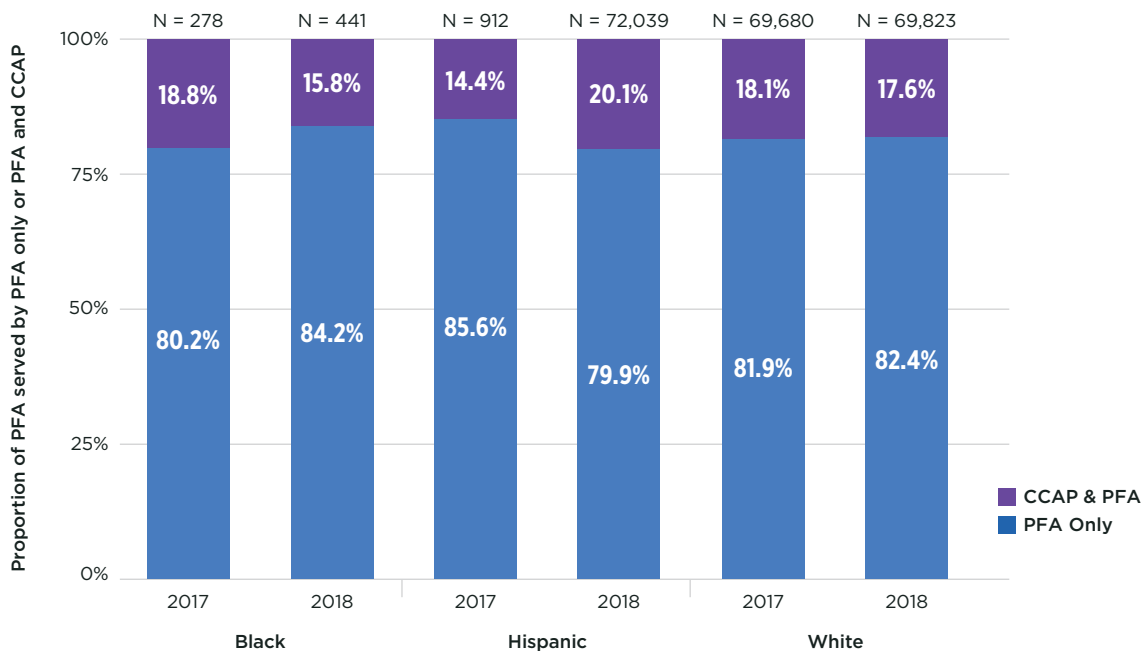
Notes: Service year runs from July 1 to June 30; categories are determined using Jenks natural breaks; counties with data suppressed had CCAP, PFA, or PFA-E cells with 1) program totals with n <= 20 and/or 2) cells with n <= 10 or related cells allowing for the determination of cells with n <= 10
Sources: DHS CCMS; ISBE SIS

IDEA Part B, Section 619

IDEA Part B, Section 619 applies to children ages three through five identified as disabled and receiving an IEP. The Project disaggregates counts of children served by PFA or CCAP by Section 619 status. Overall, Section 619 children made up approximately 0.4 percent (n = 278), 0.6 percent (n = 411), and 1.3 percent (n = 912) of all PFA-funded children in years 2016, 2017, and 2018, respectively. The 2017-to-2018 change represented an increase of approximately 107 percent.

Figure 28 displays the proportion of PFA-served children served by PFA alone or both CCAP and PFA, by Section 619 status. In interpreting the figure, note that the year-specific counts vary greatly between Section 619 and non-Section 619. In SY 2016, among the CCAP-or-PFA population receiving Section 619 services, approximately 19.8 percent (n = 46) were served by both CCAP and PFA. This proportion compared with approximately 20.1 percent (n = 12,049) among the non-. Proportions fell across years regardless of status, though the non-Section 619 had higher proportions in 2017 (approximately 18.1 percent with n = 10,687) and 2018 (approximately 17.6 percent with n = 10,472) than did their served counterparts (approximately 15.8 percent (n = 56) in 2017 and approximately 14.4 percent (n = 115) in 2018). Please note that Figure 28 does not include PFA-E data on account of cell-size suppression and disclosure proofing.

Figure 28: Proportion of PFA-served children served by PFA only or by both CCAP and PFA, by Section 619 status



Notes: Population consists of children ages 3 or 4 served by CCAP & PFA
 Sources: DHS CCMS; ISBE SIS; I-STAR

Recommendations

Treat Project findings as a marker of progress

The early childhood community should consider Project findings as evidence of the continued progress of the ILDS and its participating agencies. The Project and other ILDS-related data projects have only recently become possible in Illinois. Supported largely by federal State Longitudinal Data Systems (SLDS) grant dollars, the execution of legal agreements, establishment of governance, and construction of technical infrastructure have combined to enhance data practices within and across agencies.

Now incorporating records from over a half-dozen different early childhood programs, administered by two different agencies, the Project represents a key achievement of the ILDS to date. Its findings—specifically, the identification of the number of children receiving services from multiple funding sources/programs in a given service year—have proven revelatory and informed policy conversations. In addition, over the course of the three iterations of the Project, DHS and ISBE have benefited from ILDS infrastructure in building more efficient external data sharing processes, and their child-level records have displayed markedly higher quality across data elements.

Act on the P-20 Council's Education & Workforce Data Task Force recommendations

Continued enhancement of inter- and intra-agency data systems would build on the progress of the ILDS while helping address some of its shortfalls. In its spring 2019 final report, the P-20 Council's Education and Workforce Data Task Force makes recommendations for action to improve the state's data infrastructure. In sum, the Task Force and its recommendations pursued a vision of data-informed practice and policy decision making and a mission of empowering stakeholders with actionable information that will support improved learning, equity, and community engagement.

Particularly relevant to the Project, the Task Force recommends increasing data capacity within and across agencies. Related recommended actions include assessing current and future capacity needs and planning and budgeting for those needs; developing centralized capacity to support inter-agency data linkage and use; and building a “next-generation” centralized infrastructure to facilitate secure and efficient data analysis. Each of these actions would benefit the Project and strengthen its findings, which are created from early childhood data sets typically scattered across disparate agency systems, of questionable quality, and maintained by overburdened agency staff. These and other challenges continue to limit Project findings.

DHS, ISBE, and other ILDS participating agencies should consider the Task Force a call to improve their intra-agency data systems and the quality of the data therein. The ILDS supports inter-agency data governance and sharing but leaves ultimate control and maintenance of data to its participating agencies. Completion of the Project and similar inter-agency projects is dependent upon participating agencies collecting, storing, and sharing high-quality data.

In early childhood, DHS and ISBE should continue encouraging the collection of high-quality data by early childhood care providers. Prioritizing local-level data quality strengthens state-level systems and inspires confidence in state-level reporting and analyses. Agencies should also consider the inter-agency rationalization of demographic or common programmatic data element naming conventions and codes. Aligning element names and codes—particularly, for demographic elements describing race/ethnicity, low-income status, homelessness, and language learning—would help establish a baseline for better describing and understanding the child populations served.

Expected federal grant investments in early childhood data systems should expedite inter- and intra-agency efforts. Federal SLDS grants have seeded the ILDS from the beginning, and ISBE, as the state education agency applicant, continues to pursue these funds. In addition, Illinois was recently awarded a PDG B-5 Renewal Grant, which will support systems building within DHS and other state entities. Combined, these grants will drive early childhood ecosystem-wide improvements over the next several years.

Incorporate Early Head Start and Head Start data

Future iterations of the Project should aim to incorporate data from Early Head Start and Head Start. These programs serve a substantial number of children under the age of five in Illinois, including many from priority populations, and would make strong additions. The Project would help tease out what is, anecdotally, certain overlap in service coverage between Early Head Start and Head Start providers and their IDHS and ISBE counterparts. More broadly, establishing Head Start-inclusive unduplicated counts would mark a major achievement for inter-agency data sharing in Illinois, and it would position the state as a leader in the early childhood data systems space.

IHSA and CPRD appear well positioned to share Early Head Start and Head Start data soon. As of fall 2019, CPRD was pursuing a pilot integration of child-level data from a set of Head Start grantees contracting with ChildPlus. This pilot should be completed in early 2020, at which time the CPRD system should be operational and capable of sharing data externally. A second pilot, focused on COPA, will launch in 2020 with similar near-term goals for operation and data sharing.

Enhance Project with data better describing DHS and ISBE programs

The Project should incorporate data that better describe the selected DHS and ISBE early childhood programs. The work to date shows that establishing unduplicated counts across funding streams and programs is possible, but additional details are necessary. Such details are constrained by the availability of high-quality data, but the continued enhancement of inter- and intra-agency data systems, including aligning data definitions and collecting data with fidelity to quality, should help address the issue over time.

The following examples should be prioritized in future iterations of the Project. First, the Project should distinguish between provider settings like centers or schools. This distinction is key for informing policy given anecdotal evidence suggests that different settings tend to serve different populations of children, both demographically and geographically. Disaggregating by type of setting would require agencies to ensure that provider-level information is available and of sufficient quality and can be reliably associated with child-level records.

Second, CCAP data used for the Project should include both contracted and non-contracted providers in a systematic way. DHS currently stores records for children served by these groups of providers in different systems and formats, and the possibility of integration across systems is unclear. Regardless, the current storage and formatting of contracted CCAP provider data by DHS is not conducive to external data sharing and thus full incorporation in the Project. All CCAP-relevant data systems need to be enhanced through ongoing longitudinal data systems building efforts. At minimum, either the MCI should be expanded to include, to the extent possible, the DHS system storing contracted CCAP provider records, or NIU should work with the City of Chicago to establish a direct data sharing relationship that will ensure records from contracted CCAP providers operating in the city are included in the Project.

Third, home visiting services are diverse and deserve greater detail with respect to Project findings. The third iteration of the Project is the first to include home visiting-specific data, and its related analysis and findings are thus high level and combine programs. Future iterations should distinguish between home visiting programs like HFI and MIECHV and incorporate additional ones like PTS where possible.

Fourth and related, the Project should disaggregate by the components of PI. The program offers center-based and home visiting services that overlap in different ways with services delivered by other programs. The third iteration of the Project could not describe these overlaps, which would represent valuable information for stakeholders. Provided a data indicator and enough records are available, PI services should be separated in Project findings moving forward.

Lastly, the Project should enhance its integration and analysis of IDEA Part B, Section 619 data. These data describe children with disabilities—a priority population in the early childhood ecosystem—but reside in an ISBE I-STAR data system that sits largely outside broader longitudinal data conversations. Early childhood data stakeholders should focus on learning more about I-STAR, the data available therein, and ways that that data could be better integrated with records in other Project-relevant data systems. Integration would facilitate deeper analysis of the Section 619 population and thus strengthen the Project and its findings.

Appendix

PRESCHOOL DEVELOPMENT GRANT BIRTH THROUGH FIVE Statewide early childhood needs assessment:

Unduplicated counts project — Data issues memo and proposed next steps.

Summary

Systemic data-related challenges have emerged during the three phases of the Early Childhood Unduplicated Counts Project (“The Project”). Identifying such barriers is a primary purpose of the work, but they continue to hinder completion of the planned analyses as well as other state inter-agency projects. This memo summarizes challenges related to data systems, sharing, and quality encountered by the Northern Illinois University (NIU) team while working on the Project. The team hopes the memo can inform ongoing conversations around enhancing Illinois’ early childhood data systems.

The summarized challenges include:

- Continued development of Head Start data systems
- Data system siloes
- Difficulties related to incorporating data from DHS-contracted CCAP providers
- Data-related capacity and communications
- Data sharing agreement execution
- Data transfer
- Data formatting and quality
- Missing data records and fields

Project purposes

Led by an NIU team from the Center for Governmental Studies and Education Systems Center, the Project carries two purposes. First and primarily, it utilizes the Illinois Longitudinal Data System (ILDS) inter-agency linkage mechanism, the Master Client Index (MCI), to establish distinct counts of children ages birth to five served by selected publicly funded early childhood funding streams / programs administered by the Illinois Department of Human Services (DHS), the Illinois State Board of Education (ISBE), and Head Start. Second, it seeks to develop recommendations that would promote alignment in data collection, naming, linkage, and analysis to support greater understanding of access to early childhood care and education services through an unduplicated count.

Background

Funded by the Race to the Top Early Learning Challenge Grant, Project Phase I fulfilled both intended purposes. After execution of the project-specific data sharing agreement in October 2014, a years-long data transfer process pushed the NIU team’s completion of Phase I to summer 2016. Phase I created, for service years 2013 and 2014, unduplicated counts of children served by Preschool for All (PFA) or the Childcare Assistance Program (CCAP) from ages three to five and Prevention Initiative (PI) or CCAP-funded infant/toddler care from ages birth to three. The counts represented an early win for the ILDS and for the early childhood community, placing Illinois among a select group of states to have established such baselines.

Notably, Phase I was the first determination of the count and proportion of children served by both CCAP and either of the Early Childhood Block Grant programs (PI and PFA), and where possible it broke down service receipt by child race/ethnicity. Phase I also saw NIU and staff from the Governor’s Office of Early Childhood Development (GOECD) identify numerous data barriers, including those outlined in this memo. These barriers precluded completion of the planned initial scope and prompted plans for a Phase II, which would both complete the Project scope and rectify standing issues.

Planning for Phase II started later that fall, and after an iterative and lengthy process, all signatories executed the final data sharing agreement in late spring 2017. The subsequent data transfer from DHS and ISBE to NIU was not wholly completed until early 2018, at which time analysis began. The primary Phase II enhancement included establishing counts for two additional years of data (service years 2015 and 2016). The goal of incorporating Head Start data remained unfulfilled, as did obtaining the complete set of data elements requested initially during Phase I. Additionally, the availability and quality of the requested demographic data elements—particularly race/ethnicity, homelessness, and English-language-learner status—remained a major concern.

Contracted with ISBE as part of Illinois’ Preschool Development Grant Birth through Five Grant, the NIU team will have completed Phase III of the Project in early 2020. Plans for this phase included establishing unduplicated counts for CCAP, PI, and PFA as well as Early Head Start and Head Start and additional programs or supports from DHS—including Early Intervention (EI); Healthy Families Illinois (HFI); Maternal, Infant, and Early Childhood Home Visiting (MIECHV); and Parents Too Soon (PTS)—and from ISBE—including Preschool For All Expansion (PFA-E) and IDEA Part B, Section 619 (Section 619). The data sharing agreement was executed in September 2019, with data transfers from DHS and ISBE to NIU completed in early November 2019. Despite initial plans, data from PTS and Early Head Start and Head Start were not available in time for inclusion in Phase III.

Challenges

Continued development of Head Start data systems

The Illinois Head Start Association (IHSA) and its data administrator, the Center for Prevention Research & Development (CPRD) at the University of Illinois at Urbana-Champaign, are building a data system to house and share records from Early Head Start and Head Start grantees statewide. Inter-agency data integration depends upon individual entities being capable of sharing records, and such capability remains a goal for IHSA. It and CPRD continue to make steady progress, but an integrated Head Start system has yet to reach an operational level such that it can share data for the Project. CPRD did share data for a small group of Head Start grantees for Phase II, but those grantees offered limited coverage of the state’s total population of children served by Head Start and thus were not included in the Phase II analysis.

IHSA and CPRD face several challenges in the data systems space. First and generally, Head Start grantees are funded by federal dollars and thus are not required to report data to state-level entities, public or private, like IHSA. In Illinois, only grantee-level participant counts, which are limited in their application to the Project and its linkage of child-level data, are widely available. A notable past effort to encourage systematic state reporting was a 2016-17 IHSA-ISBE outreach campaign around including Head Start-served children in ISBE’s Student Information System (SIS). Those children would then be assigned an ISBE student identifier that would facilitate inter-agency linkage and future analysis. The campaign was unsuccessful, and there has not been a systematic effort since. IHSA’s ongoing outreach has focused on individual grantees.

Second, due to the localized nature of Early Head Start and Head Start grantees, IHSA must establish a data sharing agreement with each individual grantee. There are dozens of Head Start and Early Head Start grantees across Illinois. As of spring 2019, IHSA had reached data sharing agreements with approximately three quarters of them, and its staff are hopeful that it can reach agreements with additional grantees over time. Regardless, executing many agreements slows IHSA's and CPRD's efforts to build a state-level system that is representative of all Illinois children served by Head Start.

Third, multiple data vendors operate in the Head Start space, with grantees contracting with ChildPlus, COPA, Teaching Strategies GOLD, and others for data systems and reporting. Each vendor maintains proprietary system structures and builds similar but customized reports for individual grantees. For example, ChildPlus and COPA may not collect the same general data elements, or they may define child demography or other characteristics in different ways. For IHSA and CPRD, these differences across vendors and between grantees complicate integrating records into one system.

CPRD has nearly completed a pilot build integrating data across five Head Start grantees that use ChildPlus. Starting in earnest in 2019, the pilot entails updating the data sharing agreement with each participating grantee, obtaining direct access to grantees' respective ChildPlus systems, pulling data and rationalizing differences across grantees, and integrating those data into a single CPRD-built environment. As of fall 2019, CPRD was validating the data and testing reports within its system—steps necessary prior to external data sharing—and those efforts were still ongoing at the time of data transfer for the Phase III analysis. Per CPRD, pending completion of the ChildPlus pilot and similar success with COPA, data from pilot grantees, and perhaps others, should be available to support a future Head Start-inclusive unduplicated count.

IHSA and CPRD appear well positioned for more systematic inter-agency data sharing soon, with a goal of sharing capability in 2020. Though a long effort, CPRD's ChildPlus pilot has proven largely successful, and there are plans to expand the integration to more ChildPlus-using grantees in the coming year. Additionally, CPRD will embark on a similar pilot with COPA, which is used by the City of Chicago. IHSA has contracted with COPA to build data reports like those used for ChildPlus.

Beyond the pilots and at a non-systematic level, CPRD has previously successfully linked child-level records from a subset of ChildPlus- and COPA-using grantees with assessment records held in Teaching Strategies GOLD. Such a linkage should be possible within a state-level integrated Head Start data system. Further, CPRD has been capable of sharing the GOLD data for the Project, and it offered to share them for Phase II. Given the GOLD data are limited to assessments, GOECD and NIU staff elected not to pursue that option.

Data system siloes

The number of disparate early childhood data systems poses a challenge for inter-agency work. Illinois is like other states in that its data systems reflect manifold early childhood programs and funding streams. For the purposes of the Project, these systems can be categorized by agency or entity, though intra-agency systems do not necessarily communicate.

ISBE stores its PFA, PI, and PFA-E records in its SIS, while Section 619 data are housed in the Individualized Education Program Student Tracking and Reporting System (I-STAR). Though there is an IEP indicator available within SIS, per ISBE staff, that indicator does not appear to be regularly verified against the I-STAR system of truth. Both SIS and I-STAR are operational systems—that is, they support program operations—but ISBE has recently built a data warehouse that can facilitate the sharing of data and help staff assess possible discrepancies between SIS and I-STAR (and other systems). Such integrated environments also limit the need to interact directly with operational systems for external data sharing.

Four Project-relevant operational data systems fall under the purview of the DHS Division of Family & Community Services (FCS). FCS maintains two of these systems, which house CCAP, EI, and HFI records. The other two systems are maintained by non-DHS entities: Visit Tracker, which houses records from MIECHV and is maintained by DataKeeper Technologies, with support from CPRD; and OunceNet, which houses PTS records and is maintained by The Ounce of Prevention Fund. Project Phases I and II used solely CCAP records, from the Child Care Management System (CCMS), while Phase III expanded to CCAP, EI, HFI, and MIECHV records, from three different systems. There appears to be minimal communication between these operational systems. Unlike ISBE, DHS does not appear to operate a data warehouse or similar environment in the early childhood space.

There are additional data sources and/or systems that could contribute data for the establishment of future unduplicated counts. As noted, an IHSA/CPRD system was not available for Phase III. Pending such a system, any Head Start data used for the Project would be drawn from numerous individual grantees, which use different or multiple data vendors. Further, data from DHS-contracted CCAP providers are stored in a system separate from CCMS, and it is unclear whether or how the two systems interact. Only CCMS contributes records to the MCI. Other possible data sources include state-level data systems maintained by the Illinois Department of Children & Family Services and the Illinois Department of Public Health and more local systems, including those maintained by the City of Chicago.

The existence and frequency of data sharing between state and local systems is unclear. Notably, the NIU team's Project experiences suggest that DHS systems may not communicate regularly with the City of Chicago Department of Family & Support Services (DFSS) system holding CCAP records. These experiences—including the sharing of dozens of Chicago- or other locally contracted CCAP provider-specific spreadsheets for Phase I and limited Chicago CCAP coverage in the MCI for use in Phase II—prompted the NIU team's unsuccessful attempt to establish a data sharing agreement directly with the City of Chicago for Phase III.

Difficulties related to incorporating data from DHS-contracted CCAP providers

In Chicago and statewide, to date, the Project has likely undercounted the number of children served by DHS-contracted CCAP providers. DHS currently receives and stores service-related information for its contracted CCAP providers in systems separate from CCMS, which is the Project's sole comprehensive source for CCAP records. As noted, the City of Chicago stores its contracted provider records in a DFSS system whose connection with state-level systems seems tenuous. Otherwise, provider-specific information is stored in a format—monthly spreadsheets from each provider—that is not conducive to sharing for external purposes like the Project. The NIU team incorporated what spreadsheets DHS could share in Phase I, but the unwieldy nature and poor quality of the spreadsheet data posed major challenges for the team and ultimately limited Phase I findings. The challenges served as an impetus for Phase II.

NIU did not receive any contracted CCAP provider spreadsheets for Phase II or Phase III, nor did it receive contracted provider records directly from the City of Chicago. Work for Phase III revealed that DHS still stores contracted provider data in the spreadsheet format, and it is unclear to the NIU team whether agency staff would have been capable of or comfortable sharing those data externally. In addition, questions remain regarding the data sharing relationship between City and DHS systems. Information for children served by contracted providers may or may not appear in CCMS, though not on a systematic basis.

Establishing truly complete counts of children served by CCAP hinges upon counting records from both contracted and non-contracted providers. Ultimately, planned enhancements to DHS early childhood data infrastructure need to ensure that all CCAP data are stored in a way that facilitates efficient and secure sharing. The NIU team's interactions with CCMS and CCAP data continue to improve slowly, and there is state-level momentum for improving all DHS systems relevant to the Project.

Data-related capacity and communications

The Project and other inter-agency efforts depend upon enough stable data capacity existing within agencies. Between maintaining or updating current systems, validating existing data, and reporting data for statutory or compliance purposes, agencies often have few resources to devote to external data requests like the Project. These resources are further stressed by general challenges recruiting for data-related positions as well as the lingering effects of Illinois' recent years-long budget impasse.

It has taken all the ILDS participating agencies—including DHS and ISBE—years to establish internal systems that can support external data sharing. ISBE has benefited from being Illinois' state education agency and thus the lead on several federal State Longitudinal Data Systems (SLDS) grants, which have seeded the creation of the MCI and other ILDS infrastructure to date. ISBE has a single primary operational system for child/student unit records, SIS, and can allocate its resources accordingly. For Phase III, the NIU team worked with an early childhood-specific data staffer and an agency-wide data manager.

DHS has struggled by comparison. DHS maintains dozens of operational systems, and with Phase III, the Project has now interacted with each of the systems relevant to FCS Early Childhood. Each of these systems has at least one responsible data staffer and supervisor, but corresponding with staff from each system has not been easy for the NIU team. Primary system contacts can be unclear, as staff often will pass NIU messages up and down the hierarchy seeking approval or clarity. Across sources, data staffers have not always known that DHS has executed a specific data sharing agreement with NIU, so they required a clear confirmation from their direct supervisor. Likewise, supervisors have sometimes questioned or claimed the availability of data elements that may or may not be available. These questions or claims require clarification from data staffers, who have sometimes already offered conflicting information to the NIU team. Lastly, apparent turnover across systems or offices, including the DHS Office of the General Counsel, has resulted in changes in contacts with minimal external communication of such.

Responsiveness has suffered as a result. Sporadic communication of internal DHS status means the NIU team has had trouble predicting how long data sharing and transfer processes may take. DHS could return correspondence within days, as it has more recently and for Phase III, or it could take months or even years, as was the case for the data sharing agreement for the Validation Study for the Race to the Top Early Learning Challenge Grant. These delays at the start of projects have begotten further delays in transfers and subsequent analyses. In response, the NIU team generally left Phase II and III timelines relative, e.g., a project deliverable expected four weeks after data receipt, rather than tied to specific dates as in Phase I.

Data capacity and related communications from DHS and ISBE have improved over the course of the Project, as have the NIU team's own processes. At DHS specifically, the issues above either had been addressed by the start of, or only minimally impacted, Phase III. Much remains to be done, but the NIU team is optimistic for continued improvements moving forward.

Data sharing agreement execution

Questions regarding data availability and updated agency data policies significantly delayed execution of data sharing agreements for Phases I and II. While ISBE publishes SIS data element and sharing protocols, DHS has not always provided similar documentation describing its sources. Limited understanding of the availability and sourcing of DHS data elements forced the NIU team to request a broad set of data for Phase I. Requested data as named did not necessarily align with actual data element names, so narrowing and finalizing the request required extensive work with DHS staff. Learnings from Phase I revealed that DHS stores CCAP data in CCMS, but a data dictionary outlining CCMS data elements did not exist to inform planning for Phase II. Phase II thus suffered from a similarly protracted request process. An internal CCMS data dictionary existed as of spring 2018 and somewhat informed the specification of data elements for the Phase III CCAP data request.

The Phase II execution process overlapped with data sharing policy changes within DHS and ISBE. In fall 2016 DHS implemented a new security control questionnaire outlining specific data security criteria required of all external data requestors. The NIU team completed the questionnaire—which is a necessary and positive step forward for DHS— but completion did delay execution of the data sharing agreement. That delay coincided with staff turnover and a refresh of the data sharing approval process at ISBE. ISBE and NIU signatories had signed a prior version of Phase II agreement during fall 2016, but the DHS process and resulting changes to the agreement required a second round of signatures. The agreement now had to obtain approval through ISBE's updated process, which the agency had just implemented and was still fine-tuning. Ultimately, DHS and NIU signatories signed the Phase II agreement in April 2017. The ISBE signatory signed in June 2017, executing the agreement.

Executing the Phase III data sharing agreement went quickly by comparison. Given past challenges, the NIU team strategically and intentionally engaged DHS and ISBE staff to raise awareness of the Project and related agreement. ISBE has implemented a new data request process, which allows for easier tracking of progress, and DHS has recently connected NIU with a staffer, who has been very responsive, devoted to shepherding external data sharing agreements and the like. Even with these improvements, the Phase III process took approximately three months. Meeting a data transfer timeline of three months or fewer should be a reasonable goal for future work.

Data transfer

Each of the Project's three data transfer processes has proven lengthy. These processes encompass the agencies both transferring requested data to NIU and clarifying any immediate questions regarding data formatting and coding. DHS, ISBE, and NIU executed the Phase I agreement in October 2014. ISBE transferred its data to NIU by the end of that year, but IDHS took over a year to transfer the CCAP data, delaying the completion of the analysis.

The Phase II transfer proceeded in a similar way, with ISBE transferring its PFA and PI records within a month or so and DHS taking around six months to transfer the CCAP data. Notably, the coding of race/ethnicity within CCMS changed between Phases I and II, resulting in differences in codes within the five years of data collected for Phase II. Without documentation, this change was not known to the NIU team. For Phases I and II, the CCAP delays appear to have related directly with the noted capacity and communications challenges.

As with the execution of the data sharing agreement, the Phase III data transfer was relatively quick but surfaced new challenges. Phase III is the first phase to have incorporated data from multiple DHS systems. Initiating the transfer of those data entailed the NIU team corresponding with staff representing each system, including CCMS (CCAP), Cornerstone (EI and HFI), DataKeeper Technologies' Visit Tracker (MIECHV), and the Ounce of Prevention Fund's OunceNet (PTS). Though staff from each system were responsive and helpful, reaching them all took time and added complication relative to the single point of contact for the ISBE transfer. Regarding CCAP, the field for provider ExceleRate rating was unclearly coded, and it took a couple of weeks to receive a clarification from relevant DHS staff.

Ultimately, the Phase III DHS data transfer, across all systems, took two months, and the PTS transfer did not occur in time for the inclusion of those data in Phase III. PTS data are maintained by the Ounce, but DHS is legally responsible for stewarding them. Initial correspondence with staff from the Ounce was funneled through DHS staff, who had to give the go-ahead for the Ounce to share the data with NIU. This process proved too lengthy such that including the data would have delayed completion of the Phase III analysis past the end of NIU's contract. The NIU team is now more aware of the DHS-Ounce data sharing relationship and can account for it moving forward.

Data formatting and quality

The NIU team has had trouble handling DHS data throughout the Project. Data element formats and codes vary across agency data systems, and the lack of clear documentation makes consistently cleaning and integrating the data time consuming. Regarding data formatting, in Phase I, DHS shared data via many separate spreadsheets. Working with numerous individual files proved cumbersome for the NIU team. The Phase II transfer featured fewer individual spreadsheets—an incremental improvement—and Phase III saw DHS data being shared in the standard text or flat format typical of ISBE and other state entities.

Data quality concerns are common across DHS demographic elements. Regarding Date of Birth, numerous child records show service dates, e.g., for receipt of CCAP services, that precede the child's actual birth date. While mothers or families receiving prenatal services is common, understanding how those instances would appear in a child record is difficult to understand. Another possibility is that Date of Birth refers to a mother's due date, which may or may not align with the date she gives birth. Social Security Number (SSN) raises a similar issue in that, through its CDDA work, the NIU team has found that an SSN associated with a child's record can refer to the child's parent. Descriptive but very likely incorrect names are also relatively common. Examples include "Child Smith" and "Baby Jones"—names that effectively limit the number of data elements available for inter-agency matching of records. Investigating and addressing these concerns will require improving local level data collections.

Missing data records and fields

Missing data exist in all data systems and analyses, but systematic patterns raise concern. Phase I revealed missing data patterns across DHS demographic elements. Most notably, of the Phase I DHS records for 2014, approximately thirty to forty percent were missing a value for the race/ethnicity field. The NIU team only recognized the extent of the 2014 issue after a manual check against 2013 aggregate counts and rates. Thereafter the team was not confident in sharing race/ethnicity-related findings for 2014. Considering equity, those missing data severely limited the potential for Phase I findings to inform policy. As with the quality issues above, missing data stem from the local level. Per agency data staffers, DHS has resolved to improve the issue through outreach.

Across ISBE and DHS systems, household income information is typically either missing or of questionable quality. Agencies must rely upon data that are reported by families and thus unreliable. Further, proxies like free-or-reduced-price lunch are unavailable across agencies. As a result, to date, the Project has used U.S. Census American Community Survey poverty estimates, available from the Illinois Early Childhood Asset Map, to calculate service receipt as a proportion of the total population in poverty. These proportions are of questionable validity, and in Phase III, the freshest available Census estimates were from 2017 versus 2018. Use of the 2017 poverty estimates for the 2018 proportion calculations resulted in wildly variable calculations at the county level, and the NIU team decided against including those county-level data in its findings. Phase III provided state-level proportions for 2016 (for which 2016 Census estimates were available) and 2017, and rough state-level proportions for 2018 using 2017 estimates.

A significant subset of missing data records plagued Phase II. Upon processing the DHS data for Phase II, the NIU team discovered that all CCAP records from Chicago lacked a CDDA-ID to link with ISBE records. The DHS Chicago records were not a part of the spring 2017 data collection for Release 4 of the MCI and thus were neither linked nor assigned an ID. Agency-specific data elements collected to create the MCI do not include indication of geography, so the issue had remained unknown. The NIU team used demographic elements to perform a separate DHS-to-ISBE production match of the Chicago records, but that match postponed full findings for Phase II until late spring 2018.

There remains little indication of why DHS did not share the Chicago records for MCI Release 4. Given their existence in the data transfer for Phase II, those records exist within CCMS, though experience suggests that there may have been an issue in sharing between City and state systems. NIU and GOECD staff identified a specific, agency-wide point of contact at DHS, and the NIU team worked through that contact to investigate further. The understanding of the team was that the issue had been addressed as of future MCI releases. The team did not encounter the issue in Phase III, though questions regarding the data sharing relationship between City and state systems remain.

Closing

This memo provides an overview of the Project and the systemic data-related challenges faced by the NIU team. The Project is the beneficiary of the inter-agency infrastructure of the ILDS, which is in turn dependent upon intra-agency data systems and processes. DHS and ISBE have each made internal progress, but much remains to be done to ensure that agency data are efficiently shareable. Both agencies will continue to be vital participants in conversations around enhancing early childhood data systems statewide.

Proposed short-term next steps

The following table lays out proposed next steps—including suggested tasks, parties, and completion dates—to begin addressing the noted data issues in the short term (through spring 2020).

Task	Parties / notes	Suggested completion
Hold initial conversations with DHS and ISBE EC staff to share Project findings in depth and broach noted data issues	NIU EdSystems, DHS, ISBE, GOECD	1/31/20
Hold conversation with IHSA and CPRD staff to discuss status of vendor pilots	NIU EdSystems, IHSA, CPRD, GOECD	1/31/20
Engage DRE regarding Project findings and high-level data issues	NIU EdSystems, DRE	2/28/20
Determine ISBE plans and timeline for SLDS-supported early childhood data staffer	ISBE, NIU EdSystems, GOECD, Gov's Office	2/28/20
Determine GOECD plans and timeline for PDG-supported data staffer	GOECD, NIU EdSystems, Gov's Office	2/28/20
Engage IAT, perhaps in two successive monthly meetings, regarding Project findings and noted data issues	NIU EdSystems, IAT	3/31/20
In coordination with DRE and IAT and in relation to ILDS 2.0, identify and gauge the interest of prospective members of an early childhood data working group	NIU EdSystems, IAT, GOECD, Gov's Office	3/31/20
Pending initial meeting of ILDS 2.0 governance, hold an initial engagement of early childhood data working group	TBD; pending initial meeting of ILDS 2.0 governance	4/30/20
Set work plan re: next steps to address noted data issues	TBD; pending initial meeting of working group	5/29/20
Coordinate with ISBE SLDS and GOECD data staffers re: work plan roles and responsibilities	TBD; pending hire of data staffers and existence of work plan	5/29/20