Kentucky Early Childhood Needs Assessment
August 2019

Submitted by the Kentucky Governor's Office of Early Childhood

This page intentionally left blank

Executive Summary

The Preschool Development Grant Birth-Five Grant (PDG B-5 grant) Needs Assessment is a comprehensive review of Kentucky's early childhood care and education system. With a focus on highly vulnerable, under-served, and rural children, the Needs Assessment is an opportunity to assess needs related to the quality and availability of Kentucky's early care and education programs as well as other service domains that influence child development and family resilience.

Kentucky's emergent system uses a Prenatal-Third Grade framework, which expands and enhances the prior Birth-Five approach. This creates opportunities for the alignment of policy and practices across state and local agencies and the development of sustainable processes to ensure eligible children and families can be served effectively and efficiently. A central goal is to increase the number and proportion of children and families served in high-quality and responsive programs.

The Needs Assessment relied on multiple data sources, including publicly available data from state and federal agencies, surveys, focus groups, and interviews. The study team also reviewed partner agency reports and assessments as well as a variety of relatively current study findings. Kentucky's Early Childhood Advisory Council and its Data Subcommittee provided guidance and oversight of the development of the Needs Assessment. Data and information respond to required elements that capture key definitions, a description of the state's system, identification of focal populations, need for and participation in early care and education programs, need for and participation in other system services, gaps in data or research, the quality and availability of programs and supports, indicators of progress, barriers to funding and the efficient use of funds, transitions, and system collaborations. Whenever possible, data are presented to reflect regional needs, with regions defined by Local Workforce Development Agencies as well as (a) the current absolute or proportional level of need in individual counties and (b) change in need over time in individual counties. Data also are provided that describe statewide services and supports to respond to different types of needs, with regional and county-level participation data provided whenever possible.

Stakeholder Engagement

In addition to the parent, educator, and community stakeholder surveys and focus groups conducted for this Needs Assessment, Kentucky is conducting focus groups with the Early Childhood Advisory Council (ECAC) as one component of the strategic planning process. Kentucky also recently completed its RTT-ELC validation study, which incorporated data and feedback from a stratified, random sample of early care and education facilities, parents, and early care and education professionals across the state. Similarly, Kentucky's recently completed RTT-ELC sustainability study incorporated stakeholder interviews with ECAC members and partner agency staff. The PDG B-5 grant created opportunities for partner agency staff and other stakeholders to participate on committees and work groups, and provide input and feedback into the early childhood system planning and development process.

The sections that follow provide highlights from each of the PDG B-5 grant's required components.

Key Definitions

Vulnerable children: Overall, for many Kentucky programs, the definition and practical response to vulnerability is tied to the Federal Poverty Level, or some multiplier of it. Vulnerability also is informed by a child's special learning or developmental needs, exposure to trauma or adverse childhood experiences, or exposure to multiple risks to health, welfare, or development.

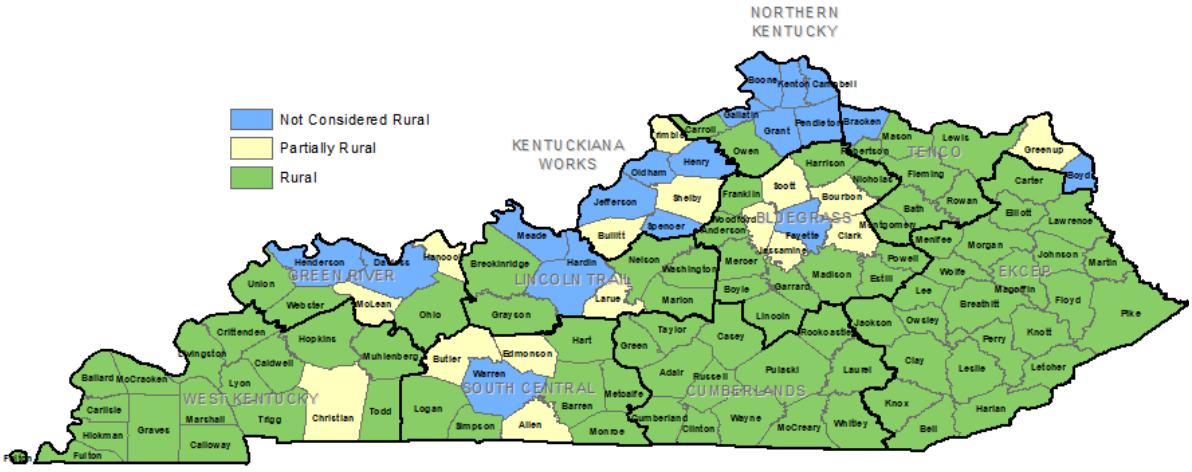
Under-served children: Kentucky's partner agencies do not have formal definitions of "under-served." That stated, under-served may be considered any instance in which children or families who have been identified to be in need of services, or who are aware of and desire services, cannot access the nature, type, or extent of high-quality services that are (a) responsive to individual needs and (b) affordable and available, per family circumstances.

Quality early childhood care and education: Kentucky's definition of high-quality early childhood care and education is provided through the Kentucky All STARS tiered quality rating improvement system (TQRIS). Kentucky All STARS uses a five-star rating scale wherein a 1-star indicates the lowest relative quality and a 5-star indicates the highest relative quality.

Early care and education availability: Ideally, every family that wants or needs child care or early education services will be able to secure a placement in a high-quality and affordable setting that meets child developmental and learning needs and aligns with parent work or educational schedules.

Children in rural areas: Kentucky used the Office of Rural Health Policy's definitions of rural and urban[1] to identify rural counties. Counties that are included in Metropolitan Areas (MAs) by the Office of Management and Budget are considered urban (Map 1). Counties that consist of both rural and urban census tracts are considered partially rural. Counties that are not parts of MAs are considered rural; this definition was further informed by the use of the Rural Urban Commuting Area Codes and the United States Department of Agriculture Economic Research Service definition of Frontier and Remote Areas.

Map 1 *Kentucky's Rural and Urban Counties*



Data Source: Office of Rural Health Policy

[1] https://www.hrsa.gov/sites/default/files/ruralhealth/resources/forhpeligibleareas.pdf

Focal Populations

Kentucky examined data on the overall number of children typically encompassed by an early childhood system (i.e., children ages birth to four), which vary from less than 500 in some counties to more than 3000 in others. Kentucky also examined the estimated population change over the next decade, in children ages birth to four, as informed by projections made available through the Kentucky State Data Center. In brief, the state's overall population of children ages birth through four is expected to increase by 1.9 percent by 2030. However, this increase is not expected to be consistent across the state. In fact, many counties, primarily rural, are expected to experience a decline in this population. The expected decline is greatest in the eastern-most parts of the state.

Families who are foreign-born reside in each region of the state, but typically, the eastern-most counties have lower levels of foreign-born citizens or residents. These areas may be experiencing growth in immigrant populations, however, as is suggested by data on the percent of the foreign-born population that has arrived in the past ten years. This will have implications for how state and local services are implemented, especially as regards community ability to work with children and families for whom English is a second language.

Percent of Total Population Living in Poverty

The state's primary definition for vulnerability is poverty. An analysis of poverty by race or ethnicity suggests that, across the state, poverty continues to be felt more extensively or deeply among communities of color. The total population in poverty in some counties was as high as 41.7%, while as much as 68.5% of children were at 100% or less of the Federal Poverty Level (FPL). Kentucky's easternmost, Appalachian, region experiences the greatest proportion of individuals in poverty. All counties have some level of poverty, with the lowest levels experienced in the state's western counties that are home to urban centers. Of interest, the counties with the highest levels of overall poverty are not necessarily the counties with the highest levels of child poverty. This could indicate the use of available services to combat or respond to child poverty.

Between 2010 and 2017, there was a decrease in the population who were living in poverty (-.6%). Some counties experienced a decrease in poverty during that time period while other counties experienced an increase. Of concern, a high proportion of the areas that experienced increases in poverty are in the most eastern parts of the state, which also are areas that are the most remote.

Despite the availability of services that respond to poverty, many parents and families who contributed information used in the Needs Assessment expressed ways in which services can or should be more affordable. Suggestions included:

- Improve the affordability of services for children with special learning or developmental needs (reported by 68.1% of respondents; children who are eligible for early intervention services can be served through the Individuals with Disabilities in Education Act Parts B and C. Thus, this response merits more investigation.);
- Improve the affordability of services for highly vulnerable children (children exposed to traumatic experiences or environments; 68% of respondents);
- A need for additional supports for working families (67.2% of respondents; examples included child care subsidies or job training); and

- Improve the affordability of child care or preschool (61.3% of respondents)[2].

Appalachian Need

Fifty-four of the state's eastern counties are included in the Appalachian region. All but three of these counties is considered either distressed or at-risk. Of particular concern for the Needs Assessment, these counties have experienced increases in poverty over time. Further, there are areas within this region that still lack high-speed internet or family access to computers, including smartphones. The lack of availability to "next generation" techniques for communicating and providing services represents a challenge.

Participation in Early Care and Education Programs

There are three types of early care and education programs that are prevalent across the state: private (licensed or certified) child care, Head Start and Early Head Start, and public preschool. A summary of existing services is presented in Exhibit 1.

Exhibit 1 *Kentucky's Prevalent Early Care and Education Services*

Private regulated child care[3]:

- Licensed Type I: facility that regularly provides child care services for four (4) or more children in a non-residential setting; or thirteen (13) or more children in a residential setting.
- Licensed Type II: the primary residence where child care is regularly provided for at least seven (7), but not more than twelve (12) children including related children.
- Certified Family Child Care Home: person who cares for a child in their own home; and shall not exceed six (6) unrelated children at anyone (1) time; or four (4) related children in addition to six (6) unrelated children for a maximum of ten (10) hours at anyone (1) time.

Private non-regulated care[4]:

- Registered: private individual that provides care for someone receiving child care assistance, such as a relative or neighbor who is not regulated by the Division of Regulated Child Care.

Head Start[5]: promotes school readiness of children under 5 from low-income families through education, health, social and other services.

Early Head Start[6]: serve infants and toddlers under the age of 3, and pregnant women. EHS programs provide intensive comprehensive child development

[2] Kentucky's Race to the Top Early Learning Challenge Grant Validation Study (2018) included feedback from over 2700 parents enrolled in child care, Head Start, and preschool programs across the state. Seventy-one percent (n=1964) of participating parents reported that cost was a factor when choosing an early care and education option for their young child or children.

[3] http://childcarecouncilofky.com/types-of-care-in-kentucky/

[4] http://childcarecouncilofky.com/i-want-to-become-a-provider/

[5] https://www.acf.hhs.gov/ohs

[6] https://eclkc.ohs.acf.hhs.gov/programs/article/early-head-start-programs

and family support services to low-income infants and toddlers and their families, and to pregnant women and their families.

Public preschool[7]: developmentally appropriate services for four-year-old children whose family income is no more than 160% of poverty; all three and four-year-old children with developmental delays and disabilities, regardless of income; and other four-year- old children as placements are available based on district decision.

Kentucky Education Title 1 Preschool Services[8]: provided in schools with high numbers or percentages of children from low-income families to ensure that all children meet challenging state academic content and achievement standards.

As regards enrollment in public preschool programs, it is no surprise that counties with higher numbers of children will have higher enrollment. Thus, it is helpful to also examine the growth or decline in preschool enrollment over time, noting that some counties with large populations of children also experienced a decline in enrollment. This merits further review and discussion. In addition, it is important to note that preschool participation is a function of the availability of Head Start (Kentucky has a full utilization policy for Head Start resources), private child care, and subsidies for care. Kentucky is in the process of improving its ability to track the unduplicated numbers of students participating in Head Start, to better understand the need for and use of early care and education programming. This is a priority for the state for data improvements. Further, there are no reliable and high quality, systematic, data on participation in licensed or certified child care. Typically, counties with higher numbers of young children also have higher child care capacity. However, one county does not have any licensed or certified child care (Martin County) while others have relatively few sites.

Kentucky can make clear and specific gains in its ability to collect data on and understand the need for early care and education programming, including the calculation of an unduplicated number of children (a) enrolled in programs, (b) eligible for subsidized or free care, (c) waiting for services, or (d) ineligible due to income or other factors. Systematic data on total enrollment and total demand for services also can inform state and local efforts to incubate and foster high quality care (that is affordable and accessible to children and families).

The state does not currently have a waiting list for its Child Care Assistance Program (CCAP), which provides subsidized care to eligible children. That stated, sites across the state may experience a waiting list for services, and infant/toddler care in particular.

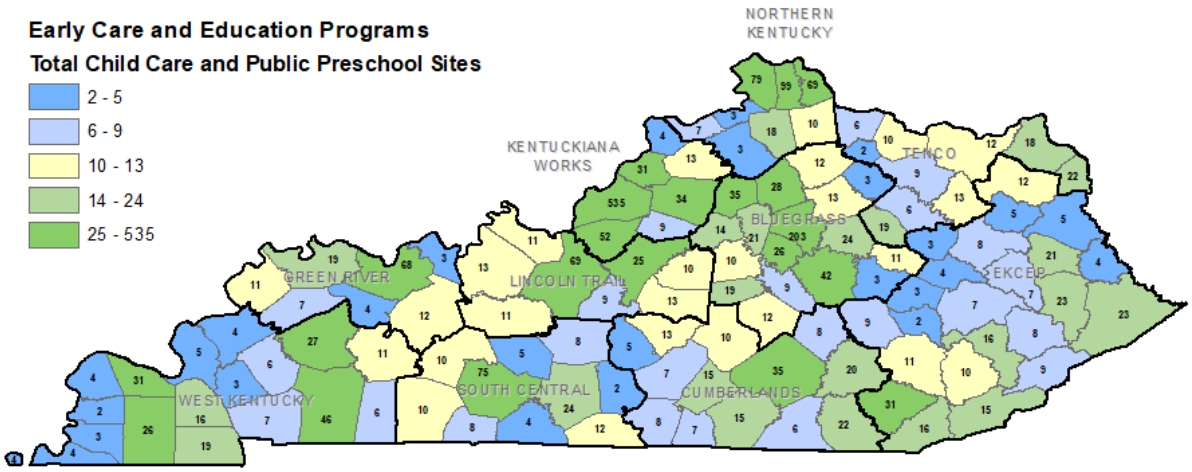
Quality and Availability of Early Care and Education Programs

As noted above, counties with higher populations tend to have a higher number of facilities and placements for children. Thus, it is important to examine what type of facilities are present, as public preschool only will provide access for three- and four-year old children. The total number of facilities in each county, as of 2019, is presented in Map 2. Head Start sites may be under-estimated due to the challenges of identifying programs that are co-located or braid/blend funding, a condition that can change over time.

[7] https://education.ky.gov/curriculum/conpro/prim-pre/Pages/default.aspx

[8] https://education.ky.gov/federal/progs/tia/Pages/default.aspx

Map 2 *Total Number of Certified and Licensed Private Child Care **and** Public Preschool Programs, by County, 2019*



Data source: KYSTATS Early Childhood Profile, 2019

Average Star Rating of Licensed and Certified Child Care

Participation in Kentucky All STARS is mandatory for any site that receives any form of public funding, which means that almost every licensed or certified early care and education program in the state participates, as do all public preschool programs[9]. Licensed or certified sites enter Kentucky All STARS at level 1, while public preschool and Head Start sites enter Kentucky All STARS at a level 3 on the five-level system, in part because these facilities have stronger federal and state requirements related to professional education or credentials. Kentucky All STARS is a unified system—meaning that its standards are applicable to the three primary models (child care, preschool, and Head Start). One positive finding in this Needs Assessment is that the eastern region of the state, where poverty and other needs tend to be high, tends to have higher rated licensed or certified care. However, there are opportunities to improve the quality of care in public preschool programs in this same region.

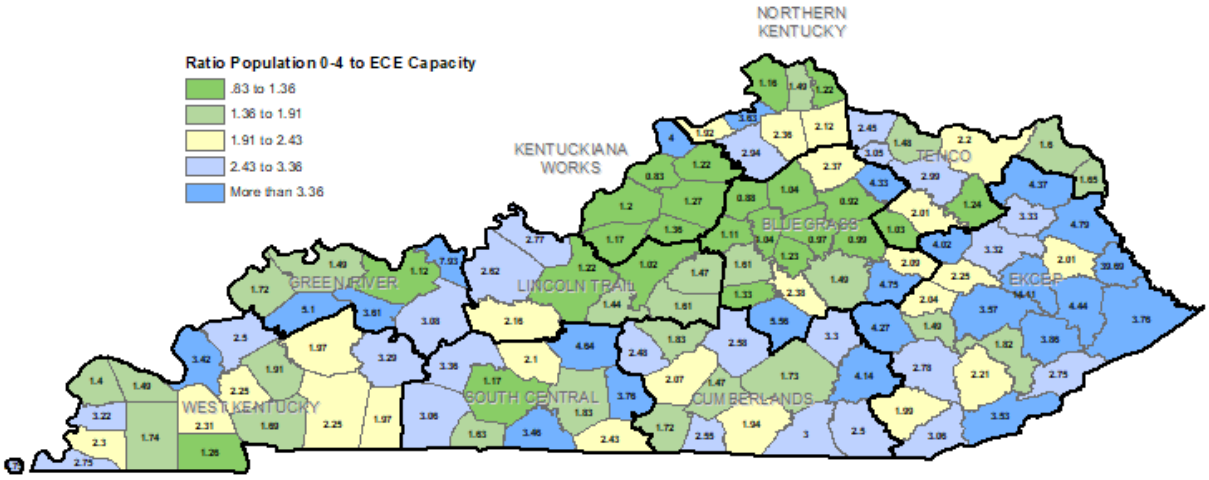
Kentucky has an opportunity to better integrate Head Start and Early Head Start services into its early childhood data system. At present, because Head Start/Early Head Start can be offered in conjunction or co-located with public preschool or private child care centers, there is no reliable estimate of the total unduplicated number of sites and children served. Further, the nature of the Head Start relationship with either public preschool or private child care centers can cause confusion regarding which standards or requirements apply when the site is submitting its materials to maintain or advance in star rating.

Kentucky's primary resources for informing parents about quality and availability of care are Benefind (the state's web-based, multi-sector, service portal) and its Child Care Resource and Referral system, with additional information available through state websites and Community Early Childhood Councils. Initial feedback from parents suggests that parents most often receive information from friends, family, internet searches, and teachers or child care providers in their communities. Thus, there may be an opportunity to raise awareness in general about the nature of high-quality care and how to find it.

[9] Registered providers and the informal network of providers (e.g., Family Friend and Neighbor Care) are not, however, represented in the Kentucky All STARS rating framework.

Child care deserts have been defined as locations in which there are more than three children for each available placements[10]. Map 3 presents an estimate of county child care deserts, which can be refined in the future with more precise data on the number of placements available for children of different ages and the number of parents desiring care. In general, based on existing estimates, child care deserts more frequently occur in rural areas of the state. Moving forward, it will be helpful to examine the existence of deserts for infants and toddlers, given the scarcity of licensed and certified child care in some counties. Martin County, for example, has no licensed and certified child care, which creates questions as to how parents of infants and toddlers find care. It also will be helpful to examine deserts through the lens of non-traditional schedules, such as second- and third-shift care or weekend care.

Map 3 *Child Care Deserts*



Data or Research Related to Child and Family Needs

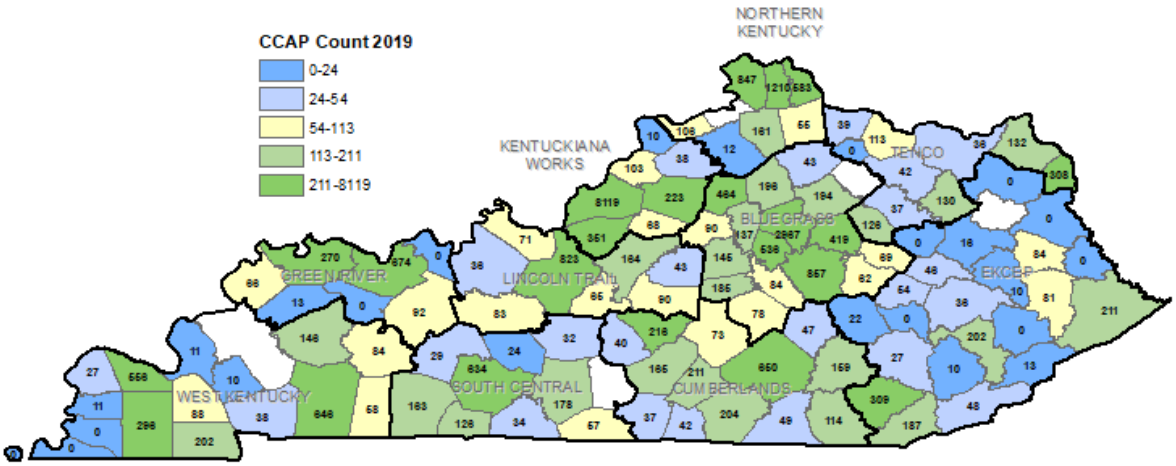
The Needs Assessment contains a comprehensive review of child and family needs, with sections devoted to (a) Homelessness, Housing, and Food Insecurities; (b) Children and Families in Need of Protective or Preventive Services (including children affected by substance and opioid abuse); (c) Children in Out-of-Home Care; (d) Teen Parents and Single Parent Households; and e) Perinatal Period and Maternal Depression. These sections contain available data and feedback on the need for services as well as existing statewide supports and service participation, and the ways in which services can be improved. The need for basic supports such as food and housing are a concern, as are the emotional and mental toll of poverty on parents and families. Further, vulnerabilities can be expressed through developmental needs, which are present in children regardless of socioeconomic status. Vulnerability can reflect internal family stability and health—abuse and neglect also can occur across all income strata. A statewide review of service participation indicates that some regions have increased their use of some services, while others have decreased use. Further, changes in federal or state policy can affect service availability and eligibility.

[10] Center for American Progress (https://childcaredeserts.org)

Quality and Availability of Programs and Supports

Participation in the state's Child Care Assistance Program varies by county, with more populated counties often demonstrating higher levels of participation. Map 4 presents county-level data on participation, as of 2019.

Map 4 *Child Care Assistance Program Participation by County, 2019*



Data Source: KYSTATS Early Childhood Profile 2014 to 2019; a lack of shading indicates missing data; counts were suppressed in some counties due to low values

Also of interest is participation in Individuals with Disabilities in Education Act, Parts C and B. Exhibit 2 presents state totals for Part C participation, from 2014 to 2017, as informed by Office of Special Education Annual Child Count and Settings reports. Over time, participation has risen, and primary in children who were age two. Exhibit 3 presents similar information for Part B participation. There was a similar, but not as large, increase over time, with the greatest increase in children who were age three.

Exhibit 2 *Children Served through Individuals with Disabilities in Education Act, Part C*

	Estimated Population of Children Ages Birth through Two, Participating in Part C Services				Change
	2014	2015	2016	2017	2014-2017
Kentucky	4423	4498	4837	5098	15%
Birth	326	316	364	339	4%
Age 1	1317	1320	1416	1511	15%
Age 2	2780	2862	3057	3248	17%

Data Source: Office of Special Education Annual Child Count and Settings Reports

Exhibit 3 Children Served through Individuals with Disabilities in Education Act, Part B

	Estimated Population of Children Ages Three through Five, Participating in Part B Services				Change
	2014	2015	2016	2017	2014-2017
Kentucky	16994	17044	17626	18070	6%
Age 3	3557	3697	3737	3839	8%
Age 4	6003	5948	6304	6342	6%
Age 5	7434	7399	7585	7889	6%

Data Source: Office of Special Education Annual Child Care Educational Environment Reports

The quality of care in inclusion classrooms recently was addressed in the state's Race to the Top Early Learning Challenge grant validation study (completed in 2018). The study team used the SpeciaLink Early Childhood Inclusion Quality Scale (or, SpeciaLink) to assess the quality of study classrooms in which children with special learning or developmental needs were participating. The SpeciaLink is comprised of two sub-scales: Practices and Principles. The Practices sub-scale contains items that target how well teachers, parents, and other professionals work together while the Principles sub-scale contains items that focus on values and beliefs regarding inclusion.

Findings are presented in Exhibit 4, disaggregated by type of site. As can be seen, public preschool and Head Start programs earned the highest ratings, which is understandable given the investments each of these programs has made in enrolling and serving children with special learning or developmental needs (and the close alignment in Kentucky of public preschool and early intervention). These data suggest that additional training or assistance to private child care sites may better equip those programs to provide inclusion classrooms.

Exhibit 4 Overall SpeciaLink Ratings in Observed Classrooms by Type of Program

	Overall	Average Practices	Average Principles
Overall	*4.80*	*4.64*	*5.11*
Private Child Care	3.44	3.21	3.89
Public Preschool	5.53	5.46	5.67
Head Start	5.35	5.17	5.73

Also of interest was the ability of early care and education programs to help families find or connect to community services. Family and Community Engagement is one domain of Kentucky All STARS. The quality of practices was addressed in the state's Race to the Top Early Learning Challenge grant validation study using the Family Provider Teacher Relationship Quality (FPTRQ) suite of surveys. Within this suite of surveys, the Director's scale informs the assessment of site practices for providing referrals to families, which is captured in the subscale "Referrals" (five items that address whether or not programs provide referrals for services such as health screenings or developmental assessments). The mean score on Referrals was 2.5, which is at the mid-point of the 5-point scale. The highest scores were reported for by Head Start directors (average of 3.9), followed by public preschool administrators (average of 3.7), and private child care directors (average of 2.0).

Data or Research Needs

Kentucky has several data partners and systems that inform and assist early childhood systems work. These include the Kentucky Center for Statistics, the Kentucky State Data Center, Kentucky Youth Advocates, and the Early Care and Education Training Records Information System, among others. After reviewing existing systems data, partners identified additional opportunities to enhance and expand Kentucky's early childhood data approach.

Development of a unique state-system identifier, for further development of the state's Early Childhood Integrated Data System and State Longitudinal Data System. One priority that is emerging from this Needs Assessment is the need to better understand how many children and families are engaged in the system—across the variety of services that address vulnerability. Kentucky also can develop its ability to understand comprehensive service use, wherein the use of multiple services by children and families can be tracked.

One of the state's data priorities will be ***Head Start and Early Head Start***. Currently, the state cannot generate an unduplicated count of children serving or waiting to be served across its early care and education models (child care, Head Start, and public preschool). Kentucky also can improve its ability to track braided or blended service delivery across Head Start sites, to further inform and improve Kentucky All STARS as a unified system for quality.

Expansion of the state's Early Childhood Integrated Data System. The Kentucky Center for Statistics has prioritized specific data elements for this expansion, which include:

- Children served through the Individuals with Disabilities in Education Act, Part B (housed within the Kentucky Department of Education),
- Vital Statistics, including
    - Birth records,
    - Births to teen mothers, and
    - Births to mothers who are not High School graduates,
- TWIST—Kentucky's foster care system,
- Adoption records,
- Benefind records, including
    - KCHIP participation,
    - SNAP participation,
    - KTAP participation, and
    - Medicaid participation,
- WIC participation,
- Referrals to child protective services,
- Children substantiated as victims of child abuse or neglect (noting cases linked to alcohol and substance abuse),
- Victims of child abuse,
- Children of incarcerated parents,
- Children waiting for or not served in programs,
- Incidence of vulnerability or children with Adverse Childhood Experiences,
- Attendance records, and
- Prevalence of screenings, flags, referrals, and diagnoses for special health, learning, or developmental disabilities.

Parent eligibility, needs, and preferences. Kentucky can make gains in understanding several aspects of parent and family service participation, including:

- Outcomes for working families or families who are either wait-listed or found ineligible for services,
- Parent and family accessibility concerns, such as location, cost, and scheduling of services, or

- Parent demand for licensed or regulated child care, as opposed for informal child care or stay-at-home care.

Measurable Indicators of Progress

Kentucky implements the BRIGANCE Early Childhood Kindergarten Screen III at kindergarten entry. The kindergarten screener assesses development in five domains: Academic/Cognitive, Language Development, Physical Development, Self-Help and Social-Emotional Development. Three of these domains (Academic/Cognitive, Language Development, and Physical Development) are combined into an overall rating[11]. An examination of screening findings over time suggests variation from one year to the next. In addition, the counties where children appear to have more needs also tend be counties with higher levels of other child and family needs. That stated, there also are counties in which there appear to be positive results, which can serve as models for further examination.

Additional data that are made available across data partners include vital statistics (e.g., birth rates, population projections), basic health information, family structure and stability, participation in early care and education programming, child development upon kindergarten entry, and third grade test scores. Thus, there is a wealth of information available to inform and understand the process and condition of school readiness. Making data available, however, is not the same as intentionally developing a suite of indicators that can be used to track system development, and to hold different system partners accountable for progress (or lack thereof). Thus, Kentucky now has an opportunity, with the development of an updated early childhood strategic plan, to further develop a complementary data plan.

Facilities

Kentucky lacks systematic and readily available data on facility needs across licensed or certified child care, Head Start/Early Head Start, and public preschool facilities. Data were available on the premises concerns of licensed or certified child care facilities for a three-month period in 2019. A total of 453 concerns were noted; 409 were noted for Type 1 facilities, 13 were noted for Type 2 facilities, and 31 were noted for certified facilities, which is consistent with the availability of these different types of facility. Issues related to floors, walls, and ceilings received the highest number of notations (n=51), reflecting a concern for the requirement that "*Floors, walls, and ceilings shall be smooth, in good repair, and constructed to be easily cleaned.*" This was followed by 34 notations, each, for premises requirements and protective surfaces. The deficiencies were noted during onsite inspections; premises issues were noted in facilities in 80 counties. Not surprisingly, counties with higher numbers of programs also had higher counts of deficiencies.

[11] It must be noted, the screener is not designed or intended to produce summative outcome data. Thus, caution must be used in interpreting these data.

Barriers to Funding and the Efficient Use of Resources

Kentucky provides early childhood care and education primarily through three operational models: private child care, Head Start/Early Head Start, and public preschool. Licensed providers are eligible to participate in the Child Care Assistance Program (CCAP). The CCAP provides subsidies for eligible students. The dollar value of subsidies is informed by market rate studies conducted every two years (with the most current market rate study completed in 2017).

Head Start and Early Head Start receive federal funding, while Kentucky's public preschool program primarily is funded with state resources. Further, Kentucky has a policy of "full utilization," which requires the local coordination of preschool and Head Start services, so as to "*avoid duplication of preschool services and supplanting of federal funds and to maximize the use of Head Start funds to serve as many four-year-old children as possible.*[12]"

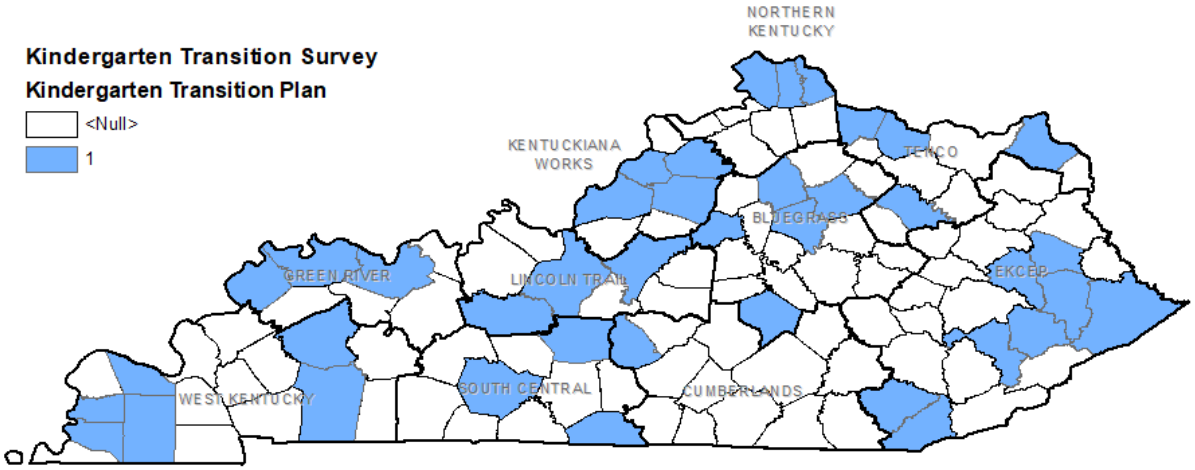
The presence of different operational models provides flexibility in program structure and options for families. At the same time, the different regulatory and administrative expectations have to be accommodated within one, unifying, approach to quality, which is Kentucky All STARS. Moving forward, Kentucky may explore opportunities to further improve the consistency of implementation across the models, including the coordination and consistency of supports, technical assistance, and training provided to professionals. Kentucky also has the opportunity to explore guidance and assistance to counties and programs to promote the use of braided and blended funding strategies, to maximize existing resources across children and families.

Transitions

Results from a recent statewide survey of kindergarten transition practices indicate a range of parent and family, child, and professional strategies that varied by county or district and by type of respondent, with private child care providers less frequently reporting the use of transition practices (compared to Head Start and public preschool educators). It also is possible that respondents may not be aware of transition practices occurring within their county or district—leading to varied findings within counties or districts. The lack of communication and coordination that is implied is a weakness that Kentucky currently is working to address, with support from the PDG. There also is an opportunity to build consistency with regard to planning; the counties in which at least one participant reported having a written kindergarten transition plan are presented in Map 5 (noting, again, that some survey participants may not be aware of transition strategies within their counties or districts). Further, Kentucky has identified multiple transitions of interest, starting at birth and proceeding through transition into formal education. This is an area for building awareness and supports.

[12] https://education.ky.gov/curriculum/conpro/prim-pre/Pages/Head-Start-Full-Utilization.aspx

Map 5 *Counties Reported to have a Written Kindergarten Transition Plan*



System Integration and Collaboration

The primary strategy for ensuring interagency collaboration is the Early Childhood Advisory Council (ECAC), which has representation from major partners across the state. The ECAC was authorized through an Executive Order and codified into legislation. The ECAC allows for regular and collaborative communication on the state's comprehensive early childhood care and education system.

Through the ECAC, Community Early Childhood Councils (CECCs) are supported to coordinate and collaborate on work at the local level. Similar to the ECAC at the state-level, CECCs draw partners from major service providers operating within communities. Thus, Kentucky has state and local strategies for ensuring partnership. CECCs are voluntary, with little state funding (if any) available to support administrative functions; some counties choose not to participate in a CECC. Kentucky may benefit from strategies that strengthen state and local alignment on policies and practices, including assistance to CECCs that are struggling or counties that do not participate in a CECC.

Survey data collected over the past year (from parent, educators, and other community stakeholders) provide suggestions for improving state and local coordination, across a range of services. Top priorities for improving both state and local coordination focused on services for vulnerable children, children with special learning or developmental needs, and working families. Other priorities for sustainable improvements include:

- Improvements to the leveraging of resources, including assistance and guidance for braiding and blending funding,
- Working with state and local partners to ensure the system supports both education and economic development, and
- Growing the awareness and understanding of the importance of early childhood across a wide range of stakeholders.

Key Findings and Next Steps

Every Kentucky county has needs. In some counties, the need is expressed as the absolute numbers of children and families who can benefit from assistance across multiple service domains. The volume of need across domains, especially in more populated counties, is worth attention. In other counties, need is perhaps best understood as the proportion of the child and family population who could benefit from assistance. In these cases, which tend to be more isolated and rural counties, it is not so much the absolute and large number of children and families in need so much as the percent of the population that is represented. Just as children and families have protective factors, one can ask whether counties and county governments have sufficient protective factors, when high proportions of their residents need support in multiple ways. Finally, a county's needs can be examined through an assessment of change in both child and family circumstance and participation in available services: does service use increase in proportion to child and family needs? Is there a direct or indirect relationship over time, and how does the nature of the relationship inform the system's ability to deploy resources effectively and efficiently? Data presented in this report document that in some counties there is high poverty and a relatively high incidence of other needs occurring alongside an anticipated decline in population. This phenomenon merits careful discussion and planning.

Kentucky's strengths.

Kentucky has multiple strengths to draw upon in examining these data and completing a new strategic plan. Principle among these:

- Kentucky is conceptualizing early childhood within a Prenatal-Third Grade framework. This broadening will facilitate the engagement and alignment of multiple sectors devoted to serving children and families, many of which are noted in this report.
- Kentucky has engaged data partners who are building a data system that can serve as an engine for understanding needs, tracking progress, and encouraging and furthering communication among stakeholders across all levels (including state-to-local feedback and alignment).
- Kentucky's ECAC, a collection of stakeholders from across partner agencies and early childhood interests, is guiding the work of both the Needs Assessment and the Strategic Plan. By tasking the ECAC to perform this function, Kentucky is ensuring the involvement of multiple sectors and stakeholders—each of which provides a window into policy and service implementation as well as child and family needs.

Kentucky's statewide system of services.

This report captures highlights from Kentucky's existing and statewide system of services. Data collected for this report suggest that Kentucky can improve its ability to inform and enable parents. The study team requested feedback on options such as the use of the internet and providing information in more than one language. Simply having these options may not be sufficient, however—some counties (or, families in some counties) still may lack adequate internet services. It is possible that some parents don't have sufficient literacy in English or their primary language to access written resources. In other cases, services may exist but still not be accessible due to concerns regarding affordability, eligibility, or logistics (e.g., scheduling, need for transportation, need for translation services, etc.). The needs of working families deserve attention and consideration.

The study team analyzed data regarding the quality of early care and education programming, drawing upon the state's recently completed Race to the Top Early Learning Challenge (RTT-ELC) grant validation study to understand the quality of care in inclusion classrooms and the nature and scope of family, provider, and teacher relationships. The state's TQRIS, Kentucky All STARS, scaffolds perceptions and standards for quality. As a primary service of interest for the PDG, the variation in average quality across the state and the existence of child care deserts in some counties is a concern.

Workforce development is the foundation of sustainable quality. Information from the RTT-ELC validation study provides insights into how workforce development can be strengthened, with implications for education, credentialing, and ongoing professional development. Notably, Kentucky may have the opportunity to better align professional desires and preferences with regard to how training and technical assistance are received with the consistency of training and technical assistance across the state and the methods for providing training and technical assistance.

Responding to trauma.

The PDG B-5 grant focuses on vulnerable and under-served children and children in rural communities. In Kentucky, vulnerability and location can intersect with exposure to substance abuse and the opioid epidemic along with other forms of trauma. The system needs to work collectively to respond to trauma, grounding its approach in the importance and primacy of parents and families. Kentucky's Strengthening Families approach provides a framework for working with families.

Data strengths and challenges.

Kentucky has many system strengths in the existence of state data centers (such as the Kentucky Center for Statistics, the Kentucky State Data Center, Kentucky Youth Advocates, and the Early Care and Education Training Records Information System). This stated, there are multiple opportunities to further strengthen the availability of system-supportive data, including the development of a unique state-system identifier, tracking of cross-sector unduplicated service participation, and a focus on system accessibility, participation, and outcomes across families and across the state. A complement to these efforts is enhanced outreach, education, and awareness building for families so that families can maximize their choices and preferences, across service domains.

Transitions as philosophy, policy, and practice.

Kentucky gathered data, statewide, on the nature and scope of practices to support the transition to kindergarten. The findings encompasses strategies for children, parents, and professionals and included an examination of practices for highly vulnerable children and children in rural communities. The data suggest that professionals working in the same county (or district) may be unaware of transition practices used in their county or district. Thus, there appears to be a need to improve planning and communication around kindergarten transitions, so as to ensure there is more consistency and awareness, statewide.

Transitions are not limited to the enrollment into kindergarten. Rather, transitions occur across early childhood and can reflect movement of children from home into non-parental or group settings as well as across group settings or age groups. This more holistic framing of transitions is an opportunity for Kentucky to inform and enhance its work across service domains, inclusive of the

training and professional development early childhood care and education professionals may need to provide high-quality services to children, families, and other professionals.

Sustainability.

Improving a system is not necessarily about providing more services. Rather, sustainable improvements can come as a result of improving processes. There are several areas where Kentucky has an opportunity to further examine or improve its processes.

Leveraging resources.

Kentucky currently is completing a statewide fiscal mapping project of major state and federal early childhood resources. As of the time of this report, Kentucky has identified more than 30 funding streams. What follows is a discussion of how to leverage these resource streams to more effectively and efficiently serve eligible children and families. This discussion can include considerations of how to better braid and blend resources. Currently, programs such as Head Start braid or blend funds at the local level, to make the most of existing resources. Kentucky can further consider the guidance and assistance that is necessary to expand braiding and blending to more locations and, possible, to a greater range of services.

Importance of partnerships and alignments.

Kentucky's ECAC guides and provide oversight for the state's early childhood investments. The ECAC consists of members from partner agencies across the state, giving agencies the opportunity to provide advice and generate buy-in into major policy statements. Locally, Community Early Childhood Councils (CECC) guide and provide oversight for local investments. The CECCs have membership from local agencies and programs. CECCs function as volunteer collectives, with the opportunity to apply for and use periodic funding, which is implemented through the Governor's Office of Early Childhood (GOEC).

State and local agencies serve complementary and symbiotic roles. This is to say, the overall system benefits when state and local agencies have well-functioning feedback loops and provide the nature and level of services that are needed for children and families to thrive. With this in mind, Kentucky has an opportunity to strengthen the CECCs and help CECCs maintain focus on and respond to system gaps and weaknesses. Kentucky also has the opportunity to further examine and strengthen communication around and alignment of state and local work—especially with regard to services for highly vulnerable children, children with special learning or development needs, and services for working families. Enhancements to state and local alignment can include the use of data as an engine for driving system adaptations and responsiveness. While state policies, regulations, and standards provide a consistent structure for ensuring quality and availability of services, local implementation and responsiveness helps ensure child and family needs are met.

Ensuring the system supports both education and economic development.

The early childhood system supports both early education and economic development. Representatives from the state's Chamber of Commerce sit on the ECAC. Kentucky also has the opportunity to enhance and expand its outreach and partnership with local or regional Chambers across the state, to ensure the system serves both roles.

Growing awareness and understanding of the importance of the prenatal to third grade period.

There is an ongoing need to help stakeholders across the state understand the importance of early childhood. This includes outreach to parents, businesses, educators, civic groups, elected representatives, and others. In providing outreach, it can be important to ensure stakeholders realize that the system is for "*every child, every family*." Survey participants reported the need to improve outreach and education about services for highly vulnerable children, children with special learning or developmental needs, and working families. It is possible that some families aren't aware of or don't feel connected to the system, especially when the system appears to have limited options for helping children and families with their needs. Thus, part of the work in growing awareness and understanding about the importance of early childhood is growing the ability to respond to parent needs and preferences and helping parents understand that a system goal is to help parents find and use the services that best support their individual children and families.

Next Steps

The Needs Assessment is a resource for the ECAC, partner agencies, and any Kentucky stakeholder interested in better understanding the importance of early childhood, the needs of Kentucky children and families, and opportunities for meaningful and sustainable improvements. Moving forward, the report will be made available, both in whole and as a series of issue briefs, to facilitate discussion and planning.

Contents

Executive Summary i

Introduction 1

Report Organization 2

Methodology 3

Existing Systems Data 4

Stakeholder Input 6

Section 1. Needs Assessment Scope and Definition of Terms 9

Vulnerable Children 9

Underserved Children 11

Quality Early Childhood Care and Education 11

Early Childhood Care and Education Availability 12

Children in Rural Areas 14

Rural-Urban Continuum 15

Description of the Early Childhood Care and Education System 19

Kentucky's System Model 19

Needs Assessment Scope and Definition of Terms: Synthesis 22

Section 2. Focal Populations 24

Population 24

Kentucky's Vulnerable or Underserved Children 26

Poverty or Low-Income Status 26

Deep Poverty 30

Race/Ethnicity 30

Recency of Immigration 34

Home or Primary Language 36

Race and Poverty 37

Data Strengths and Needs 41

Initiatives to Improve Data 41

Kentucky's Rural Children 41

Poverty or Low-Income Status 42

Deep Poverty 43

Race/Ethnicity 43

Recency of Immigration 45
Home or Primary Language 46
Distance from Urban Areas 47
Appalachia 49
Data Strengths and Needs 50
Initiatives to Improve Data 51
Statewide Services that Respond to Poverty 51
Child Care Assistance Program 51
Women Infants and Children Program (WIC) 54
Supplemental Nutrition Assistance Program (SNAP) 56
Kentucky Transitional Assistance Program (KTAP) 58
Medicaid 60
Kentucky Children's Health Insurance Program (KCHIP) 61
Low Income Home Energy Assistance Program (LIHEAP) 63
Benefind 64
Data Strengths and Needs 65
Initiatives to Improve Data 65
Focus Populations: Synthesis 65
Section 3. Number of Children Being Served and Awaiting Service in Early Care and Education Programs 69
Unduplicated Children Served in Existing Programs 69
Public Preschool 69
Head Start 70
Private (Licensed or Certified) Child Care 72
Registered and Family Friend or Neighbor (FFN) Care 74
Services to Support Participation in Early Care and Education Programs 74
Children Supported through the Child Care Development Fund (CCDF) 74
Unduplicated Children Awaiting Services in Existing Programs 78
Data Strengths and Needs 78
Initiatives to Improve Data 78
Children Served and Waiting to be Served in Early Care and Education Programs: Synthesis 79
Section 4. Quality and Availability of Early Care and Education Programs 80
Quality of Care Across Settings 80

Systems Strengths Across Settings 80
Kentucky All STARS Participation and Ratings 81
Systems Gaps or Needs Across Settings and Counties 84
Children or Families Living in Child Care Deserts 84
General Availability and Accessibility of Care 86
Workforce and Training Needs 87
Data Strengths and Needs 91
Initiatives to Ensure High-Quality Care is Available to Vulnerable Children 92
Assessing the Ability to Respond to Vulnerable Children 92
Informing Parents about Quality 96
Quality and Availability of Early Care and Education Programs: Synthesis 100
Section 5. Gaps in Data or Research to Support Collaboration Between Programs/Services and Maximize Parental Choice 102
Service Needs of Families with Children 102
Homelessness, Housing, and Food Insecurities 102
Housing Problems 104
Food Security 106
Statewide Services that Respond to Homelessness, Housing, and Food Insecurity 108
Continuum of Care 108
Food Banks 109
Children and Families in Need of Protective or Preventive Services 110
Substance/Opioid Abuse 115
Statewide Services that Respond to Children and Families in Need of Prevention and Protection Services 121
Children in Out-Of-Home Care 122
Adoptive Cases 126
Grandparent Care 128
Statewide Services that Respond to Children in Out-of-Home Care 131
Teen Parents and Single Parent Households 132
Births to Teen Mothers (Age 15-19) 132
Mothers Who are Not High School Graduates 134
Household Types 135
Statewide Services that Respond to Parent Education and Support 138
Kentucky Strengthening Families 138

Health Access Nurturing Development Services (HANDS) 139
Perinatal Period and Maternal Depression 141
Infant Mortality 141
Adequate Prenatal Care 142
Pre-Term Births 143
Low Birthweight 144
Breastfeeding 145
Mental Health 146
Statewide Services that Respond to Perinatal and Mental Heath Needs 147
Public Prenatal Services 147
Public prenatal services are provided through the 147
Maternal Depression 148
Family Resource and Youth Service Centers 151
Two Generation Approach 152
Gaps in Data or Research Regarding Programs and Supports 154
Unique Identifier 155
Maximizing Parental Choice 156
Opportunities to Collaborate Across Programs and Maximize Parent Choice: Synthesis 156
Section 6. Quality and Availability of Programs and Supports 158
Programs and Supports to Identify and Connect Children who are Developmentally Delayed 158
Infants and Toddlers 158
Children ages Three through Five 160
Children with Disabilities Served in Preschool or Head Start Programs 168
Participation in Supplemental Security Income (SSI) 170
Assessing the Quality of Inclusion Classrooms 172
Data Strengths and Needs 173
Programs or Supports to Ensure Early Care and Education Settings Help Connect Children and Families to Support Services 174
Assessing Supports for Family Engagement 175
Data Needs 178
Programs or Supports to Support Children who are Non-English Speaking 178
Quality and Availability of Programs and Supports: Synthesis 182
Section 7. Measurable Indicators of Progress that Align with the State/Territory's Vision and Desired Outcomes for the Project 184

Measurable Indicators to Track Progress 184
Kentucky Center for Statistics 184
Current Readiness Data 184
Kentucky Youth Advocates/Kids Count 191
Kentucky State Data Center 191
Early Care and Education Training Records Information System 191
Strengths and Weaknesses of Indicators 191
Development of Additional Measurable Indicators 192
Measurable Indicators of Progress: Synthesis 192
Section 8. Issues Involving ECCE Facilities 193
Issues Involving ECCE Facilities 193
Opportunities to Work Collaborative on ECCE Facility Improvement 194
Data Strengths and Needs 194
Section 9. Barriers to the Funding and Provision of High- Quality Early Childhood Care and Education Services and Supports and Opportunities for More Efficient Use of Resources 195
Barriers to Funding and Provision of High-Quality Early Childhood Care and Education Supports 195
Policy or Regulatory Barriers 195
Financing the System 200
Opportunities for More Efficient Allocation of Resources Across the System 202
Fiscal Mapping of System Elements 202
Business and Economic Development Needs 204
Barriers to the Efficient Use of Resources: Synthesis 204
Section 10. Transition Supports and Gaps 206
Strengths and Weaknesses of Transition Supports (and Differences by Type of Respondent) 206
Effectiveness of Communication between Early Care and Education Providers and School Systems 211
Communicating with Parents 212
Targeted Supports 212
Other Transition Supports 214
Transition Supports and Gaps: Synthesis 216
Section 11. System Integration and Interagency Collaboration 218
Practices for Effective and Supporting Interagency Collaboration 218
Early Childhood Advisory Council 218
Community Early Childhood Councils 219

Additional Opportunities to Improve Collaboration and Coordination 221
System Integration and Interagency Collaboration: Synthesis 224
Concluding Thoughts: Developing a Plan 225
Kentucky needs. 225
Kentucky's strengths. 225
Kentucky's statewide system of services. 226
Responding to trauma. 226
Data strengths and challenges. 227
Transitions as philosophy, policy, and practice. 228
Sustainability. 228
Leveraging resources. 228
Importance of partnerships and alignments. 229
Ensuring the system supports both education and economic development. 229
Growing awareness and understanding of the importance of the prenatal to third grade period. 229
Next Steps 230
Appendix A: Kentucky All STARS 231
Appendix B: School Readiness by County 234
Appendix C: Current CCAP Market Rates 252
Appendix D: Children in Poverty at 150% to 200% or Less of the Federal Poverty Level 256

Table of Exhibits

Exhibit 1 Kentucky's Local Workforce Development Areas 3
Exhibit 2 Stakeholder Engagement in the Needs Assessment Process 6
Exhibit 3 Federal Poverty Guidelines for 2019 9
Exhibit 4 United States Census Poverty Thresholds for 2018 9
Exhibit 5 Kentucky state agency definitions of vulnerable status 10
Exhibit 6 Kentucky's Prevalent Early Care and Education Services 12
Exhibit 7 Map of Kentucky's Rural and Urban Counties 14
Exhibit 8 Census-based descriptions of county rural or urban status 15
Exhibit 9 Kentucky's Counties along the Rural-Urban Continuum 16
Exhibit 10 Census-base descriptions of zip code area frontier or remote status 16
Exhibit 11 Kentucky Counties that Qualify as FAR 1, FAR 2, FAR 3, and FAR 4 17
Exhibit 12 Percent of County Population Considered Rural, 2010 18
Exhibit 13 Kentucky's Draft Systems Model 20
Exhibit 14 Organizational Chart of State Agencies and Programs 21
Exhibit 15 Birth through Four Population and Projections 24
Exhibit 16 Estimated Population Changes: Past and Future 25
Exhibit 17 Population Map Ages 0-4 (July 2017) 25
Exhibit 18 Population Projections: Ages 0-4 from 2017 to 2030 26
Exhibit 19 Percent of Families with Children Under Five Living in Poverty and Median Family Income 27
Exhibit 20 Poverty Map 2017 28
Exhibit 21 Children Experiencing Poverty in 2017: 100% or Less of the Federal Poverty Level (FPL) 29
Exhibit 22 Change in Poverty: 2010-2017 29
Exhibit 23 Deep Poverty in 2016 30
Exhibit 24 Estimated Population, by Race 31
Exhibit 25 Percent Population Identifying as African-American, by County, 2017 32
Exhibit 26 Percent Population that is "Other Race," by County, 2017 32
Exhibit 27 Percent Population Identifying as Two or More Races, by County, 2017 33
Exhibit 28 Hispanic/Latino Population Estimates 33
Exhibit 29 Percent Population Identifying as Hispanic or Latino, by County, 2017 34
Exhibit 30 Percent of the Population that is Foreign Born, By County, 2017 35
Exhibit 31 Percent of the Population that is Foreign Born and Emigrated 2010 or Later, By County, 2017 36
Exhibit 32 Estimated Households in which English in Not the Primary Language, 2014 to 2019 36
Exhibit 33 Estimated Households in which English in Not the Primary Language, by County, 2019 37
Exhibit 34 Percent Total Population Below Poverty Level, 2013 to 2017 38
Exhibit 35 Percent Population Below Poverty Level, by Race, 2013 to 2017 39
Exhibit 36 Estimated Percent of Population Below Poverty Level by Race and LWDA, 2017 39
Exhibit 37 Estimated Children Under Age 6 Below Poverty Level by LWDA, 2017 40
Exhibit 38 Percent Population in Poverty in Rural Counties 42
Exhibit 39 Children Under Age 6 at 100% Federal Poverty Level in Rural Counties 42
Exhibit 40 Percent Population in Deep Poverty in Rural Counties 43
Exhibit 41 Percent African-American Population in Rural Counties 43
Exhibit 42 Percent Population that is "Other Race" in Rural Counties 44
Exhibit 43 Percent Population that is Two or More Races in Rural Counties 44
Exhibit 44 Percent Hispanic Population in Rural Counties 45
Exhibit 45 Percent Population that is Foreign Born in Rural Counties 45
Exhibit 46 Percent of Foreign Born Population the Emigrated 2010 or Later in Rural Counties 46
Exhibit 47 Households in which English is not the Primary Language in Rural Counties 46

Exhibit 48 Frontier and Remote Area 1, in Rural Counties 47
Exhibit 49 Frontier and Remote Area 2, in Rural Counties 47
Exhibit 50 Frontier and Remote Area 3, in Rural Counties 48
Exhibit 51 Frontier and Remote Area 4, in Rural Counties 48
Exhibit 52 Kentucky's Appalachian Counties 49
Exhibit 53 Distress Level of Kentucky's Appalachian Counties, FY 2020 50
Exhibit 54 Child Care Assistance Program Participation 2014 to 2019 53
Exhibit 55 Child Care Assistance Program Participation by County, 2019 54
Exhibit 56 Children Receiving WIC Benefits, 2017 to 2019 55
Exhibit 57 Children Receiving WIC Benefits, by County, 2019 55
Exhibit 58 Change in Children Receiving WIC Benefits, 2017 to 2019 56
Exhibit 59 Monthly Average Number of Children Receiving SNAP Benefits, 2013 to 2016 56
Exhibit 60 Children Receiving SNAP Benefits by County, 2018 57
Exhibit 61 Change in Children Receiving SNAP Benefits, 2014 to 2018 58
Exhibit 62 Children Receiving KTAP Benefits, 2013 to 2016 58
Exhibit 63 Children Receiving KTAP Benefits by County, 2018 59
Exhibit 64 Change in Children Receiving KTAP Benefits, 2013 to 2016 59
Exhibit 65 Average Monthly Number of Children Enrolled in Medicaid, 2014 to 2017 60
Exhibit 66 Average Monthly Number of Children Participating in Medicaid by County, 2017 61
Exhibit 67 Change in Children Receiving Medicaid Benefits, 2014 to 2017 61
Exhibit 68 Child Participation in KCHIP Benefits, 2014 to 2017 62
Exhibit 69 Child Participation in KCHIP Benefits by County, 2017 62
Exhibit 70 Change in Children Receiving KCHIP Benefits, 2014 to 2017 63
Exhibit 71 Kentucky Participation in the Low Income Home Energy Assistance Program (LIHEAP) 64
Exhibit 72 Estimated Participation in Preschool Programs, 2014 to 2019 69
Exhibit 73 Estimated Participation in Preschool Programs, by County, 2019 70
Exhibit 74 Change in Preschool Participation, 2014 to 2019 70
Exhibit 75 Estimated Participation in Head Start Programs, 2014 to 2019 71
Exhibit 76 Estimated Participation in Head Start Programs, by County, 2019 71
Exhibit 77 Change in Head Start Participation, 2014 to 2019 72
Exhibit 78 Estimated Child Care Capacity, 2014 to 2019 72
Exhibit 79 Estimated Child Care Capacity, by County, 2019 73
Exhibit 80 Change in Child Care Capacity, 2014 to 2019 73
Exhibit 81 Kentucky Participation in Child Care, Average Monthly Adjusted Number (including School-Age Care), 2014 to 2017 75
Exhibit 82 Kentucky Participation in Child Care, by Type (including School-Age Care), 2014 to 2017 75
Exhibit 83 Kentucky Providers Receiving CCDG Funds (including School-Aged Care), 2014 to 2017 75
Exhibit 84 Kentucky Children Participating in CCAP, by Age, Birth to 5, Average Monthly Percentage, 2014 to 2017 76
Exhibit 85 Kentucky Children Participating in CCAP, by Race or Ethnicity (including School-Aged Care), 2014 to 2017 76
Exhibit 86 NATIONAL Children Participating in CCAP, by Age and Setting, Average Monthly Percentage, 2014 to 2017 77
Exhibit 87 Kentucky Children Participating in CCAP, Reasons for Care, Average Monthly Percentage of Families, 2014 to 2017 77
Exhibit 88 Kentucky All STARS Participation and Ratings, by Type of Program, April 2019 81
Exhibit 89 Kentucky All STARS Participation and Ratings, by LWDA and Star Rating, April 2019 81
Exhibit 90 Total Number of Certified and Licensed Private Child Care **and** Public Preschool Programs, by County, 2019 82

Exhibit 91 Total Number of Certified and Licensed Private Child Care Programs, by County, 2019 82
Exhibit 92 Total Number of Public Preschool Programs, by County, 2019 83
Exhibit 93 Map of Average Star Quality by County, Licensed and Certified Child Care Programs, April 2019 83
Exhibit 94 Map of Average Star Quality by County, Public Preschool Programs, April 2019 84
Exhibit 95 Child Care Deserts 85
Exhibit 96 Child Care Deserts (Ratio of 3 or Higher), by County 86
Exhibit 97 Administrator Feedback on Supports for Improving Quality 88
Exhibit 98 Preferred Methods for Receiving Support 89
Exhibit 99 Availability of Different Types of Support 90
Exhibit 100 Barriers to Receiving Support: Non-Cost Barriers 91
Exhibit 101 Barriers to Receiving Support: Cost Factors (n=496) 91
Exhibit 102 Early Childhood Professionals' Feedback on Serving Children with High ACES 93
Exhibit 103 Early Childhood Professionals' Feedback on Training Specific to ACES 93
Exhibit 104 Early Childhood Professionals' Feedback on Reasons for Absence of Training or Professional Development for ACES 93
Exhibit 105 Early Childhood Professionals' Feedback on Skills and Tools 94
Exhibit 106 Early Childhood Professionals' Feedback on Strategies Used for Working with Children with High ACES 95
Exhibit 107 Early Childhood Professionals' Feedback Working with Children with High ACES on Frequently or Occasionally Feeling Fatigue or Enthusiasm 95
Exhibit 108 Kentucky Consumer Education Efforts (including School Age Care), 2014 to 2017 97
Exhibit 109 Parent feedback on use of All STARS rating to make enrollment decisions 98
Exhibit 110 Parent feedback on factors indicative of or important for quality (n=2779) 99
Exhibit 111 Estimated "Point-in-Time" Homelessness 103
Exhibit 112 Percent of Children Experiencing Homelessness, 2016-2017 104
Exhibit 113 Percent of Households with Severe Housing Problems 104
Exhibit 114 Percent Households with Severe Housing Problems, 2015 105
Exhibit 115 Percent of children experiencing food insecurity, 2017 107
Exhibit 116 Change in children experiencing food insecurity, 2015 to 2017 107
Exhibit 117 Continuum of Care Regions 109
Exhibit 118 Emergency Shelter or Assistance Locations 109
Exhibit 119 Feeding Kentucky Regions 110
Exhibit 120 Children receiving investigations for abuse or neglect 110
Exhibit 121 Substantiated Abuse or Neglect by LWDA 111
Exhibit 122 Percent Cases Substantiated for Abuse or Neglect, 2016 112
Exhibit 123 Child Fatalities and Victims, 2013 to 2017 112
Exhibit 124 Child Victims Ages Birth through Five, 2013 to 2017 113
Exhibit 125 Child Victims, Ages Birth through Five, Rate per 1000 Children, 2013 to 2017 113
Exhibit 126 Child Victims, by Race, Rate per 1000 Children, 2013 to 2017 114
Exhibit 127 Total Victims by Type of Abuse, 2013 to 2017 114
Exhibit 128 Kentucky Victims by Perpetrator, 2013 to 2017 115
Exhibit 129 Total Drug Arrests, 2013 to 2016 115
Exhibit 130 Total Drug Arrests, 2016 116
Exhibit 131 Change in Drug Arrests, 2013 to 2016 116
Exhibit 132 Incidence of Neonatal Abstinence Syndrome, 2013 to 2017 117
Exhibit 133 Incidence of Neonatal Abstinence Syndrome, by County, 2017 118
Exhibit 134 Acute Drug Poisoning (Overdose; Any Substance), 2014 to 2018 118
Exhibit 135 Acute Drug Poisoning (Overdose; Any Substance), by County, 2018 119

Exhibit 136 Change in Acute Drug Poisoning, 2014 to 2018 119
Exhibit 137 DCBS Service Regions 121
Exhibit 138 Estimated Children in Out-of-Home Care, 2013 to 2016 122
Exhibit 139 Percent of Children Receiving Out-of-Home Care, in Foster Care, 2013 to 2017 122
Exhibit 140 Of children in out-of-home care, percent in foster care, 2017 123
Exhibit 141 Overview of Foster Care Service Statistics, 2013 to 2017 123
Exhibit 142 Foster Care: Percent Children Re-Entering Services within 12 Months, 2013 to 2016 124
Exhibit 143 Children Under 18 in Household: Foster Child, 2013 to 2017 124
Exhibit 144 Children Under 18 Relationship to Householder: Foster Child or Other Unrelated Child, by County, 2017 125
Exhibit 145 Change in Children in Foster Care, 2013 to 2017 125
Exhibit 146 Overview of Adoption Service Statistics, 2013 to 2017 126
Exhibit 147 Children Under 18 in Household: Adopted Child, 2013 to 2017 126
Exhibit 148 Children Under 18 Relationship to Householder: Adopted Child, by County, 2017 127
Exhibit 149 Change in Adopted Children, 2013 to 2017 127
Exhibit 150 Grandchildren under the age of six live with grandparent in household, 2013-2017 128
Exhibit 151 Grandchildren under the age of six live with grandparent in household, by county, 2017 129
Exhibit 152 Change in Grandparents Living in Households with Grandchildren Under 6 Years, 2013 to 2017 129
Exhibit 153 Grandchildren in household where grandparent is responsible for grandchildren, under the age of 18, 2013 to 2017 130
Exhibit 154 Grandchildren in household where grandparent is responsible for grandchildren, under the age of 18, by county, 2017 130
Exhibit 155 Change in Households where Grandparent is Responsible for Grandchildren, 2013 to 2017 131
Exhibit 156 Teen Births (Ages 15 to 19), by LWDA, 2013 to 2017 133
Exhibit 157 Teen Birth Rate, by County 133
Exhibit 158 Births to Mothers who were not High School Graduates, 2013 to 2017 134
Exhibit 159 Births to Mothers who are not High School Graduates, 2016 135
Exhibit 160 Estimated Percent Households, by Type, 2012 and 2017 136
Exhibit 161 Percent Children Living in Single-Parent Households, by County, 2017 137
Exhibit 162 Percent female-headed households, by county, 2017 138
Exhibit 163 Unduplicated Count of Families Served by HANDS, 2014 to 2018 139
Exhibit 164 Unduplicated Count of Families Served by HANDS, by County, 2018 140
Exhibit 165 Change in HANDS Participation, 2014 to 2018 141
Exhibit 166 Infant Mortality Rate, 2012-2016 142
Exhibit 167 Percent Pregnant Women Who Received Adequate Prenatal Care, 2012-2016 143
Exhibit 168 Number of Pre-Term Births, by LWDA, 2014 to 2019 143
Exhibit 169 Percent Pre-Term Births, by County, 2017 144
Exhibit 170 Percent of Live Births with Low Birthweight, 2012-2016 145
Exhibit 171 Breastfeeding Practices 145
Exhibit 172 Average Number Mentally Unhealthy Days, 2016 146
Exhibit 173 Percent Adults Reporting 14 or More Days with Poor Mental Health, per Month, 2016 146
Exhibit 174 Mothers Served in Moving Beyond Depression, 2014 to 2018 148
Exhibit 175 Kentucky's Community Mental Health Center Regions 150
Exhibit 176 Ratio of Population to Mental Health Providers, 2016 151
Exhibit 177 Family Resource and Youth Service Center Regions 152
Exhibit 178 Family Resource Youth Service Center Locations 152
Exhibit 179 National Center for Children in Poverty Two Generation Profile 153
Exhibit 180 Core Components of the Two-Generation Playbook 154

Exhibit 181 Kentucky IDEA Part C Point of Entry Regions and Central Offices 158
Exhibit 182 Children Served through Individuals with Disabilities in Education Act, Part C 159
Exhibit 183 Families Served by Kentucky's First Steps Program 159
Exhibit 184 Participation in First Steps, 2019 160
Exhibit 185 Children Served through Individuals with Disabilities in Education Act, Part C, by Type of Delay or Disability 160
Exhibit 186 Kentucky County and Independent School Districts 161
Exhibit 187 Process for Transitioning a Student from Part C to Part B Services 163
Exhibit 188 Process for Transitioning a Student from Head Start to Part B Services 164
Exhibit 189 Child Find Process for Income-Eligible 4 Year Old Children 165
Exhibit 190 Child Find Process for Not-Income-Eligible 4 Year Olds and Potentially Eligible 3 Year Olds 166
Exhibit 191 Children Served through Individuals with Disabilities in Education Act, Part B 167
Exhibit 192 Children Served through Individuals with Disabilities in Education Act, Part B, by Race/Ethnicity 167
Exhibit 193 Children Served through Individuals with Disabilities in Education Act, Part B, by Type of Delay or Disability 167
Exhibit 194 Children with Disabilities Served in Preschool 168
Exhibit 195 Children with Disabilities Served in Public Preschool, by County, 2019 169
Exhibit 196 Children with Disabilities Served in Head Start 169
Exhibit 197 Children with Disabilities Served in Head Start, by County, 2019 170
Exhibit 198 Children who Received SSI Benefits, 2013 to 2016 170
Exhibit 199 Children Receiving SSI Benefits by County, 2017 171
Exhibit 200 Change in Children Receiving SSI Benefits, 2013 to 2017 171
Exhibit 201 Overall SpeciaLink Ratings in Observed Classrooms by Type of Program 172
Exhibit 202 Public Preschool Family and Community Engagement Kentucky All STARS Points 175
Exhibit 203 FPTRQ Scale Scores for Directors in Participating Sites 176
Exhibit 204 FPTRQ Scale Scores for Teachers in Participating Sites 177
Exhibit 205 FPTRQ Scale Scores for Parents in Participating Sites 178
Exhibit 206 Kentucky Department of Education Migrant Regions for 2018-2019 180
Exhibit 207 Migrant or Seasonal Head Start Programs 181
Exhibit 208 Percent Children Assessed as Ready for Kindergarten in Fall 2018 185
Exhibit 209 Cognition and General Knowledge in Fall 2018 186
Exhibit 210 Language and Communication Skills in Fall 2018 186
Exhibit 211 Physical Well Being in Fall 2018 187
Exhibit 212 Self-Help Skills in Fall 2018 187
Exhibit 213 Social-Emotional Skills in Fall 2018 188
Exhibit 214 Premises Concerns with Child Care Facilities 193
Exhibit 215 Early Care and Education Operational Models 197
Exhibit 216 Recommended ECE Funding Mechanisms 201
Exhibit 217 Funding Sources 202
Exhibit 218 Counties Responding to the Survey of Transition Practices: Number of Survey Responses 206
Exhibit 219 Counties Reported to have a Written Kindergarten Transition Plan 207
Exhibit 220 Counties Reported to Provide at least One Strategy for Parents and Families 208
Exhibit 221 Parent and Family Strategies by Type of Respondent 208
Exhibit 222 Counties Reported to Provide at least One Strategy for Children 209
Exhibit 223 Child Strategies by Type of Respondent 209
Exhibit 224 Counties Reported to Provide at least One Strategy for Professionals 210
Exhibit 225 Professional Strategies by Type of Respondent 211
Exhibit 226 Communication Methods: Parents 212

Exhibit 227 Targeted Supports for Children 213
Exhibit 228 Targeted Transition Supports for Vulnerable or Underserved Children 213
Exhibit 229 Targeted Transition Supports for Rural Children....213
Exhibit 230 Targeted Transition Supports for Children with Special Learning or Developmental Needs 214
Exhibit 231 Other Transition Supports 215
Exhibit 232 Membership of the Early Childhood Advisory Council 218
Exhibit 233 Existing Community Early Childhood Councils 220
Exhibit 234 Percent of Children Assessed as Ready for Kindergarten (Composite Measure), by County, 2015 to 2019....234
Exhibit 235 Percent of Children Assessed as Ready for Kindergarten (Cognition and General Knowledge), by County, 2015 to 2019 237
Exhibit 236 Percent of Children Assessed as Ready for Kindergarten (Language and Communication), by County, 2015 to 2019 240
Exhibit 237 Percent of Children Assessed as Ready for Kindergarten (Physical Well-Being), by County, 2015 to 2019....243
Exhibit 238 Percent of Children Assessed as Ready for Kindergarten (Self-Help), by County, 2015 to 2019 .246
Exhibit 239 Percent of Children Assessed as Ready for Kindergarten (Social-Emotional), by County, 2015 to 2019....249

Introduction

Kentucky is strong in potential, rich in human and natural resources, and an inspiration for many who are working to promote and support the well-being of children and families. While Kentucky is not immune to the present-day challenges many other states are facing, Kentucky is resolved to continue to work for the benefit of its children, ensuring that future generations will thrive. Kentucky believes it can and will serve as an example for other states and regions as to the power of relationships, partnerships, and purpose, coming together to work on goals that positively impact all children, families, and communities.

Kentucky's Preschool Development Grant Need Assessment is focused on answering the question: *To what extent are Kentucky's most vulnerable young children gaining access to or using early childhood care and education services?* To answer this question, Kentucky will present:

(1) A working definition of vulnerability, with specific attention to the distribution of vulnerable children and families across the state;
(2) Working definitions of high quality and available early childhood care and education services; and
(3) An analysis of system gaps and needs, including the need for new or more comprehensive data.

The data presented in this report are structured to facilitate analyses along the following axes:

- **Location**, or the relative levels of access of children in different regions of the state and in rural and remote locations;
- **Trend**, or the upwards or downwards patterns of accessibility and use over time; and
- **Absolute** level need as well as **change** in need, when possible. Similarly, where possible, data are presented on service availability and participation.

Kentucky strives to present data and information from multiple perspectives, so as to triangulate findings. This report contains, wherever possible, county-level data, to inform an analysis of the distribution of needs and resources across rural and non-rural locations. Not surprisingly, counties with higher numbers of children often are reported to have higher numbers of participants in programs. Thus, when possible, change in need or service use also is presented[13].

Several Kentucky system highlights will be presented and discussed throughout the report, as they are foundational to Kentucky's new strategic plan and progress: (1) Kentucky's shift to a Prenatal-Third Grade framework as a conceptual framework for early childhood systems work; (2) collaborative partnerships fostered and supported by Kentucky's Early Childhood Advisory Council; and (3) the ability to use data as an engine to support system progress at state, regional, and local levels.

Kentucky highlights:

1. Prenatal-Third Grade conceptual framework
2. Collaborative partnerships fostered and supported by the Early Childhood Advisory Council
3. The ability to use data as an engine to drive system progress

[13] And, it is not always clear in some datasets how to accurately calculate the percent of population served.

Report Organization

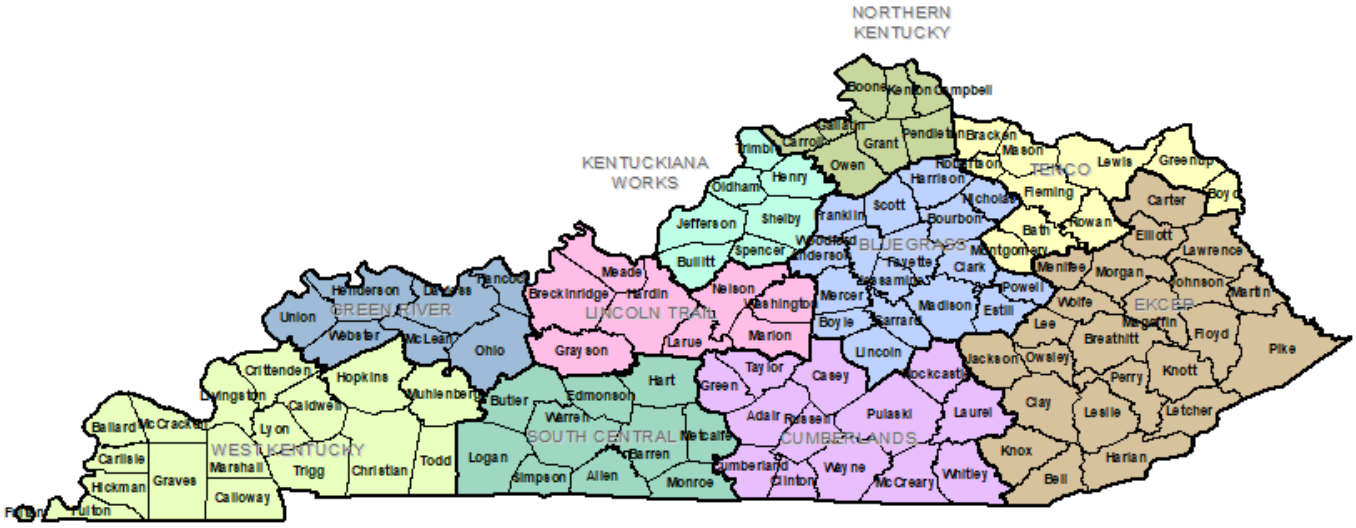
The first section of this report presents working definitions of vulnerable, underserved, and rural children along with definitions for quality early childhood care and education and the availability of care. The second section explores, in more depth, focal early childhood populations, with attention to factors such as race or ethnicity, poverty, and primary language. The third section presents information on the extent to which young children are served (or waiting to be served) in Kentucky's existing early care and education programs.

The remaining sections explore additional areas of interest. First, section 4 addresses the quality and availability of existing early care and education programs, including an exploration of efforts to connect children and families to programs. Section 5 explores gaps in data or research, with a specific focus on collaborations and efforts to maximize parent choice of services. This section includes an examination of programs and services used by children and families, while Section 6 focuses on services for children with early learning or developmental needs. Section 7 focuses on existing and emergent indicators of progress, Section 8 addresses issues specific to early childhood care and education facilities, and Section 9 explores barriers to more efficient funding of services. The final sections address issues related to the transition to kindergarten (Section 10) and system integration and interagency collaboration (Section 11).

Whenever possible, data first are presented on the level and extent of need, including an analysis of need by county. In so doing, the report allows the reader to assess rural versus non-rural distinctions in need, as well as the prevalence of need across rural locations. Then, information is presented on available services and service participation. This is done to assess the extent to which the state has statewide or systematic services available that can respond to needs. In each of these sections, there is a consideration of the systems features that are working well, and those features that may need improvement, informed by stakeholder input and feedback. This includes a discussion of data gaps and needs, such that future data systems can better function as drivers of system improvements.

As regards presentation of data, to the greatest extent possible, tables in the body of the report present data according to the overall state finding as well as by Local Workforce Development Areas (LWDA). This was done to facilitate further analysis and planning for regional system supports, which include the nurturing of young children as the state's future workforce and partnering with parents to ensure current educational and economic needs are met. Exhibit 1 presents the configuration of counties into LWDAs.

Exhibit 1 *Kentucky's Local Workforce Development Areas*



Methodology

The Needs Assessment was facilitated and guided by Kentucky's Early Childhood Advisory Council (ECAC), and particularly the ECAC's Data Subcommittee. The subcommittee and staff from the Governor's Office of Early Childhood (GOEC) worked within existing data systems to extract and analyze data relevant for this assessment. Additional data were collected to supplement extant data and data extractions. Of note:

- The ECAC contains representation from major state agencies, ensuring buy-in and partnership for the assessment process. The data team issued specific data requests to members of the ECAC; members helped connect the data team to the appropriate staff in their agencies to generate data extracts.
- The Data Subcommittee first reached consensus on definitions, which guided much of the work in compiling and presenting information. The primary definition is "vulnerability;" KY used existing agency definitions of vulnerability, which focus on poverty (and the income: poverty ratio that is used by different agencies to qualify for services). From there, the Subcommittee examined additional agency priorities, which allowed a deeper dive into vulnerability.
- Data on school readiness and additional indicators were furnished by the Kentucky Center for Statistics (KYSTATS), which publishes annual, county-level, data specific to early childhood care and education. Members of KYSTATS sit on the Data Subcommittee and the data are publicly available. Additional data sources are noted throughout the report and include Kentucky Youth Advocates and the Kentucky State Data Center as well as staff within partner agencies.
- Several data collections were completed to supplement existing data. Data collections included (a) focus groups conducted in several rural communities; (b) interviews; (c) an online parent survey targeting access to services and transitions; and (d) an online Transitions survey, completed by early care and education professionals. In addition, the data team drew upon data from the state's recently completed Race to the Top Early Learning Challenge (RTT-ELC) grant validation and sustainability studies.

- Members from the Data Subcommittee and Executive Committee reviewed drafts of the Needs Assessment as it neared completion. Staff from partner agencies received sections for review, containing data that was most relevant to their agency and programs. These stakeholders were asked to review the data for accuracy and to submit additional context or information to help understand the data.

In summarizing and presenting data, the data team's goals were to (a) answer, to the fullest extent possible, federally-required questions and (b) consider:

- The extent to which individual counties consistently were ranked highest (i.e., the first quintile) in terms of absolute service need or increase in service need;
- The extent to which rural or Appalachian counties were consistently among the highest or lowest performers on different indicators; and
- The variation in needs across counties, with all 120 counties experiencing some level of need; and
- The use of the information for strategic planning.

Existing Systems Data

Cabinet for Health and Family Services Division of Child Care

- All STARS Participation and Ratings, April 2019
- Premises Concerns with Child Care Facilities

Cabinet for Health and Family Services Division of Public Health

- Families Served by Health Access Nurturing Development Services (HANDS)
- Mothers Served in Moving Beyond Depression
- Strengthening Families Program Statistics

Kentucky Center for Statistics (KYSTATS)

Early Childhood Profiles from 2014 through 2019 which contain:

- School Readiness indicators (BRIGANCE Early Childhood Kindergarten Screen III)
- Estimated Households in which English in Not the Primary Language
- Child Care Assistance Program Participation
- Families Served by Kentucky's First Steps Program
- Children with Disabilities Served in Preschool
- Children with Disabilities Served in Head Start
- Substantiated Abuse or Neglect
- Number of Pre-Term Births
- Average Star Quality by County
- Estimated Participation in Preschool Programs
- Estimated Participation in Head Start Programs
- Estimated Licensed Child Care Capacity
- Estimated Participation in Child Care Assistance Program

Kentucky State Data Center

- County Health Rankings, United States Census Population Estimates, 2010
- Comprehensive Housing Affordability Strategy and American Community Survey Five-Year Estimates Table S1101
- Kentucky State Data Center - Vital Statistics, 2012-2016

Kentucky Department of Education

- All STARS Participation and Ratings, April 2019
- Percent of Children Experiencing Homelessness, 2016-2017, by School District

Kentucky Youth Advocates KIDS COUNT

- Children Living in Deep Poverty
- Children receiving Supplemental Nutrition Assistance Program
- Children receiving Kentucky Transitional Assistance Program
- Children enrolled in Medicaid (average monthly number) in Kentucky 2013
- Kentucky Children's Health Insurance Program (average monthly number) in Kentucky 2013
- Children receiving Supplemental Security Income
- Children in Out-of-Home Care
- Percent of Children in Out-of-Home Care in Foster Homes
- Children re-entering foster care within 12 months

Office of Special Education Programs

- Annual Child Count and Settings Reports
- Annual Child Care Educational Environment Reports

United States Census[14]

American Community Survey, Five year estimates for:

- Population estimates, ages birth through four
- Table CP-05
- Table DP02
- Table DP03
- Table S1701
- Table B17020
- Table B-09018
- Table B-10001
- Table B-10002
- Table S-1301
- Table S1101

[14] Caution may be appropriate in interpreting estimates, and especially for estimates at the county-level. In some cases, there is a sizable margin of error for the county-level absolute value that is reported.

United States Administration for Children and Families

- Child Maltreatment Report Tables (2017) 3-1, 3-2, 3-4, 3-5, 3-6, 3-8, 3-9, 4-2, 5-5
- Adoption and Foster Care Analysis and Reporting System (AFCARS)
- Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables

Kentucky Housing Corporation

- Kentucky Housing Corporation K-Count Point-in-Time Estimates

Kentucky Injury Prevention Research Center

- Drug-related inpatient hospitalizations and emergency department visits

Kentucky REACH Data Warehouse

Feeding America

Stakeholder Input

The study team solicited data from Kentucky stakeholders to inform the Needs Assessment. Details on data collections and opportunities are provided below in Exhibit 2.

Exhibit 2 Stakeholder Engagement in the Needs Assessment Process

Data Collection Event	Description	Participants
Preschool Development Planning Community Feedback Survey	This survey was conducted by the Governor's Office of Early Childhood in fall 2018 to inform the Needs Assessment and the writing of the Preschool Development Grant.	There were 832 total respondents. Respondent could identify in multiple categories: • 40% identified themselves as a parent of a child or children ages birth through five. • 38% identified as an early care and education professional. • 18% identified as a K-12 educator. • 17% identified as a member of a Community Early Childhood Council. • 7% identified as working at a state or local agency designed to support or provide services to children or families. • 3% identified as representing an advocacy organization. • 3% identified as a member of a business or civic group. • 2% identified as a parent council or community representative. • 1% identified as representing a foundation or philanthropic group in Kentucky. • 1% identified as representing a Think Tank or an Institute of Higher Education. • Less than 1% identified as an elected representative. • In addition, retired educators and members of the Family Friend and Neighbor Care network participated.
Stakeholder community forums	The Governor's Office of Early Childhood conducted five community forums in February	A total of 60 community members (48 parents; 12 community/business leaders) participated in these one-hour sessions, and ranged in age, gender, ethnicity, and other factors that

	and March 2019. The community forums were conducted in four different Kentucky cities, including Bowling Green, Carlisle, Danville, and Paris. These communities represent urban, rural, and suburban areas from the western, eastern, and central parts of the state. Each of the four cities hosted a session specifically for parents and a second session was held in Bowling Green for community and business leaders.	emerged from the discussion, such as parents of special needs children and parents who spoke English as a second language.
Transitions to Kindergarten Survey	This survey was conducted by the Governor's Office of Early Childhood in spring 2019 to inform the Needs Assessment.	There were 403 total respondents. Ninety percent of counties were represented by at least one respondent. Respondents were asked to choose the identifier that was the best match: • 34% identified as representing a local elementary school or public preschool • 32% identified as representing private child care • 8% identified as representing a local education authority • 7% identified as representing Head Start • 3% identified as representing a Community Early Childhood Council • Other respondents included representatives of Child Care Resource and Referral agencies and other community organizations.
Access to Care and Transitions Parent Survey	This survey was conducted by the Governor's Office of Early Childhood in spring 2019 to inform the Needs Assessment and Preschool Development Grant activities.	To date, there are 311 parent responses. Of these 226 reported having at least one child who was not yet in kindergarten. Data still are being collected.
Stakeholder interviews	Staff from the Governor's Office of Early Childhood conducted interviews with partner agency staff in fall and winter 2018-2019 and spring 2019. Interviews were conducted to inform the development of the Preschool Development Grant and the Needs Assessment.	Partner agencies or departments included the Kentucky Department of Education, the Division of Child Care, Public Health, and the Kentucky Center for Statistics, among others.
Race to the Top Early Learning Challenge (RTT-ELC) Grant validation and sustainability studies	The Governor's Office of Early Childhood completed RTT-ELC studies in 2018.	The RTT-ELC validation study incorporated data collections from a stratified random sample of over 300 facilities. In addition to survey and observation data collected from staff within these agencies, the study team also collected survey data from over 2700 parents of children enrolled at the study sites. Another aspect of the study was an online survey (Universal Feedback Survey) available to all early care and education professionals in the state. This survey received 761 responses. Of the 666 respondents who identified their position:

- 41% represented Type I Licensed child care centers.
- 20% represented local public schools or districts.
- 11% represented preschool programs.
- 8% represented Head Start or Early Head Start programs not located in elementary schools.
- 7% represented Head Start or Early Head Start programs located in elementary schools.
- 5% represented Certified child care home providers.
- 4% represented Type II Licensed child care centers.
- Other respondents represented Child Care Resource and Referral programs and other community programs.

Section 1. Needs Assessment Scope and Definition of Terms

This assessment reflects the work of multiple state and local agencies, including the Cabinet for Health and Family Services, the Kentucky Department of Education, and Head Start/Early Head Start. As such, the assessment relies upon the collective definitions of several key terms, presented below.

Vulnerable Children

Overall, for many Kentucky programs, the definition and practical response to vulnerability is tied to the Federal Poverty Level, or some multiplier of it. The United States Department of Health and Human Services[15] references the 2019 Federal Poverty Guidelines (which inform the Federal Poverty Level) for the contiguous United States as shown in Exhibit 3:

> Vulnerability is a function of poverty for many of Kentucky's children.

Exhibit 3 *Federal Poverty Guidelines for 2019*

Persons in Household	Poverty Guideline	150% FPL	160% FPL	200% FPL
1	$12,490	$18,735	$19,984	$24,980
2	$16,910	$25,365	$27,056	$33,820
3	$21,330	$31,995	$34,128	$42,660
4	$25,750	$38,625	$41,200	$51,500
5	$30,170	$45,255	$48,272	$60,340
6	$34,590	$51,885	$55,344	$69,180
7	$39,010	$58,515	$62,416	$78,020
8	$43,430	$65,145	$69,488	$86,860

For families/households with more than 8 persons, add $4,420 for each additional person.

Further, the United States Census in 2018 defined poverty thresholds (which are used for Census calculations) as shown in Exhibit 4:

Exhibit 4 *United States Census Poverty Thresholds for 2018*

Size of family unit	**Related children under 18 years**								
	None	**One**	**Two**	**Three**	**Four**	**Five**	**Six**	**Seven**	**Eight+**
One person (unrelated individual):									
Under age 65...	13,064								
Aged 65 and older...	12,043								
Two people:									
Householder under age 65…	16,815	17,308							
Householder aged 65 and older…	15,178	17,242							
Three people…	19,642	20,212	20,231						

[15] https://aspe.hhs.gov/2019-poverty-guidelines

Four people…	25,900	26,324	25,465	25,554					
Five people…	31,234	31,689	30,718	29,967	29,509				
Six people…	35,925	36,068	35,324	34,612	33,553	32,925			
Seven people…	41,336	41,594	40,705	40,085	38,929	37,581	36,102		
Eight people…	46,231	46,640	45,800	45,064	44,021	42,696	41,317	40,967	
Nine people or more…	55,613	55,883	55,140	54,516	53,491	52,082	50,807	50,491	48,546

*Weighted estimates for 2018 are anticipated in September 2019.

Several Kentucky state agencies provide services to children (or their families or parents) deemed vulnerable or at-risk, based upon (a) family or household income; (b) health or developmental needs; and (c) other factors (such as substance or opioid abuse, homelessness, or availability of formal and informal care networks) that are shown to be associated with child development, health, or welfare. Exhibit 5 presents information on eligibility criteria used by Kentucky programs that have a statewide presence.

Exhibit 5 Kentucky state agency definitions of vulnerable status

Cabinet, Division, or Agency	Definition
Cabinet for Health and Family Services, Division of Child Care	Eligibility for the Child Care Assistance Program (CCAP) is based upon income or status within the state's Protection and Permanency services. Specifically: *Applicants for child care must have gross income at or below 160% of the federal poverty level to be eligible at application and at or below 200% of the federal poverty level at recertification. Income guidelines do not apply to cases approved by Protection and Permanency*[16]. CCAP has additional priorities for services, which include: • Families experiencing homelessness • Children with special needs: Special needs means a child who has multiple or severe functional needs requiring ongoing specialized care. • Children in need of preventative services: Preventative service is provided to meet the child care needs of a family with a case opened due to the submission of a Family in Need of Services Assessment (FINSA). Care is provided in order to stabilize the family situation and prevent escalation to an environment at increased risk of abuse or neglect. • Children in need of protective services: Protective service is provided when abuse, neglect, or dependency is substantiated and the family has need for child care services, as indicated in the case plan and/or after care. • Teen parents attending high school or GED courses • Families receiving TANF, in Kentucky's case this means families are participating in K-TAP • Low income families with an adult who is working, enrolled full-time with a trade school, college, or university, or participating in the SNAP Employment & Training (E&T) Program, or actively participating in a job search. Also for a priority for supports and services are: • Families recovering from a major disaster or emergency • Families with limited English proficiency • Children located in child care deserts • Families in need of child care during non-traditional hours

[16] https://chfs.ky.gov/agencies/dcbs/dcc/Documents/dcc1131218.pdf

Department of Public Health	Eligibility for Individuals with Disabilities in Education Act (IDEA) Part C services is determined by the identification of[17]: • Developmental delay - A child may be eligible for services if an evaluation shows that a child is not developing typically in at least one of the following skill areas: communication, cognition, physical, social and emotional or self-help. • Established Risk Concern - A child may be eligible if he or she receives a diagnosis of physical or mental condition with high probability of resulting developmental delay such as Down Syndrome.
Head Start/Early Head Start	Eligibility for Head Start or Early Head Start is defined as children from birth to age five who are from families with incomes below the poverty guidelines. Children from homeless families, and families receiving public assistance such as Temporary Assistance for Needy Families (TANF) or Supplemental Security Income (SSI) are eligible. Foster children are eligible regardless of foster family income[18].
Department of Education	Kentucky's state-funded public preschool program is available for four-year-old children whose family income is no more than 160% of poverty; all three and four-year-old children with developmental delays and disabilities, regardless of income; and other four-year- old children as placements are available based on district decision[19]. Eligibility for IDEA Part B services is established in Kentucky Administrative Regulations Section 1(9) of 707 KAR 1:002. In particular, KAR specifies that a Developmental Delay "*means that a child within the ages of three (3) through eight (8) has not acquired skills, or achieved commensurate with recognized performance expectations for his age in one (1) or more of the following developmental areas: cognition, communication, motor development, social-emotional development, or self-help-adaptive behavior. Developmental delay includes a child who demonstrates a measurable, verifiable discrepancy between expected performance for the child's chronological age and current level of performance.*[20]"

Underserved Children

> A child or family is "under-served" if, once aware of and desiring a service, there is an unmet need (either in totality or partially) for a service.

Kentucky's partner agencies do not have formal definitions of "under-served." That stated, under-served may be considered any instance in which children or families who have been identified to be in need of services, or who are aware of and desire services, cannot access the nature, type, or extent of high quality services that are (a) responsive to individual needs and (b) affordable and available, per family circumstances.

Quality Early Childhood Care and Education

> Quality in early childhood care and education programs is defined using Kentucky All STARS, the state's Tiered Quality Rating Improvement System.

Kentucky's definition of high-quality early childhood care and education is captured in the Kentucky All STARS tiered quality rating improvement system (TQRIS). Kentucky All

[17] https://chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/firststeps.aspx
[18] https://eclkc.ohs.acf.hhs.gov/eligibility-ersea/article/poverty-guidelines-determining-eligibility-participation-head-start
[19] https://education.ky.gov/curriculum/conpro/prim-pre/Pages/default.aspx
[20] https://education.ky.gov/specialed/excep/Documents/Kentucky%20Administrative%20Regulations.pdf

STARS uses a five-star rating scale wherein a 1-star indicates the lowest relative quality and a 5-star indicates the highest relative quality. Kentucky All STARS is comprised of four domains and standards within the domains. The four domains include: 1) Family and Community Engagement, 2) Classroom and Instructional Quality, 3) Staff Qualifications and Professional Development, and 4) Administrative and Leadership Practices. To obtain a 1-star rating, programs must meet regulatory requirements. To obtain a 2-star rating, programs must complete the required standards in two domains: Classroom and Instructional Quality and Staff Qualifications and Professional Development. To advance to STARS levels 3 through 5, programs must

a. Meet level 2 requirements,
b. Participate in an environmental observation (the minimum score required increases at each level),
c. Earn the minimum number of points assigned within each of the four domains, and
d. Earn an additional range of points from their choice of the four domain(s) (the range of points increase at each level).

Further details about Kentucky All STARS are presented in Appendix A.

Early Childhood Care and Education Availability

Ideally, every family that wants or needs child care or early education services will be able to secure a placement in a high-quality and affordable setting that meets child developmental and learning needs and aligns with parent work or educational schedules. In Kentucky, services may include one or more of the following options (Exhibit 6):

> Availability of high-quality early childhood care and education is defined by the alignment of need or desire for a program or service, with its quality, accessibility, and affordability.

Exhibit 6 *Kentucky's Prevalent Early Care and Education Services*

Private regulated child care[21]:

- Licensed Type I: facility that regularly provides child care services for four (4) or more children in a non-residential setting; or thirteen (13) or more children in a residential setting.
- Licensed Type II: the primary residence where child care is regularly provided for at least seven (7), but not more than twelve (12) children including related children.
- Certified Family Child Care Home: person who cares for a child in their own home; and shall not exceed six (6) unrelated children at anyone (1) time; or four (4) related children in addition to six (6) unrelated children for a maximum of ten (10) hours at anyone (1) time.

Private non-regulated care[22]:

- Registered: private individual that provides care for someone receiving child care assistance, such as a relative or neighbor who is not regulated by the Division of Regulated Child Care.

[21] http://childcarecouncilofky.com/types-of-care-in-kentucky/
[22] http://childcarecouncilofky.com/i-want-to-become-a-provider/

First Steps (IDEA Part C)[23]: statewide early intervention system that provides services to children with developmental disabilities from birth up to age 3 and their families. First Steps is housed within Kentucky's Cabinet for Health and Family Services.

Head Start[24]: promotes school readiness of children under 5 from low-income families through education, health, social and other services.

Early Head Start[25]: serve infants and toddlers under the age of 3, and pregnant women. EHS programs provide intensive comprehensive child development and family support services to low-income infants and toddlers and their families, and to pregnant women and their families.

Public preschool[26]: developmentally appropriate services for four-year-old children whose family income is no more than 160% of poverty; all three and four-year-old children with developmental delays and disabilities, regardless of income; and other four-year- old children as placements are available based on district decision.

Kentucky Education Title 1 Preschool Services[27]: provided in schools with high numbers or percentages of children from low-income families to ensure that all children meet challenging state academic content and achievement standards.

IDEA Part B services: developmentally appropriate services for children meeting Kentucky's eligibility criteria.

The number or percent of families desiring or needing child care (e.g., licensed or certified care) will fluctuate over time and will be influenced by factors such as family participation in education or the workforce and child developmental or educational needs. Thus, it is important to consider trends in the larger economy when interpreting findings related to the demand for licensed or certified child care or early education services, presented in this report.

[23] https://chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/firststeps.aspx
[24] https://www.acf.hhs.gov/ohs
[25] https://eclkc.ohs.acf.hhs.gov/programs/article/early-head-start-programs
[26] https://education.ky.gov/curriculum/conpro/prim-pre/Pages/default.aspx
[27] https://education.ky.gov/federal/progs/tia/Pages/default.aspx

Children in Rural Areas

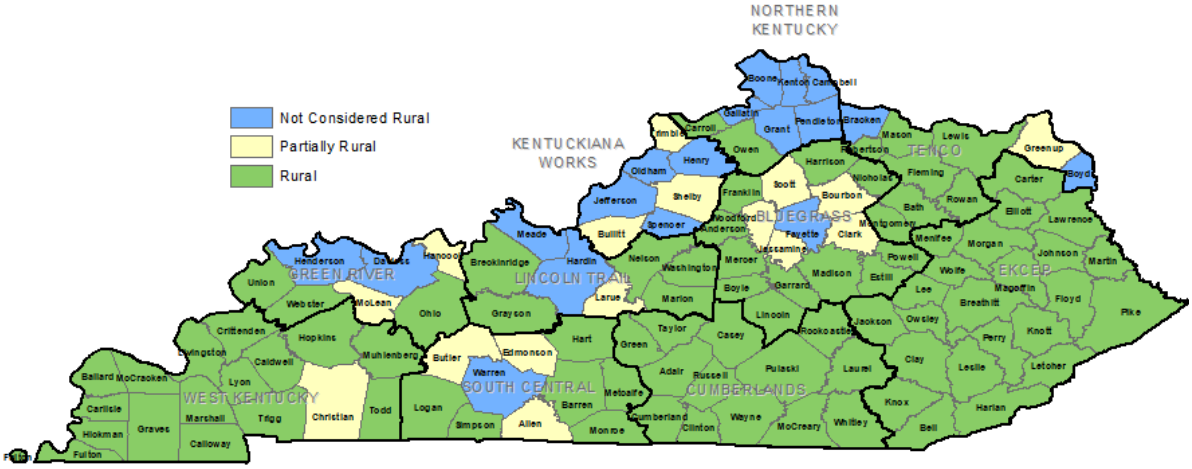
Kentucky used the Office of Rural Health Policy's definitions of rural and urban[28] to create the map presented in Exhibit 7. As noted in Figure 1, counties that are included in Metropolitan Areas (MAs) by the Office of Management and Budget are considered urban. Counties that consist of both rural and urban census tracts are considered partially rural. Counties that are not parts of MAs are considered rural; this definition was further informed by the use of the Rural Urban Commuting Area Codes.

Exhibit 7 Map of Kentucky's Rural and Urban Counties

Figure 1 Office of Rural Health Policy definitions of Rural and Urban, based on Census 2010

The Office of Rural Health Policy uses two methods to determine geographic eligibility for its grant programs. As in prior years, all counties that are not designated as parts of Metropolitan Areas (MAs) by the Office of Management and Budget (OMB) are considered rural**.** Any county that is not a part of a Metropolitan Area is considered rural. Counties classified as Micropolitan are non-Metropolitan.

Due to the fact that entire counties are designated as Metropolitan when, in fact, large parts of many counties may be rural in nature, the Office of Rural Health Policy has sought an alternative method of looking at sub-county sections of these Metropolitan counties that would allow sections to be designated rural. The Goldsmith modification was originally developed and used to identify rural Census tracts in large Metropolitan counties. The Office of Rural Health Policy has funded the development of the Rural Urban Commuting Area Codes (RUCAs) to designate "Rural" areas within MAs. Census tracts with RUCA codes 4 through 10 are considered rural for the purposes of Rural Health grants. While use of the RUCA codes has allowed identification of rural census tracts in Metropolitan counties, among the more than 60,000 tracts in the U.S. there are some that are extremely large and where use of RUCA codes alone fails to account for distance to services and sparse population. In response to these concerns, ORHP has also designated as rural census tracts with RUCA codes 2 or 3 that are at least 400 square miles in area with a population density of no more than 35 people.



Data Source: Office of Rural Health Policy

[28] https://www.hrsa.gov/sites/default/files/ruralhealth/resources/forhpeligibleareas.pdf

Rural-Urban Continuum

In 2013, the United States Department of Agriculture Economic Research Service [29] issued guidance and documentation on nine rural-urban continuum codes, which also are used in this assessment to present and reflect upon state needs. The codes, and the corresponding Kentucky counties, are presented in Exhibits 8 and 9. For purposes of the current needs assessment, counties with a code of "8" or "9" are considered low or limited access.

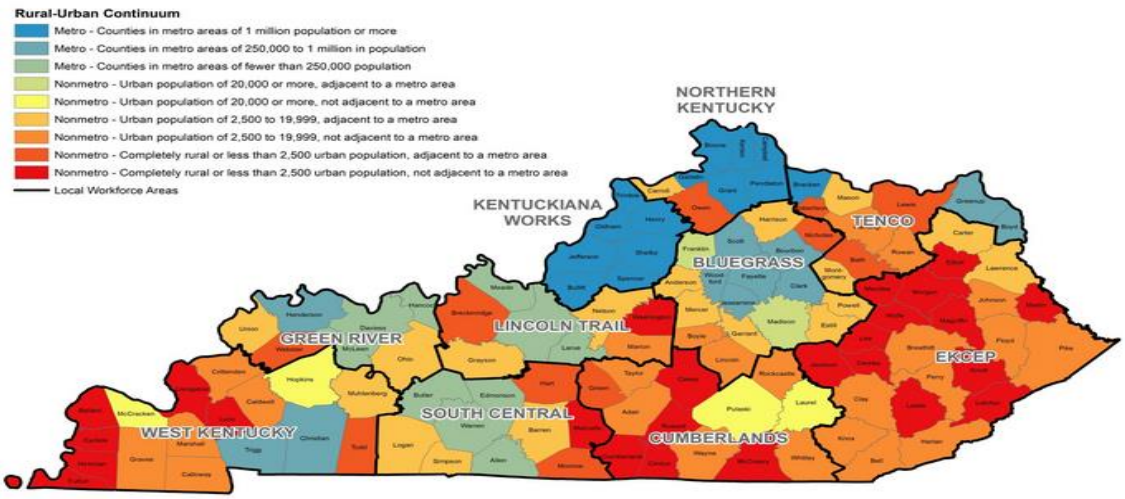
Exhibit 8 Census-based descriptions of county rural or urban status

Metropolitan Counties*		Kentucky Counties
Code	Description	
1	Counties in metro areas of 1 million population or more	Boone, Bracken, Bullitt, Campbell, Gallatin, Grant, Henry, Jefferson, Kenton, Oldham, Pendleton, Shelby, Spencer, Trimble
2	Counties in metro areas of 250,000 to 1 million population	Bourbon, Boyd, Christian, Clark, Fayette, Greenup, Henderson, Jessamine, Scott, Trigg, Woodford
3	Counties in metro areas of fewer than 250,000 population	Allen, Butler, Daviess, Edmonson, Hancock, Hardin, Larue, McLean, Meade, Warren
Nonmetropolitan Counties		
4	Urban population of 20,000 or more, adjacent to a metro area	Franklin, Madison
5	Urban population of 20,000 or more, not adjacent to a metro area	Hopkins, Laurel, McCracken, Pulaski
6	Urban population of 2,500 to 19,999, adjacent to a metro area	Anderson, Barren, Carroll, Carter, Estill, Garrard, Grayson, Harrison, Lawrence, Logan, Mason, Mercer, Montgomery, Muhlenberg, Nelson, Ohio, Powell, Simpson, Union
7	Urban population of 2,500 to 19,999, not adjacent to a metro area	Adair, Bell, Boyle, Breathitt, Caldwell, Calloway, Clay, Crittenden, Fleming, Floyd, Graves, Harlan, Johnson, Knox, Lincoln, Marion, Marshall, Perry, Pike, Rockcastle, Rowan, Taylor, Wayne, Whitley
8	Completely rural or less than 2,500 urban population, adjacent to a metro area	Bath, Breckinridge, Green, Hart, Lewis, Monroe, Nicholas, Owen, Robertson, Todd, Webster
9	Completely rural or less than 2,500 urban population, not adjacent to a metro area	Ballard, Carlisle, Casey, Clinton, Cumberland, Elliott, Fulton, Hickman, Jackson, Knott, Lee, Leslie, Letcher, Livingston, Lyon, McCreary, Magoffin, Martin, Menifee, Metcalfe, Morgan, Owsley, Russell, Washington, Wolfe

*Metropolitan areas were based on the Office of Management and Budget (OMB) delineation as of February 2013.

[29] https://www.ers.usda.gov/data-products/rural-urban-continuum-codes//

Exhibit 9 *Kentucky's Counties along the Rural-Urban Continuum*



Data Source: United States Department of Agriculture Economic Research Service

> Statewide, the number of zip codes considered to be remote is decreasing over time.

Further, using United States Department of Agriculture Economic Research Service definitions for frontier/remote areas[30], analysis of Kentucky's 729 zip codes in 2010 reveals that the number and percent of zip code areas that can be considered "remote" has dropped, compared to the 2000 census (Exhibit 10). That stated, there still are areas within Kentucky that can be considered remote, raising questions about child and family access to services (Exhibit 11). For purposes of the current needs assessment, zip code areas with a FAR level of "4" are considered very low or limited access.

Exhibit 10 *Census-base descriptions of zip code area frontier or remote status*

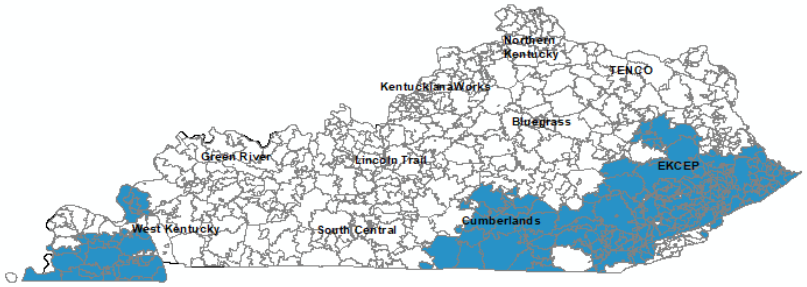
% and N of Zip Codes (2000; n=715)	Frontier/Remote Status	% and N of Zip Codes (2010; n=729)	Change
45% (320)	Level 1: ZIP code areas with majority populations living 60 minutes or more from urban areas of 50,000 or more	**36% (265)**	⬇
39% (280)	Level 2: ZIP code areas with majority populations living 60 minutes or more from urban areas of 50,000 or more people and 45 minutes or more from urban areas of 25,000-49,999 people.	**23% (169)**	⬇
31% (223)	Level 3: ZIP code areas with majority populations living 60 minutes or more from urban areas of 50,000 or more people; and 45 minutes or more from urban areas of 25,000-49,999 people; and 30 minutes or more from urban areas of 10,000- 24,999 people.	**20% (147)**	⬇
22% (159)	Level 4: ZIP code areas with majority populations living 60 minutes or more from urban areas of 50,000 or more people; and 45 minutes or more from urban areas of 25,000-49,999 people; and 30 minutes or more from urban areas of 10,000- 24,999 people; and 15 minutes or more from urban areas of 2,500-9,999 people.	**12% (84)**	⬇

Data Source: United States Department of Agriculture Economic Research Service

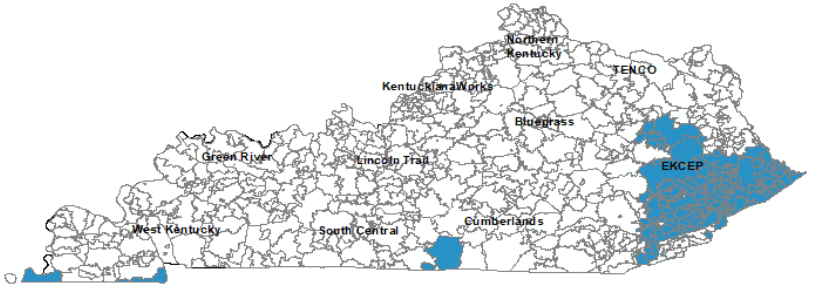
[30] https://www.ers.usda.gov/data-products/frontier-and-remote-area-codes.aspx

Exhibit 11 *Kentucky Counties that Qualify as FAR 1, FAR 2, FAR 3, and FAR 4*

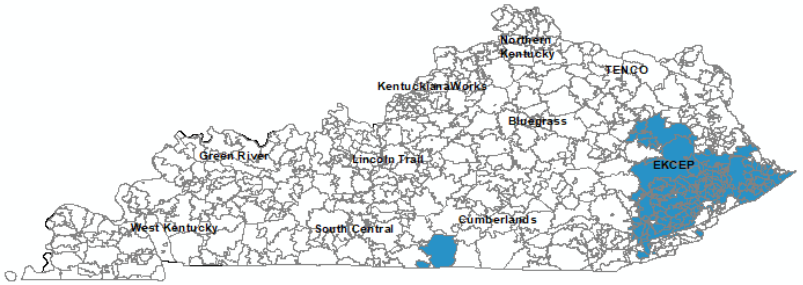
FAR 1: majority populations living 60 minutes or more from urban areas of 50,000 or more



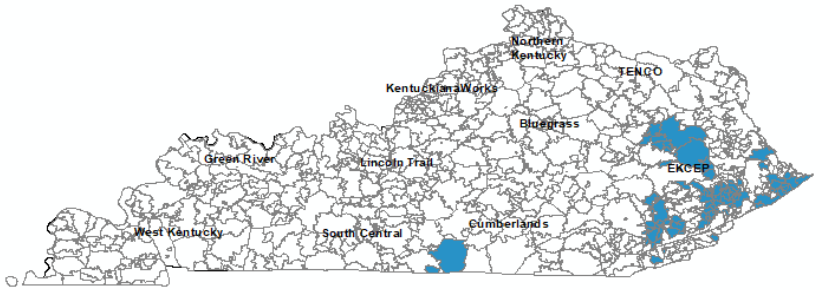
FAR 2: majority populations living 60 minutes or more from urban areas of 50,000 or more people and 45 minutes or more from urban areas of 25,000-49,999 people.



FAR 3: majority populations living 60 minutes or more from urban areas of 50,000 or more people; and 45 minutes or more from urban areas of 25,000-49,999 people; and 30 minutes or more from urban areas of 10,000- 24,999 people.



FAR 4: majority populations living 60 minutes or more from urban areas of 50,000 or more people; and 45 minutes or more from urban areas of 25,000-49,999 people; and 30 minutes or more from urban areas of 10,000- 24,999 people; and 15 minutes or more from urban areas of 2,500-9,999 people.



Data Source: United States Department of Agriculture Economic Research Service

Data from the 2010 Census also inform our understanding of what it means to be "rural" through a calculation of the percent of each county's population that is considered rural. Using data compiled in County Health Rankings reports[31] and located through the Kentucky State Data Center, the population in 41 counties is considered 100% rural. These counties include:

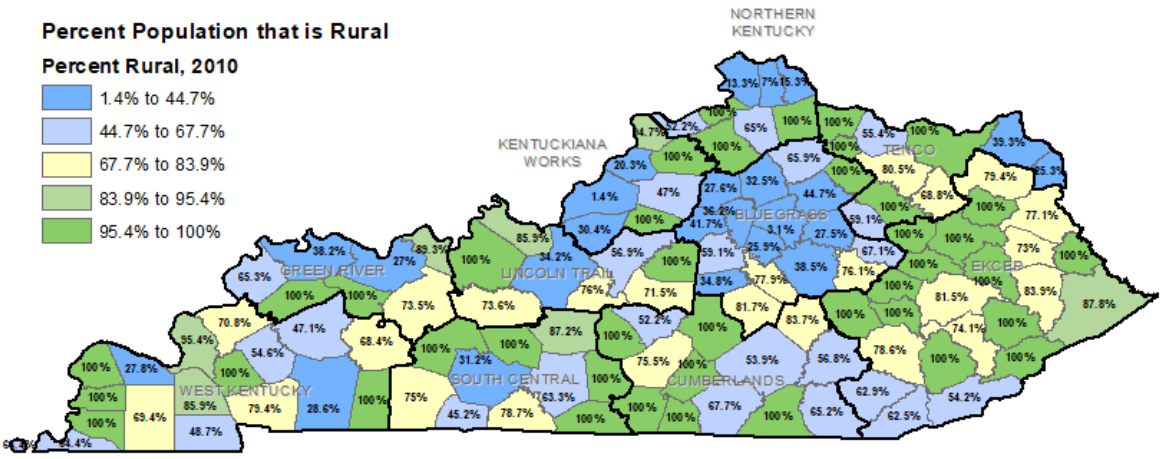
- Ballard
- Bath
- Bracken
- Breckinridge
- Butler
- Carlisle
- Casey
- Clinton
- Cumberland
- Edmonson
- Elliott
- Gallatin
- Green
- Henry
- Hickman
- Jackson
- Knott
- Lee
- Leslie
- Letcher
- Lewis
- Lyon
- Magoffin
- Martin
- McCreary
- McLean
- Menifee
- Metcalfe
- Monroe
- Morgan
- Nicholas
- Owen
- Owsley
- Pendleton
- Robertson
- Russell
- Spencer
- Todd
- Washington
- Webster
- Wolfe

In other counties, less than 20% of the population is considered rural. These counties include:

- Jefferson
- Fayette
- Kenton
- Boone
- Campbell

In the remaining counties, between 20 and 100% of the population is considered rural, as is shown in Exhibit 12.

Exhibit 12 Percent of County Population Considered Rural, 2010



Data source: Kentucky State Data Center, County Health Rankings, United States Census Population Estimates, 2010

[31] An initiative funded in partnership between the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute; http://ksdc.louisville.edu/data-sources-by-topic/health/

Description of the Early Childhood Care and Education System

Kentucky is proud of its achievements that support early childhood, many of which stem from its 1999 strategic plan. The sunsetting 20-year plan introduced the vision: "*All young children in Kentucky are healthy and safe, possess the foundations that will enable school and personal success, and live in strong families that are supported and strengthened within their communities*."

Kentucky has experienced remarkable change and growth in these strategic outcomes, over time. Simultaneously, there also has been tremendous development in the field of early childhood care and education (ECCE), nationally and within the state. This report, produced on the eve of a new strategic vision and plan for Kentucky's youngest children and their parents and caregivers, highlights Kentucky's growth and its opportunities to further serve and protect the welfare of all of its citizens.

Kentucky's System Model

Vision: All children in Kentucky will have the foundation that enables school and personal success and are supported by strong families and communities.

Exhibit 13 presents a visual depiction of Kentucky's early childhood system concept, which was developed during the state's recent Race to the Top Early Learning Challenge grant. As shown in the exhibit, the state conceptualizes the system as having four major components: vision, workforce, high-quality programs, and responsive families and caregivers. Desired outcomes for children can be produced through the effective and efficient interaction of these components.

The daily work of the system is a collective responsibility, requiring the involvement of state and local leaders, programs, services, and of course parents and families. The system culls investments from multiple state agencies or divisions—demonstrating the weaving and leveraging of resources that must occur to maximize system scope and reach. Kentucky's early childhood system is broader than early care and education programs; family and health-focused initiatives also are represented in this assessment. In addition, Kentucky currently is exploring how to position its Birth-to-Five investments within a more global early childhood framework encompassing the Prenatal-Third Grade ("P-to-3") period. Kentucky will expand the systems concepts presented in Exhibit 13 as its P-to-3 conversations continue. An organizational chart of the state's critical partner agencies is presented in Exhibit 14.

> Kentucky is transitioning to a Prenatal-to-Third Grade framework to conceptualize early childhood needs and services.

Exhibit 13 *Kentucky's Draft Systems Model*

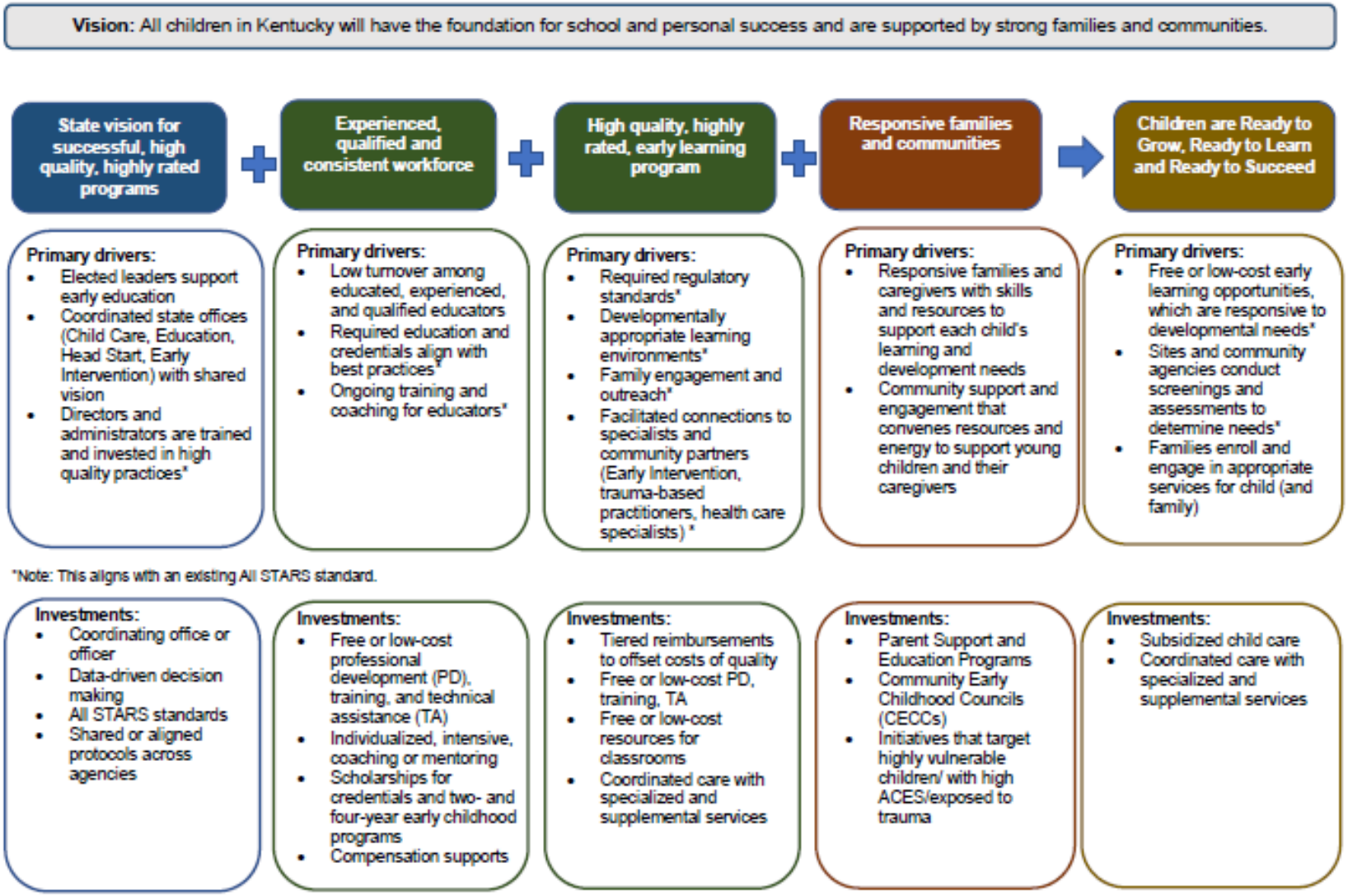
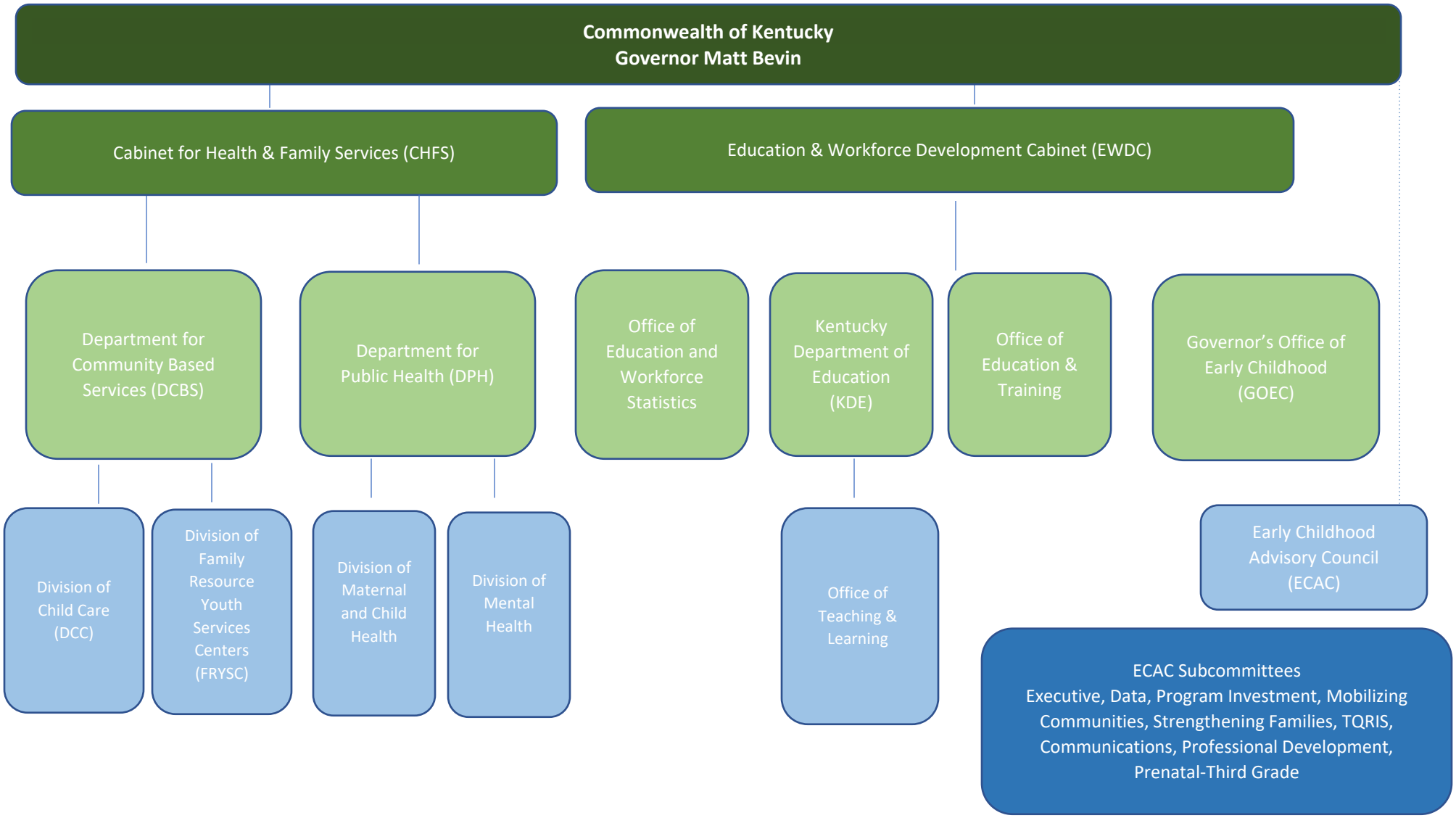


Exhibit 14 *Organizational Chart of State Agencies and Programs*

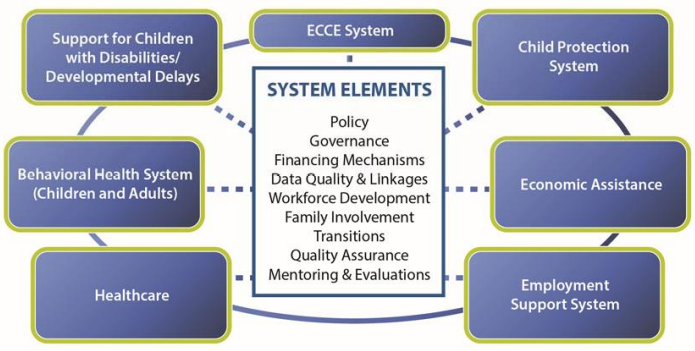


Needs Assessment Scope and Definition of Terms: Synthesis

The preceding section of the Needs Assessment presents data and analyses on the following questions:

1. **What is Kentucky's definition of quality early childhood care and education for this grant?** As noted in the body of this section, Kentucky All STARS is the state's unified approach to defining quality for early childhood care and education programs.
2. **What is Kentucky's definition of early childhood care and education availability for this grant?** Kentucky considers the availability of early care and education programs from three perspective: quality, accessibility, and affordability. Ideally, a child or family's need or desire for a program will be matched by a high-quality programs that is accessible and affordable for the family. In this approach, accessibility is taken to mean programs meet placement, scheduling, or transportation needs of families, among other logistical demands.
3. **What is your definition of vulnerable or underserved children for this grant?** As noted in this section, vulnerability in Kentucky is primarily defined as a function of the federal poverty level. However, state agencies use different levels of poverty to determine eligibility for programs. Kentucky recognizes that vulnerability also may reflect exceptional needs, such as special learning or developmental needs or family exposure to substance or opioid abuse or homelessness; the report contains data examining the prevalence of such needs as well as the services designed to respond to needs. Finally, Kentucky recognizes the intersection of poverty with factors such as race or ethnicity and that children with multiple needs often are the most vulnerable. This is explored in more detail in later sections of this report.
4. **What is your definition of children in rural areas for this grant?** This section provided three approaches to the categorization of counties as "rural," ranging from more encompassing (Office of Rural Health Policy designation of rural counties) to more limited (United States Department of Agriculture, USDA, Frontier and Remote Areas census tracts). Also of note, the USDA's Rural-Urban Continuum Code (RUCC) provides nine levels to help code and analyze needs and services in rural areas. Counties with a RUCC code of 8 or 9 can be interpreted as the most rural.
5. **Do you have a definition or description of your early childhood care and education system as a whole?** *(If yes, what have you used that definition for? What about your broader early childhood system encompassing other services used by families with young children? Do you have a definition for that and, if so, what have you used it for?)* Kentucky's system description has been used to conceptualize feedback loops across programs and partner agencies and to aid stakeholders in thinking about systems as more than collections of services. Kentucky's systems approach is dynamic. Thus, there have been changes in systems concepts and goals over time, as knowledge and awareness of needs and quality in

Figure 2 Federal perspective on a Preschool Birth to Five system that includes support for parents or guardians



services and programs has grown over time. It is important to allow for flexibility in a systems approach, to ensure the ongoing adaptability and responsiveness of the system. The ability to adapt and respond extends not only to programs and services but also to system infrastructure and drivers—including many of the drivers noted in Exhibit 12 and in Figure 2.

6. **Do these definitions differ in key ways from how you have defined any of these in the past? If so, what do you think are the advantages of your definitions for this grant?** Kentucky All STARS, the state's Quality Rating Improvement System (QRIS), is one component of the state's more holistic conceptualization of early childhood care and services. *(More information on Kentucky All STARS is presented in a later section, to further explain how the state supports the availability and accessibility of quality services across the state.)* The emergence of a Prenatal-Third Grade model is relatively current for Kentucky; this is an area of active and ongoing conversations and design. The advantage of working within a Prenatal-Third Grade framework is that it allows Kentucky to be inclusive of all young children and families, including those enrolled in Kentucky All STARS sites as well as children and families opting for stay-at-home or informal care. This approach also allows Kentucky to consider the need for and impact of services from the prenatal period, and thus ensures its youngest citizens are supported as early as possible. At the same time, shifting to a Prenatal-Third Grade framework will require consideration of the alignment of standards and expectations for the entire scope and quality of services, beginning in the prenatal period. The role of the ECAC and of key agency partners (Exhibit 13) in guiding discussion will be critical. By grounding systems work in the ECAC and its partner agencies, Kentucky is able to identify and mitigate many of the challenges that arise when a multi-dimensional, multi-level system is implemented (e.g., multiple funders' requirements, definitions of terms, varying statutes or regulations, varying management protocols, etc.). The forum that the ECAC provides helps move the state towards a more collective approach to systems work.
7. **Are there any challenges you foresee in using these definitions?** *(e.g., are they consistent with how key programs that make up the broader early childhood system define these terms?)* One of the benefits of working under the oversight of the ECAC is that Kentucky's key partners are represented in the process. However, as is shown in this section, practical differences across partner agencies in how definitions are interpreted or implemented affect Kentucky's ability to translate system concepts into unified practices. Kentucky will continue to meet and respond to these challenges moving forward.

Section 2. Focal Populations

Population

This section focuses on the estimated population of children ages birth through four, using data available from the United States Census American Community Survey (ACS) program32. Exhibit 22 presents estimates for total population of children ages birth through four (or, young children), as of 2017. Estimates are presented for the state as a whole, as well as for LWDAs. Exhibit 22 also presents population projections, for the same age range, up to 2030, while Exhibit 23 presents percent changes in population over time.

As can be seen in Exhibit 15, the LWDAs with the highest numbers of young children are Kentuckiana Works and Bluegrass. In contrast, the LWDAs with the lowest numbers are TENCO and Green River. Further, over the next decade (Exhibit 16) Kentuckiana Works is expected to experience the greatest growth in young children, with an estimated 12.6% gain in total number of children ages birth to four. In contrast, ECKEP is expected to experience the greatest decline, with an estimated 18.5% decrease in the total number of children ages birth to four.

> Kentuckiana Works and Bluegrass LWDAs contain the highest numbers of young children ages birth through four. TENCO and Green River LWDAs contain the lowest numbers. The Kentuckiana Works LWDAs is expected to have the greatest growth in this age group, by 2030, while the ECKEP LWDA is expected to experience the greatest decline.

Exhibit 15 Birth through Four Population and Projections

	Estimated Population of Children Ages Birth through Four			
	2000 Census	**2010 Census**	**2017 ACS Estimates**	**2030**
Kentucky	265,901	282,367	276,883	282,277
Bluegrass	43963	49428	50083	53555
Cumberlands	18744	19682	19717	18289
ECKEP	29582	28039	26057	21235
Green River	13553	14456	13675	13085
Kentuckiana Works	58782	62068	62010	69846
Lincoln Trail	17194	18943	17274	18388
Northern Kentucky	28729	31324	29897	31495
South Central	16622	18142	19470	19712
TENCO	11938	12700	12275	12057
West Kentucky	26794	27585	26425	24615

Data Source: Kentucky Center for Statistics

[32] And noting the cautions on interpretation of ACS findings for small(er) areas or counties mentioned earlier in this report.

Exhibit 16 *Estimated Population Changes: Past and Future*

	Estimated Population Change of Children Ages Birth through Four		
	2000-2017 Change	**2010-2017 Change**	**2017-2030 Change**
Kentucky	4.1%	-1.9%	1.9%
Bluegrass	13.9%	1.3%	6.9%
Cumberlands	5.2%	0.2%	-7.2%
ECKEP	-11.9%	-7.1%	-18.5%
Green River	0.9%	-5.4%	-4.3%
Kentuckiana Works	5.5%	-0.1%	12.6%
Lincoln Trail	0.5%	-8.8%	6.4%
Northern Kentucky	4.1%	-4.6%	5.3%
South Central	17.1%	7.3%	1.2%
TENCO	2.8%	-3.3%	-1.8%
West Kentucky	-1.4%	-4.2%	-6.8%

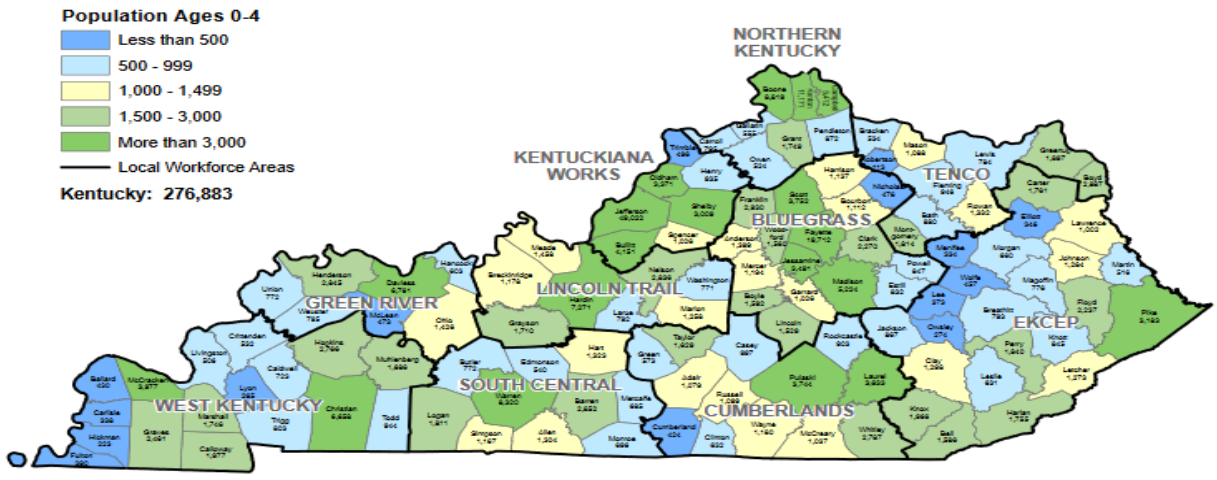
Data Source: Kentucky Center for Statistics

Exhibits 17 and 18 present county-level information on population of children ages birth through four. In Exhibit 17, counties shaded in green are estimated to contain 1,500 or more young children. In contrast, counties shaded in blue are estimated to contain 999 or fewer young children. Counties shaded in yellow are estimated to contain between 1000 and 1,499 young children.

Counties with Highest and Lowest Populations of Children Ages Birth to Four:

Highest: Jefferson, Fayette, and Kenton
Lowest: Robertson, Hickman, and Lyon

Exhibit 17 *Population Map Ages 0-4 (July 2017)*



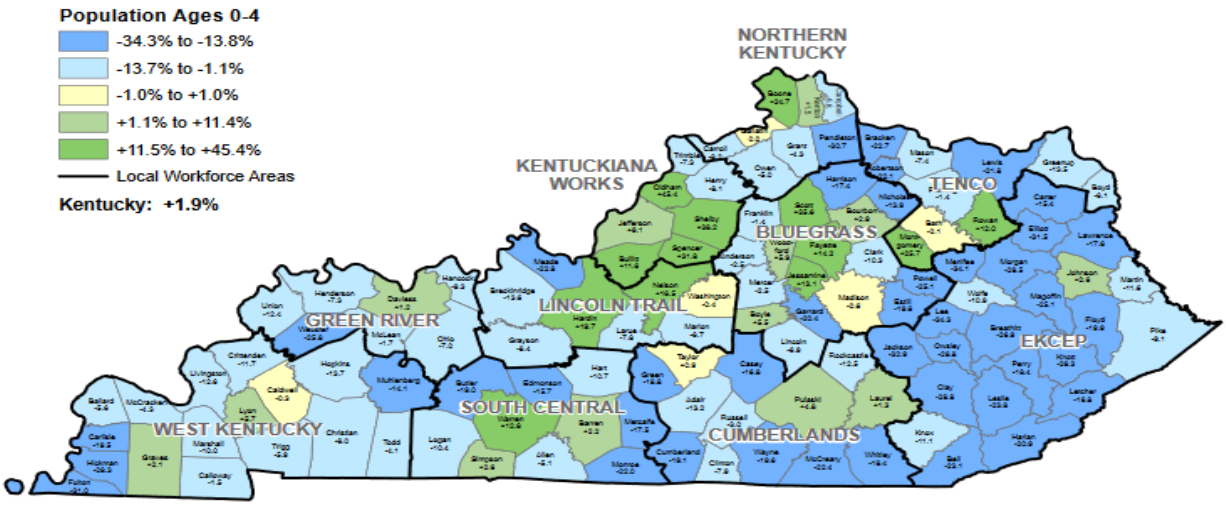
Data Source: Kentucky Center for Statistics

As shown in Exhibit 18, by 2030, some counties will experience an estimated decrease in total numbers of young children (counties shaded in blue) while others will experience an estimated increase (counties shaded in green). Counties shaded in yellow are estimated to maintain their 2017 population numbers, plus or minus one percent.

Anticipated Population Change for Young Children, by County

Highest Increasing: Oldham, Shelby, and Scott
Highest Decreasing: Lee, Menifee, and Jackson

Exhibit 18 Population Projections: Ages 0-4 from 2017 to 2030



Data Source: Kentucky Center for Statistics

Kentucky's Vulnerable or Underserved Children

Poverty or Low-Income Status

Poverty is the lens through which vulnerability is most often identified in Kentucky, as shown through the presentation of program eligibility requirements in the prior section. This perspective on vulnerability was further informed by participants in Preschool Development Grant focus groups, which were conducted in February and March 2019. To wit, focus group participants identified the working poor and participants in rural communities who have little to no access to resources as vulnerable as well as refugee populations and immigrants, families with special needs children, and grandparents raising grandchildren. Additional data on these populations is presented in this report.

As a state, Kentucky recently ranked fifth in the nation with regard to total population in poverty. As reported in the Richmond Register (September 13, 2018[33]), 17.2 percent of Kentucky's total population and 22.4 percent of children lived in poverty (which was an improvement from 2016,

[33] https://www.richmondregister.com/news/kentucky-poverty-rate-improving-still-among-worst-though/article_71a9218b-3928-5ae7-b5e9-ce138c96678d.html

when 18.5 percent of the population and 25 percent of children were considered in poverty). In contrast, the national poverty rate for 2017 was 12.3 percent. As of 2017, twenty-eight percent of Kentucky children (under age 18) were in families that received some form of public assistance (Supplemental Security Income (SSI), cash public assistance income, or Food Stamps/Supplemental Nutrition Assistance Program), in the prior 12 months[34].

Poverty is not consistent throughout the state, or when analyzed by age, race or ethnicity, or family circumstance. Exhibit 19 presents data on Kentucky's estimated percent of families that have young children and also are living in poverty (estimated 22.5% in the American Community Survey 2017 five-year estimates). Of note, from 2010 to 2017, there was a slight decline (1.2%) in the estimated percent of families with children under the age of five who were living in poverty, accompanied by an increase of almost $7000 in the median family income. This is an encouraging trend.

Exhibit 19 Percent of Families with Children Under Five Living in Poverty and Median Family Income

	Estimated Percent of Families with Children under Five Living in Poverty					
	2006-2010 Estimates		2013-2017 Estimates		Change 2010-2017	
	%	Median Family Income	%	Median Family Income	%	Median Family Income
Kentucky	23.7	$52,046	22.5	$59,003	-1.2%	$6,957

Data Sources: American Community Survey Five-Year Estimates 2006-2010 Table DP03; Five-Year Estimates 2013-2017; Table DP03

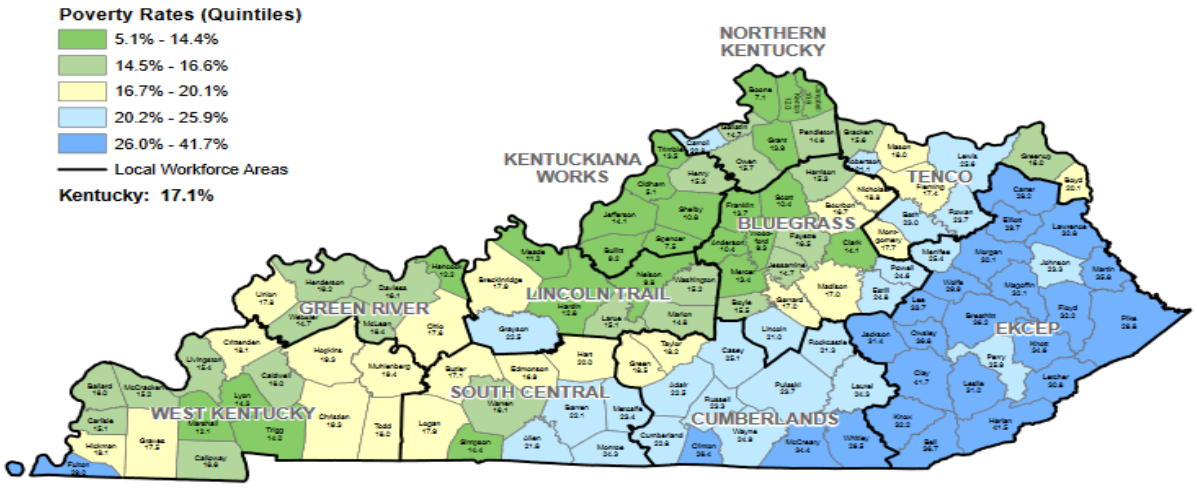
Exhibit 20 presents poverty maps illustrating the distribution of poverty by county, defined as the percent of the total population estimated to be living in poverty as of 2017. In this exhibit, counties that are shaded in blue have higher levels of poverty while counties shaded in green have lower levels of poverty. Of note, most of the counties in eastern Kentucky (i.e., the Appalachian region) experience relatively high levels of poverty among the overall population.

Counties with Highest and Lowest Proportions of Poverty

Highest: Clay, Harlan, and Owsley
Lowest: Oldham, Boone, and Spencer

[34] Cited in Kids Count, using data from the American Community Survey: https://datacenter.kidscount.org/data/tables/8857-children-in-families-that-receive-public-assistance?loc=19&loct=2#detailed/2/19/false/871,870,573,869,36,133,35,16/any/17739,17740

Exhibit 20 Poverty Map 2017



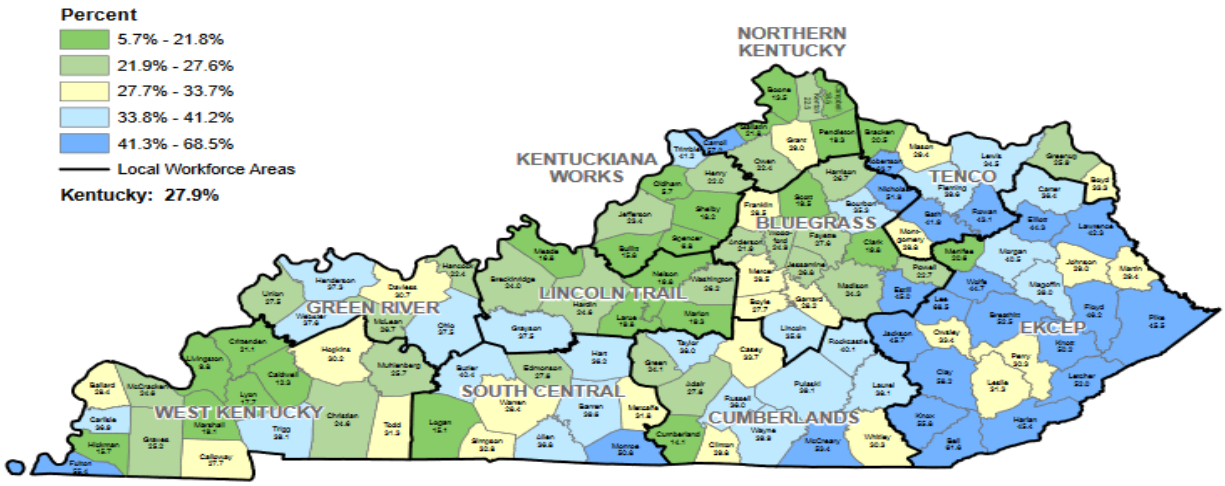
Data Source: Kentucky Center for Statistics

Exhibit 21 presents county-level data on children (under age 6) who were experiencing poverty, calculated by the ratio of income to poverty at 100% of the Federal Poverty Level (FPL)[35]. As in Exhibit 20, the results displayed in Exhibit 21 present findings in quintiles. Counties that are shaded in blue have higher levels of poverty while counties shaded in green have lower levels of poverty. It is important to note the values (i.e., the percent of children in poverty) represented by each quintile, as these are different than the values (i.e., the percent of the overall population in poverty) presented in Exhibit 20. Also, the distribution of counties within quintiles varies for children in poverty (Exhibit 21) than for the overall population (Exhibit 20). While the data Exhibit 20 suggest the highest block of poverty (for the overall population) is eastern Kentucky, the data in Exhibit 21 suggest a more variable pattern (for children under 6).

> The percent of children under 6 experiencing poverty at 150% and 200% of FPL are presented in Appendices D1 and D2.

[35] Per United States Census: The number of persons within an income to poverty ratio category…has 6 categories, which range from under 0.50 to 2.00 and over. In general, a ratio less than 1 means that the income is less than the poverty level. When the ratio equals 1, the income and poverty level are the same, and when the ratio is greater than 1, the income is higher than the poverty level. For example, person's with income below 50% of poverty indicates their income is half the poverty level. These are the poorest of the poor.
Source: http://neocando.case.edu/cando/pdf/CensusPovertyandIncomeIndicators.pdf

Exhibit 21 *Children Experiencing Poverty in 2017: 100% or Less of the Federal Poverty Level (FPL)*



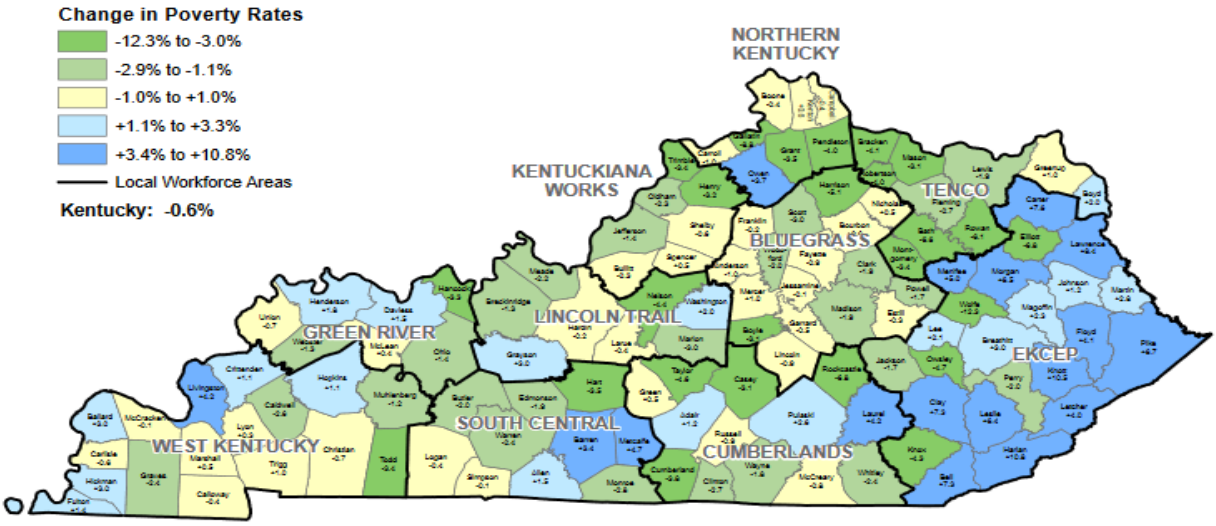
Data Source: Kentucky Center for Statistics

Exhibit 22 presents the change in the percentage of the total population living in poverty, from 2010 to 2017. Counties that are shaded in blue have experienced increases in the percent of the population living in poverty while counties shaded in green have experienced decreases in the percent of the population living in poverty. Counties shaded in yellow have maintained the percent of their population living in poverty, plus or minus one percent. Of note, increases in poverty from 2010 to 2017 were not primarily in eastern Kentucky; central and western Kentucky were affected as well.

Counties with Greatest Increases and Decreases in Poverty 2010-2017

Greatest Increase: Harlan, Knott, and Lawrence
Greatest Decrease: Wolfe, Gallatin, Rockcastle, and Elliott

Exhibit 22 *Change in Poverty: 2010-2017*



Data Source: Kentucky Center for Statistics

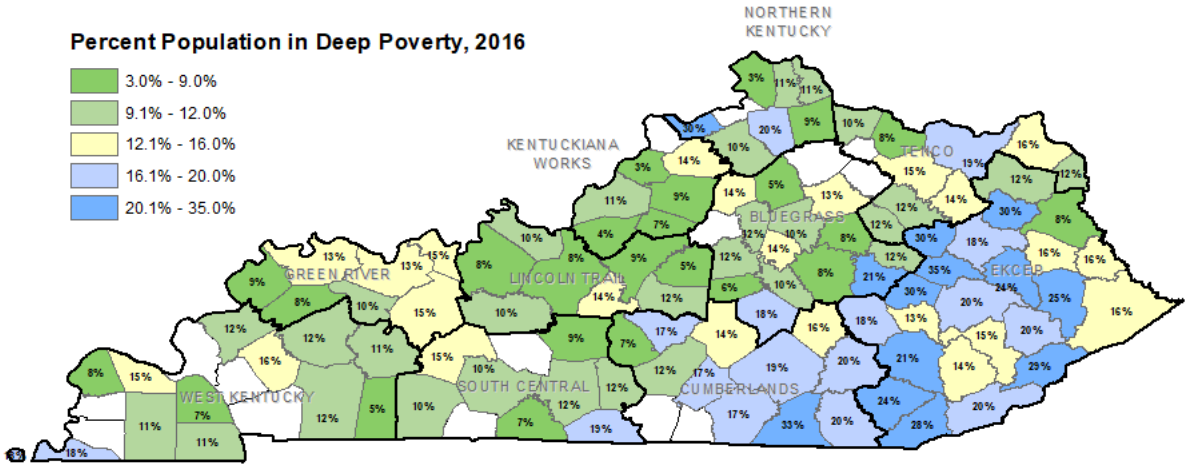
Deep Poverty

Counties with Highest and Lowest Incidence of Deep Poverty

Highest: Wolfe and McCreary
Lowest: Boone, Oldham, and Bullitt

For the current report, deep poverty is defined as individuals living at less than 50% of FPL. Data supplied by Kentucky Youth Advocates and available on the Kids Count data warehouse are presented in Exhibit 23. In this exhibit, counties with higher percentages of children living in deep poverty are shaded in blue while counties with lower percentages are shaded in green[36]. As with earlier poverty maps, it is important to note the values (in the form of percentages) represented by each quintile; a smaller proportion of children live in deep poverty, compared to all children under six. However, the greatest block of counties where deep poverty exists is eastern Kentucky, which aligns with data on the overall proportion of the population experiencing poverty.

Exhibit 23 Deep Poverty in 2016



Data Source: Kids Count Children Living in Deep Poverty, 2016, Five-year estimates; a lack of shading indicates missing data

Race/Ethnicity

Exhibit 24 presents an overview of population by race, as well as changes over the past decade. As can be seen, representation of different racial groups has remained relatively steady over time, within the state and within LWDAs. Exhibit 24 also presents information on decreases in total population in the ECKEP and West Kentucky LWDAs.

[36] Data were not available for some counties; these counties have no shading in the exhibit.

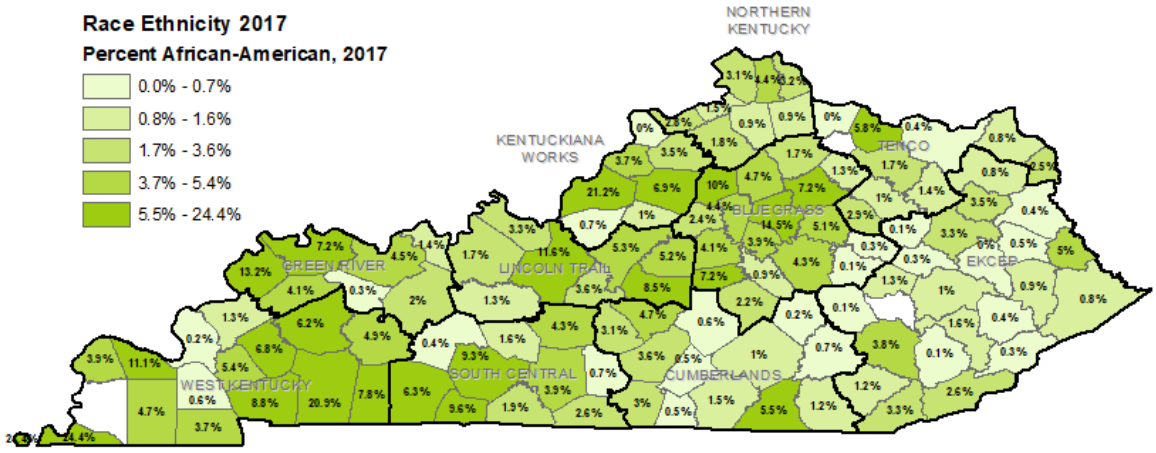
Exhibit 24 *Estimated Population, by Race*

	Estimated Race/Ethnic Representation													
	2008-2012 ACS Estimates					2013-2017 ACS Estimates					Change			
	Estimated Population	One Race			% Two or more races	Estimated Population	One Race			% Two or more races	Estimated Population	One Race			% Two or more races
		% White	% Black	% Other			% White	% Black	% Other			% White	% Black	% Other	
Kentucky	4,323,202	88.1	7.8	2.4	1.7	4,408,203	87.3	8.0	2.5	2.2	85,001	-0.8	0.2	0.1	0.5
Bluegrass	771,438	85.9	8.4	3.7	2.0	806,263	85.1	8.4	3.8	2.6	34,825	-0.8	0.1	0.1	0.6
Cumberlands	318,926	96.0	1.7	1.1	1.2	321,399	95.6	1.7	1.3	1.3	2,473	-0.3	0.0	0.2	0.1
ECKEP	460,024	97.1	1.4	0.7	0.8	442,077	96.9	1.4	0.7	0.9	-17,947	-0.2	0.0	0.1	0.1
Green River	213,692	91.7	5.2	1.5	1.5	215,728	91.2	5.1	1.5	2.3	2,036	-0.5	-0.2	0.0	0.7
Kentuckiana Works	959,751	77.9	16.7	3.2	2.2	995,850	77.1	17.0	3.3	2.6	36,099	-0.9	0.3	0.1	0.5
Lincoln Trail	268,580	88.2	7.4	2.2	2.2	272,838	87.5	7.1	2.4	3.0	4,258	-0.7	-0.3	0.3	0.7
Northern Kentucky	439,139	92.7	3.2	2.5	1.6	452,836	92.0	3.3	2.6	2.0	13,697	-0.7	0.2	0.1	0.4
South Central	284,298	89.7	6.3	2.7	1.3	296,562	88.5	6.2	3.4	1.9	12,264	-1.2	-0.1	0.7	0.6
TENCO	202,100	95.5	2.2	1.0	1.3	202,206	95.3	2.0	0.9	1.7	106	-0.2	-0.2	0.0	0.4
West Kentucky	405,254	87.8	8.5	1.6	2.1	402,444	87.1	8.9	1.8	2.3	-2,810	-0.7	0.3	0.1	0.2

Data Source: US Census Bureau, American Community Survey (ACS), 2008-2012 and 2013-2017 5-Year Estimates, CP-05

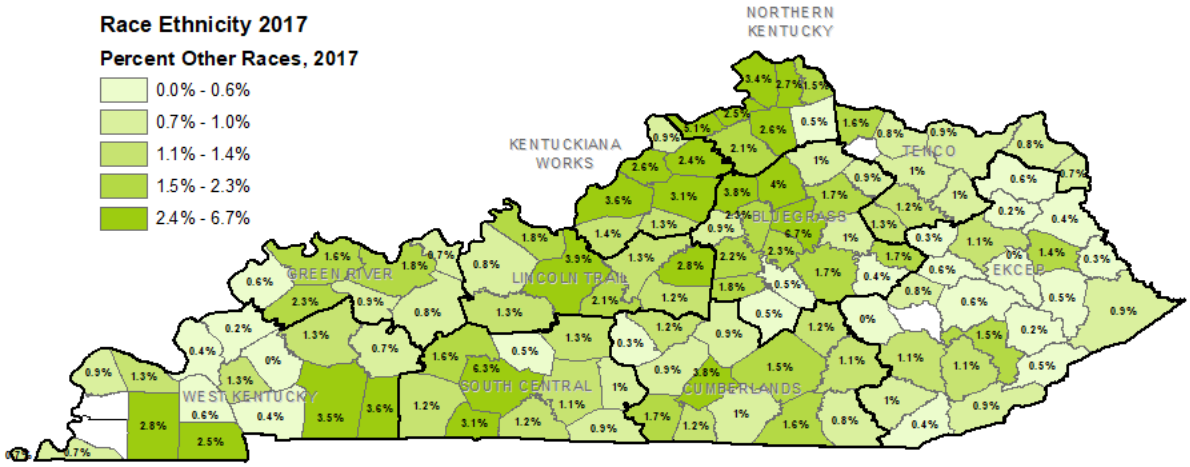
Exhibits 25 through 27 present the distribution of different populations (other than White) across the state, as assessed in the 2017 American Community Survey. As can be seen, individuals that are African-American, "other race," or two or more races are located in higher percentages in the Western half of the state.

Exhibit 25 *Percent Population Identifying as African-American, by County, 2017*



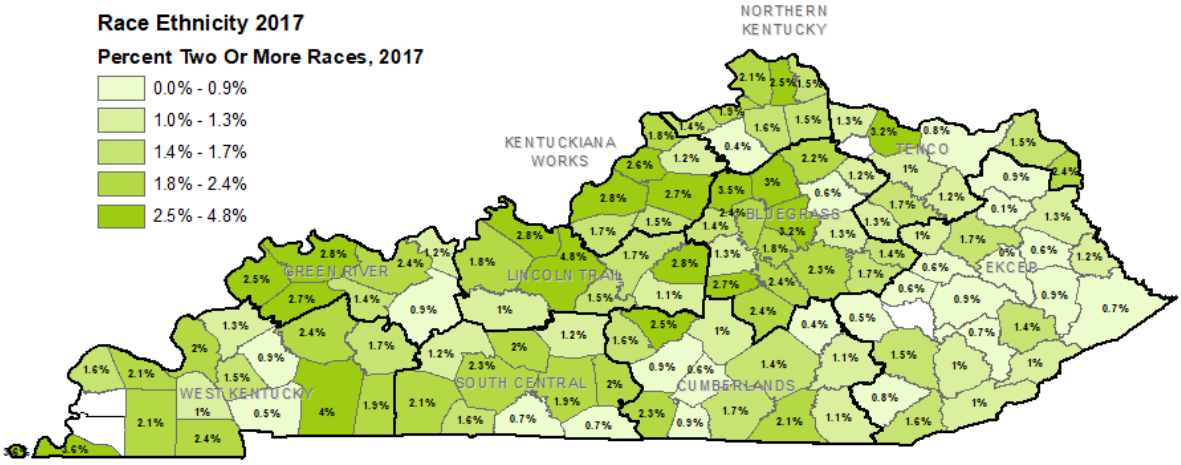
Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, CP-05; a lack of shading indicates missing data

Exhibit 26 *Percent Population that is "Other Race," by County, 2017*



Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, CP-05; a lack of shading indicates missing data

Exhibit 27 *Percent Population Identifying as Two or More Races, by County, 2017*



Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, CP-05; a lack of shading indicates missing data

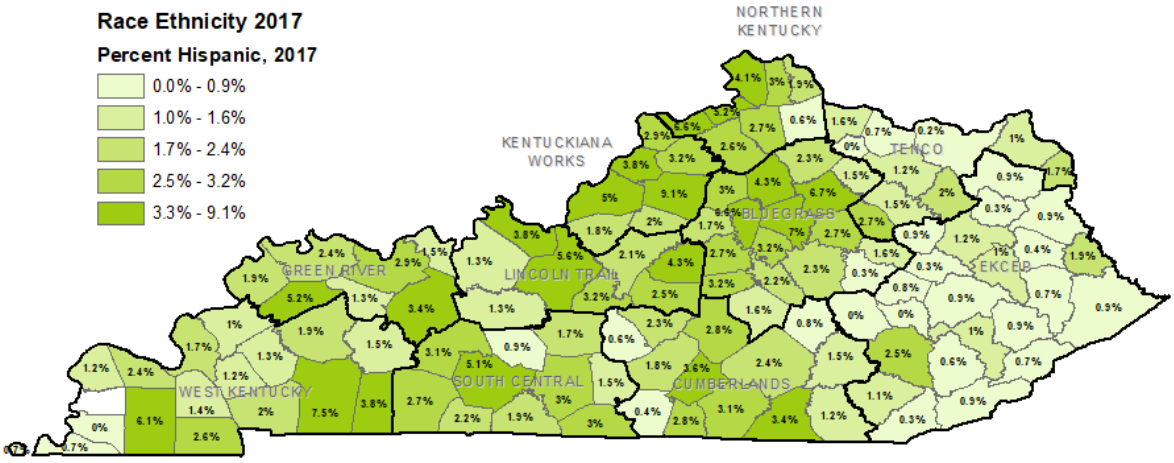
The proportion of the total population that identifies as Hispanic or Latino is presented in Exhibit 28. There have been slight but positive increases in the Hispanic population over time. The LWDAs with the highest percentages are Bluegrass and Kentuckiana Works. The map presented in Exhibit 29 presents available data on the distribution of the Hispanic population across the state. As is shown, the highest percentages of Hispanic individuals are in the western part of the state.

Exhibit 28 *Hispanic/Latino Population Estimates*

	Estimated Hispanic/Latino Representation					
	2008-2012 ACS Estimates		2013-2017 ACS Estimates		Change	
	Estimated Population	% Hispanic	Estimated Population	% Hispanic	Estimated Population	% Hispanic
Kentucky	4,323,202	3.0%	4,408,203	3.4%	85,001	0.4%
Bluegrass	771,438	4.3%	806,263	4.6%	34,825	0.3%
Cumberlands	318,926	1.7%	321,399	2.1%	2,473	0.4%
ECKEP	460,024	0.8%	442,077	0.9%	-17,947	0.1%
Green River	213,692	2.5%	215,728	2.8%	2,036	0.3%
Kentuckiana Works	959,751	4.1%	995,850	4.8%	36,099	0.7%
Lincoln Trail	268,580	3.3%	272,838	3.7%	4,258	0.4%
Northern Kentucky	439,139	2.7%	452,836	3.1%	13,697	0.4%
South Central	284,298	3.1%	296,562	3.5%	12,264	0.4%
TENCO	202,100	1.5%	202,206	1.5%	106	--
West Kentucky	405,254	2.9%	402,444	3.3%	-2,810	0.4%

Data Source: US Census Bureau, American Community Survey (ACS), 2008-2012 and 2013-2017 5-Year Estimates, CP-05

Exhibit 29 *Percent Population Identifying as Hispanic or Latino, by County, 2017*



Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, CP-05; a lack of shading indicates missing data

Recency of Immigration

According to the American Community Survey, 98% of Kentucky's children (under age 18) are native born[37]. Also according to the American Community Survey[38], 41% of Kentucky's child population (under age 18) who are either foreign-born or have at least one resident parent who is foreign-born have at least one parent from Latin America. This is followed by 27% who have at least one parent from Asia, 13% who have at least one parent from Africa, and 11% with at least one parent from Europe.

Data from the American Community Survey also provide insight into the percent and distribution of individuals who are considered foreign-born (Exhibit 30). Overall (but not exclusively), central and western counties tend to have larger proportions of foreign-born residents.

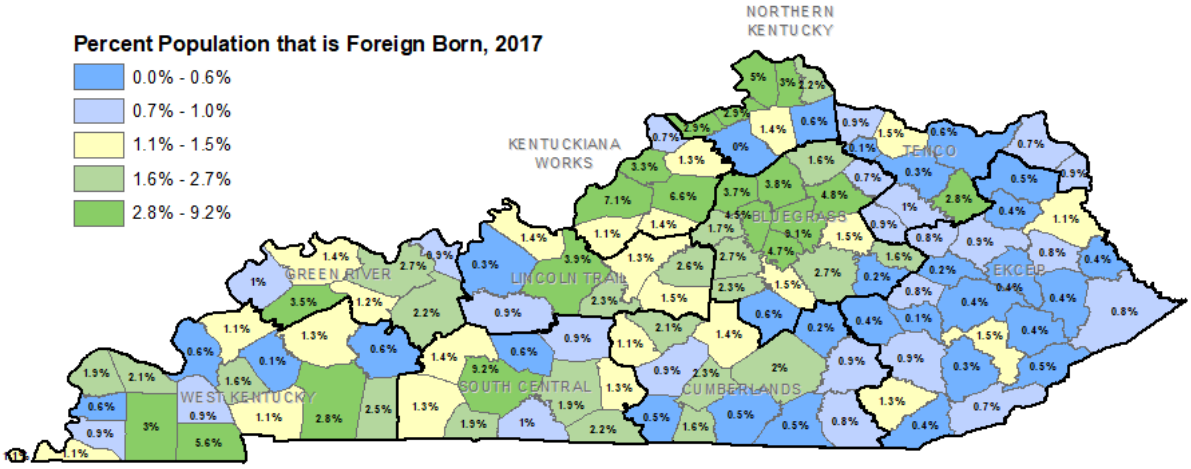
Counties with Highest and Lowest Proportions of Foreign-Born Individuals

Highest: Warren, Fayette, and Jefferson
Lowest: Owen, Caldwell, Owsley, and Robertson

[37] Cited in Kids Count: https://datacenter.kidscount.org/data/tables/116-child-population-by-nativity?loc=19&loct=2#detailed/2/19/false/871,870,573,869,36,868,867,133,38,35/76,77/447,448

[38] Cited in Kids Count: https://datacenter.kidscount.org/data/tables/5923-children-in-immigrant-families-by-parents-region-of-origin?loc=19&loct=2#detailed/2/19/false/871,870,573,869,36,868,867,133,38,35/1767, 1768,1769,1770/ 12549,12550

Exhibit 30 *Percent of the Population that is Foreign Born, By County, 2017*



Data Source: United States Census American Community Survey 2017 Five Year Estimates Table DP02

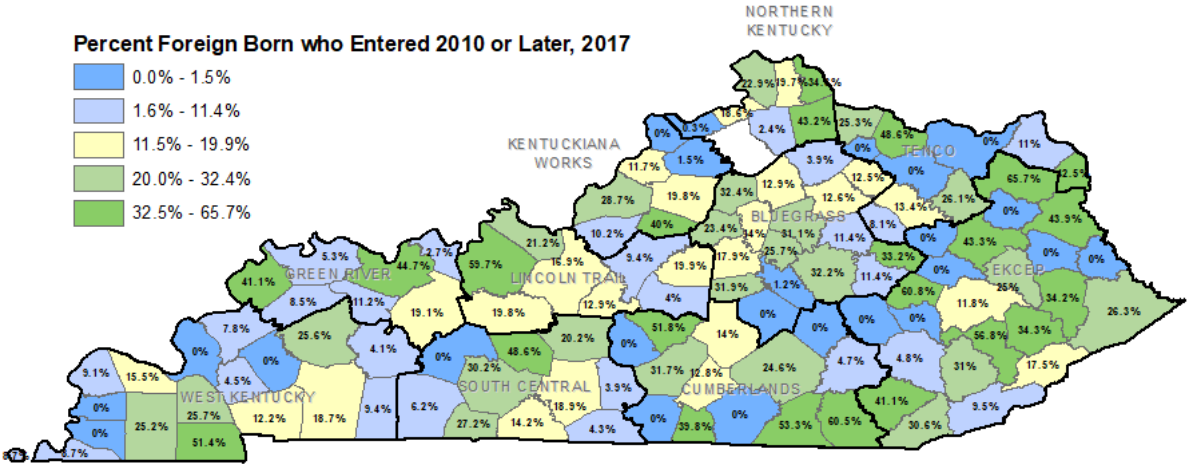
It is interesting to note that, while eastern Kentucky tends to have lower overall percentages of immigrants contributing to its population, at least some eastern counties are experiencing relatively high rates of in-migration. To wit, of the 98 counties (Exhibit 31) that had immigrants since 2010, the counties in which the highest proportion of immigrants arrived since 2010 (shaded in green) included:

- Carter (65.7%)
- Lee (60.8%)
- Whitley (60.5%)
- Breckinridge (59.7%)
- Perry (56.8%)
- McCreary (53.3%)
- Taylor (51.8%)
- Calloway (51.4%)
- Mason (48.6%)
- Edmonson (48.6%)

The counties in which the lowest proportion of immigrants arrived since 2010 (shaded in blue) included:

- Carroll (.3%)
- Garrard (1.2%)
- Henry (1.5%)
- Grant (2.4%)
- Hancock (2.7%)
- Metcalfe (3.9%)
- Harrison (3.9%)
- Marion (4%)
- Muhlenberg (4.1%)
- Monroe (4.3%)

Exhibit 31 *Percent of the Population that is Foreign Born and Emigrated 2010 or Later, By County, 2017*



Data Source: United States Census American Community Survey 2017 Five Year Estimates Table DP02; a lack of shading indicates missing data

Home or Primary Language

> Other than English, the most prevalent language spoken by students in Kentucky public schools is Spanish. The largest increase in English language learners is in the South Central LWDA.

One measure of the diversity of Kentucky's population is primary language. According to the United States Census, 5.3% of the population older than age five speaks a language other than English at home[39]. Further, the Kentucky Department of Education reports that 135 languages, other than English, are spoken at home by its students[40]. Primary among these is Spanish (61% of English-Learner students), followed by Arabic (6%), Somali (4%), Swahili (3%), Nepali (2%), and Japanese (2%). The remaining languages together account for an additional 22 percent, approximately, of the languages other than English. Exhibit 32 presents the estimated households in which English is not the primary language, by LWDA. As can be seen, the highest prevalence, in 2019, was in Kentuckiana Works, followed by Bluegrass. The highest gains in the English-Learner population, between 2014 and 2019, were experienced in South Central, followed by Green River.

Exhibit 32 *Estimated Households in which English in Not the Primary Language, 2014 to 2019*

	Estimated Households where English is Not the Primary Language						Change
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2014-2019**
Kentucky	94597	95287	96425	98107	97890	99985	6%
Bluegrass	23399	23630	23874	24093	23837	23839	2%
Cumberlands	2935	2743	2777	2942	3142	2943	--
ECKEP	2843	2814	3011	3031	2972	3218	13%

[39] https://www.census.gov/quickfacts/KY

[40] https://education.ky.gov/comm/edfacts/Pages/default.aspx

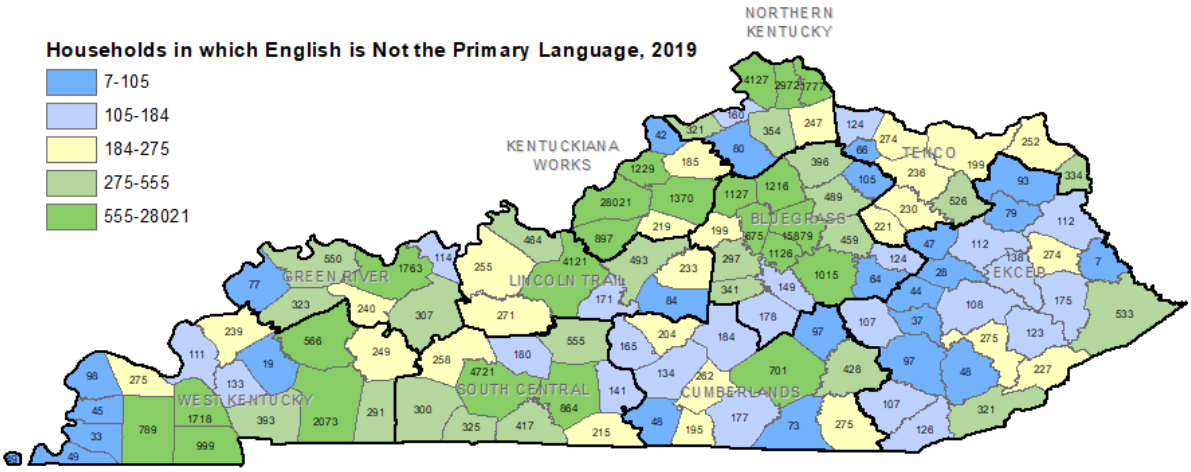
Green River	2953	3071	3154	2980	3149	3374	14%
Kentuckiana Works	29383	30158	30192	30648	31615	31963	9%
Lincoln Trail	5880	6308	6280	6756	6345	6092	4%
Northern Kentucky	9866	10005	10167	10254	9670	10038	2%
South Central	6907	7021	7261	7875	7613	7976	15%
TENCO	2243	1854	2088	2171	2248	2462	10%
West Kentucky	8188	7683	7621	7357	7299	8080	-1%

Data Source: Kentucky Center for Statistics, Early Childhood Profiles, 2014 to 2019

Counties with Highest and Lowest Numbers of English Language Learners
Highest: Jefferson, Fayette, and Warren
Lowest: Martin, Caldwell, and Wolfe

Using data compiled by the Kentucky Center for Statistics, Exhibit 33 presents county-level data on the prevalence of English as a Second Language. Not surprisingly, counties that have larger overall populations and higher proportions of immigrants also have higher numbers of households in which English is not the primary language. These include Jefferson County (home to the city of Louisville) and Fayette County (home to Lexington). These also include counties with a strong agricultural base (including horse breeding or racing). Counties with higher numbers of households in which English is not the primary language are shaded in green; counties with lower numbers are shaded in blue.

Exhibit 33 *Estimated Households in which English in Not the Primary Language, by County, 2019*



Data Source: Kentucky Center for Statistics, Early Childhood Profiles, 2014 to 2019

Race and Poverty

Race and poverty are deeply entwined. Exhibits 34 and 35 present data that disaggregate poverty by racial or ethnic identity. As shown in Exhibit 34, many groups experienced a decline in poverty between 2013 and 2017 (specifically, the percent of the total population living below the poverty level), but there still were differences across groups with regard to the total population living below poverty. In 2017, for example, 33.1% of individuals identified as "some other race" on the American Community Survey were living below the poverty level, compared to 16.1% of individuals

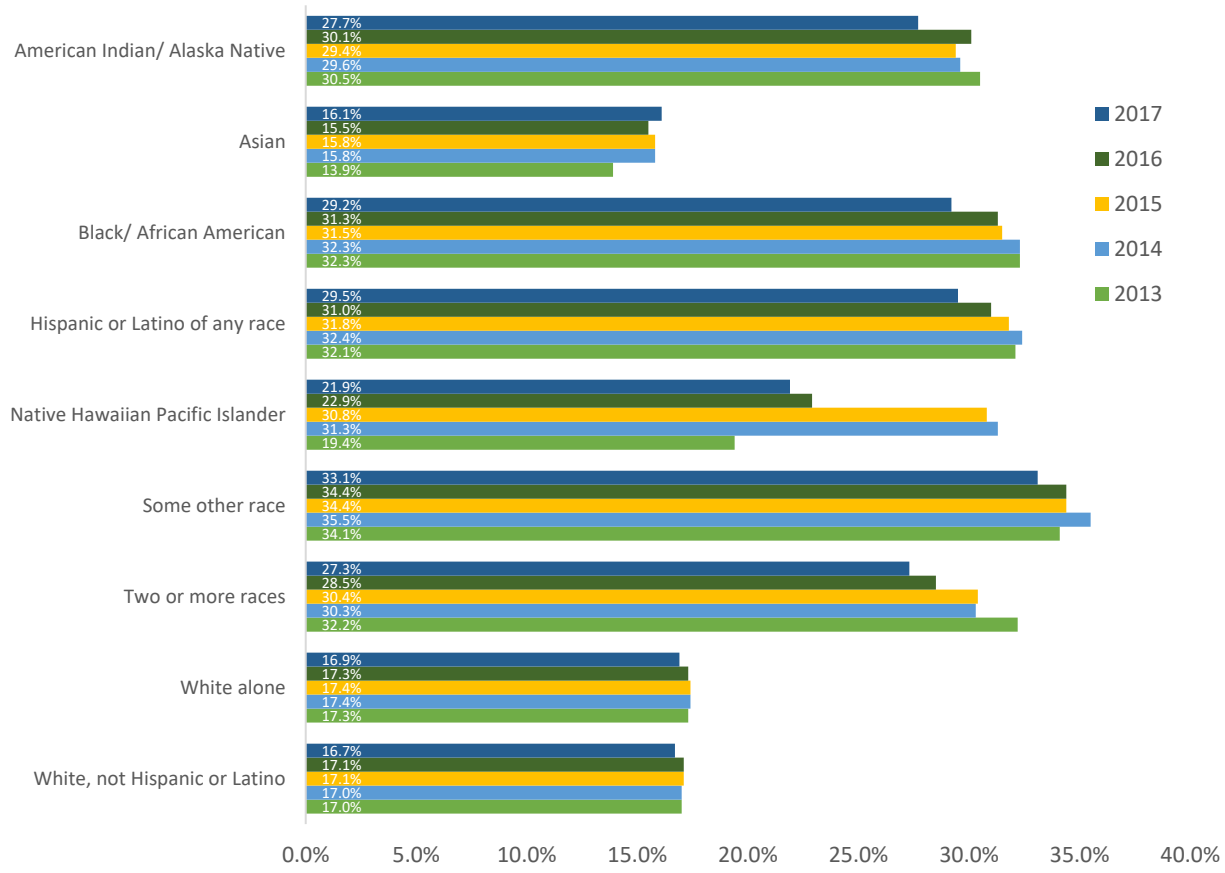
identified as Asian. Between 2013 and 2017, the Asian population experienced an increase in the population living below poverty, while individuals of "some other race" experienced a decline. The same information is presented graphically in Exhibit 35, which highlights the fact that some racial or ethnic groups experience up to twice the levels of poverty as others.

Exhibit 34 Percent Total Population Below Poverty Level, 2013 to 2017

	Percent total population below poverty level					Change
	2013	2014	2015	2016	2017	2013 to 2017
American Indian/ Alaska Native	30.5%	29.6%	29.4%	30.1%	27.7%	-2.8%
Asian	13.9%	15.8%	15.8%	15.5%	16.1%	2.2%
Black/ African American	32.3%	32.3%	31.5%	31.3%	29.2%	-3.1%
Hispanic or Latino of any race	32.1%	32.4%	31.8%	31%	29.5%	-2.6%
Native Hawaiian Pacific Islander	19.4%	31.3%	30.8%	22.9%	21.9%	2.5%
Some other race	34.1%	35.5%	34.4%	34.4%	33.1%	-1%
Two or more races	32.2%	30.3%	30.4%	28.5%	27.3%	-4.9%
White alone	17.3%	17.4%	17.4%	17.3%	16.9%	-.4%
White, not Hispanic or Latino	17%	17%	17.1%	17.1%	16.7%	-.3%

Data Source: American Community Survey Five Year Estimates; Table S1701

Exhibit 35 *Percent Population Below Poverty Level, by Race, 2013 to 2017*



Data Source: American Community Survey Five Year Estimates; Table S1701

Statistics specific to the 2013-2017 American Community Survey five-year estimates are presented in Exhibit 36. In this exhibit, data are presented by racial or ethnic group and by LWDA. These data indicate that the experience of poverty by different racial or ethnic groups may not be the same across the state—among Caucasians, for example, the overall percent of the population living below the poverty level was 16.9%. The range, however, was 10.4% in Kentuckiana Works to 30.2% in ECKEP. This aligns with the poverty maps presented earlier in this report.

Exhibit 36 *Estimated Percent of Population Below Poverty Level by Race and LWDA, 2017*

	Estimated Percent of Population Below Poverty, 2017								
	American Indian Alaska Native	Asian	Black/ African-American	Hispanic or Latino	Native Hawaiian or Pacific Islander	Some Other Race	Two or More Races	White Alone	White not Hispanic
Kentucky	27.7%	16.1%	29.2%	29.5%	21.9%	33.1%	27.3%	16.9%	16.7%
Bluegrass	32.2%	13.6%	30.9%	35.0%	11.7%	35.1%	28.7%	15.7%	15.2%
Cumberlands	40.2%	18.8%	28.6%	30.5%	91.6%	40.5%	35.1%	24.4%	24.4%
ECKEP	22.9%	22.5%	46.2%	31.6%	8.0%	37.9%	35.4%	30.2%	30.2%

Green River	24.2%	28.9%	28.9%	33.5%	0.0%	17.6%	34.1%	17.1%	16.6%
Kentuckiana Works	21.9%	14.8%	27.8%	24.6%	3.4%	17.6%	21.7%	10.4%	9.7%
Lincoln Trail	5.5%	14.1%	19.0%	29.2%	3.9%	34.9%	25.9%	14.7%	14.4%
Northern Kentucky	30.1%	10.7%	33.4%	29.1%	0.0%	40.5%	23.3%	11.3%	11.1%
South Central	27.1%	32.0%	30.8%	34.3%	50.0%	38.5%	32.4%	18.2%	17.9%
TENCO	42.1%	5.1%	23.0%	26.2%	0.0%	39.0%	35.9%	20.6%	20.7%
West Kentucky	29.8%	16.7%	34.5%	26.6%	33.5%	44.3%	28.4%	16.0%	15.9%

Data Source: American Community Survey Five Year Estimates 2013-2017; Table B17020

Exhibit 37 presents estimated numbers of young children living below poverty level, by race and LWDA, for 2017. LWDAs with higher overall populations will have higher numbers of children in poverty. However, the data are informative with regard to absolute need, by racial or ethnic group, across the state.

Exhibit 37 Estimated Children Under Age 6 Below Poverty Level by LWDA, 2017

	Estimated Number of Children Under Age 6 Below Poverty, 2017								
	American Indian Alaska Native	Asian	Black/ African-American	Hispanic or Latino	Native Hawaiian or Pacific Islander	Some Other Race	Two or More Races	White Alone	White not Hispanic
Kentucky	216	970	12248	8162	89	2110	6829	67161	62150
Bluegrass	129	125	2990	2290	*	852	1400	9751	8676
Cumberlands	*	26	*	526	66	55	535	7811	7392
ECKEP	5	45	189	144	*	10	219	13178	13055
Green River	11	69	221	395	*	66	563	4365	4051
Kentuckiana Works	*	306	6061	1872	*	64	1420	7785	6191
Lincoln Trail	*	77	370	657	*	134	555	3676	3381
Northern Kentucky	5	71	537	923	*	555	665	5320	4870
South Central	66	230	615	573	23	233	506	5046	4833
TENCO	*	8	33	162	*	49	246	4336	4241
West Kentucky	*	13	1229	620	*	92	720	5893	5460

Data Source: American Community Survey Five Year Estimates 2013-2017; Table B17020; *counts less than 5

As regards deep poverty, Kentucky's African-American and Hispanic children experience deep poverty more than other groups. Specifically, data from the American Community Survey indicate that 16% African-American, 15% Hispanic, 12% of children who are two or more races, 10% White (non-Hispanic), and 7% Asian/Pacific-Islander "live in families with incomes less than 50 percent of the federal poverty level.[41]" One of the reasons poverty may differ across race or ethnic groups may be access to employment or participation in the workforce. Data from the American Community Survey

[41] Cited in Kids Count: https://datacenter.kidscount.org/data/tables/8783-children-in-extreme-poverty-50-percent-poverty-by-race-and-ethnicity?loc=19&loct=2#detailed/2/19/false/871,870,573,869,36,133,35,16/4038,4040,4039,2638,2597,4758,1353/17619,17620

(2013 to 2017 five-year estimates) indicates that 31% of Kentucky children under age 18 are living in families where no parent has regular, full-time, employment[42]. However, this varies by race or ethnicity: 44% of African-American children, 41% of children of two or more races, 37% of Hispanic/Latino children, and 29% of White (non-Hispanic) children.

Data Strengths and Needs

This Needs Assessment incorporates data from three Kentucky data groups: the Kentucky Center for Statistics, the Kentucky State Data Center, and Kentucky Youth Advocates/Kids Count (as well as other databases and resources). These groups compile and make available a wide range of data, from federal and state partners, with much of the data available at the county-level. County-level data are essential for helping communities identify and respond to local needs. Thus, these data groups are a critical early childhood resource. In particular, the availability of these types of data, at the county-level and over time, will help state and local leaders examine trends, make data-driven decisions, and track progress on critical indicators such as poverty or deep poverty.

The Needs Assessment process has highlighted the need for groups such as the Kentucky Center for Statistics to have access to data sharing and compilation of additional system variables. This need will be documented throughout the report. The Kentucky Center for Statistics, with support from the PDG Birth through Five (B-5) grant, is working to develop a unique, state, system ID that will facilitate the compilation and reporting of data, at as discrete a level as possible (i.e., county-level data). By making these data systems more rigorous, more sophisticated analyses should be possible—such as an examination of the intersection of race and poverty at community levels, or immigration status with child development and health.

Initiatives to Improve Data

As noted above, the PDG B-5 grant is supporting the development of a unique, state system ID, which is a critical design feature that will support the non-duplication and estimation of service numbers and needs. Moving forward, the ECAC and the Kentucky Governor's Office of Early Childhood will work with data partners to develop and align data systems with the early childhood system (conceptualized using a Prenatal-Third Grade framework), guided by Kentucky's emergent Early Childhood Strategic Plan.

Kentucky's Rural Children

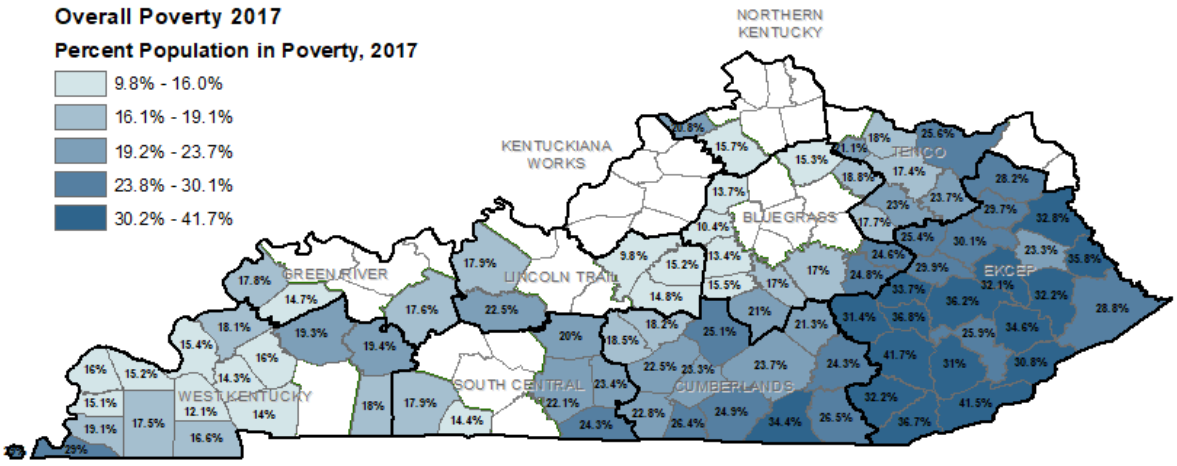
In this section, Kentucky uses the Office of Rural Health Policy's definitions of rural and non-rural counties to explore the specific needs of children in rural counties. The exhibits presented below show only Kentucky's rural counties, with data grouped by quintile among these counties. **Counties that are shaded in darker shades of blue have higher values for each indicator.**

[42] Cited in Kids Count: https://datacenter.kidscount.org/data/tables/5064-children-whose-parents-lack-secure-employment-by-race-and-ethnicity?loc=19&loct=2#detailed/2/19/false/
871,870,573,869,36,868,867,133,38,35/10,11,9,12,1,185,13/11486,11487

Poverty or Low-Income Status

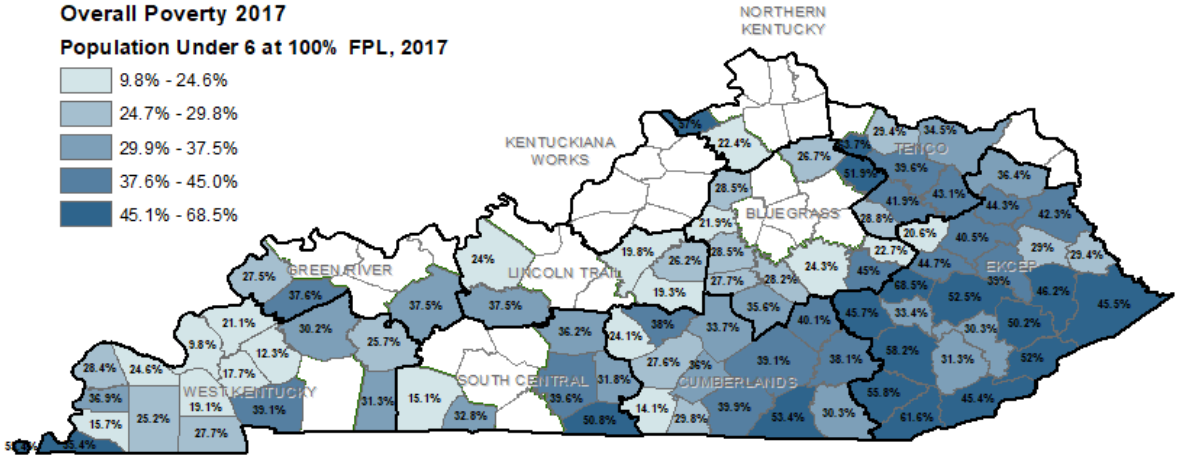
Rural counties tend to experience relatively high levels of poverty in Kentucky. Across rural counties, however, those in the eastern-most section of the state (e.g., Appalachia) tend to have the highest levels, as shown in Exhibits 38 and 39. Exhibit 38 presents information on overall population poverty, while Exhibit 39 presents the percent of children under the age of six living at 100% of the Federal Poverty Level. Of note, the incidence of poverty among children is higher than that of the overall population, which while not uncommon, is troubling.

Exhibit 38 *Percent Population in Poverty in Rural Counties*



Data Source: Kentucky Center for Statistics; a lack of shading indicates urban counties

Exhibit 39 *Children Under Age 6 at 100% Federal Poverty Level in Rural Counties*

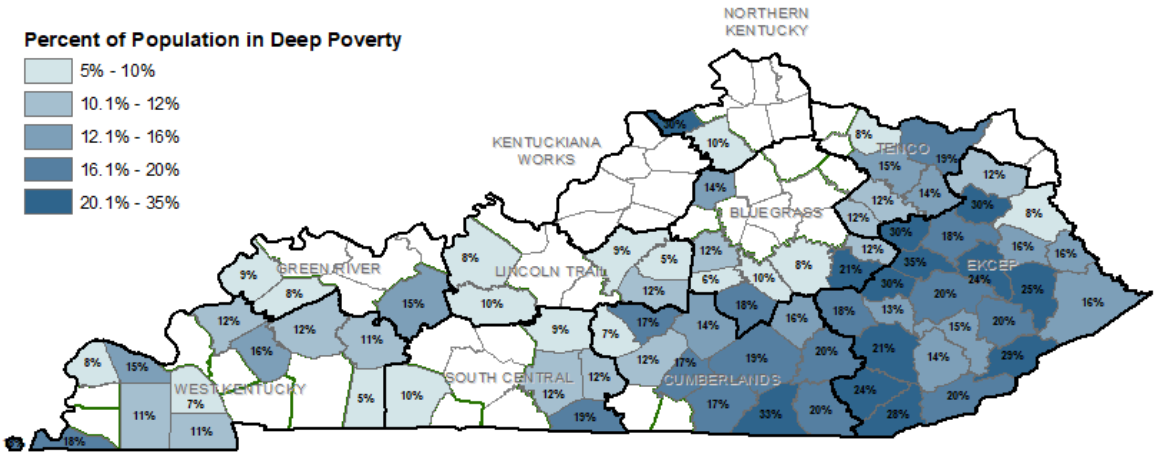


Data Source: Kentucky Center for Statistics; a lack of shading indicates urban counties

Deep Poverty

Additional data on poverty explores the incidence of deep poverty, defined earlier in this report individuals living at less than 50% of FPL, in rural counties. As shown in Exhibit 40, as many as 35% of children were living in deep poverty (when reported for 2016). As with other poverty estimates, the highest concentration of deep poverty appears to be (but is not exclusively) in the eastern part of the state.

Exhibit 40 *Percent Population in Deep Poverty in Rural Counties*

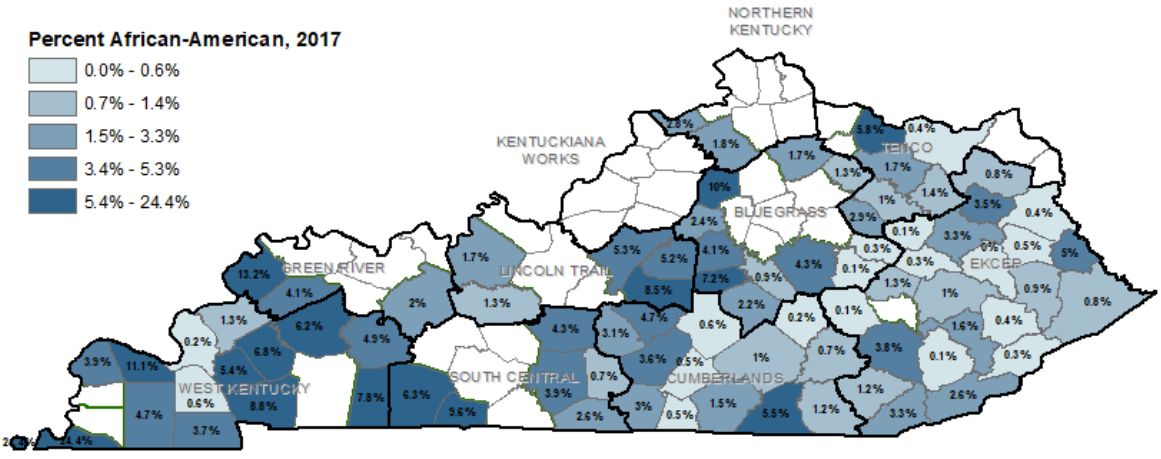


Data Source: Kids Count Children Living in Deep Poverty, 2016, Five-year estimates; a lack of shading indicates urban counties

Race/Ethnicity

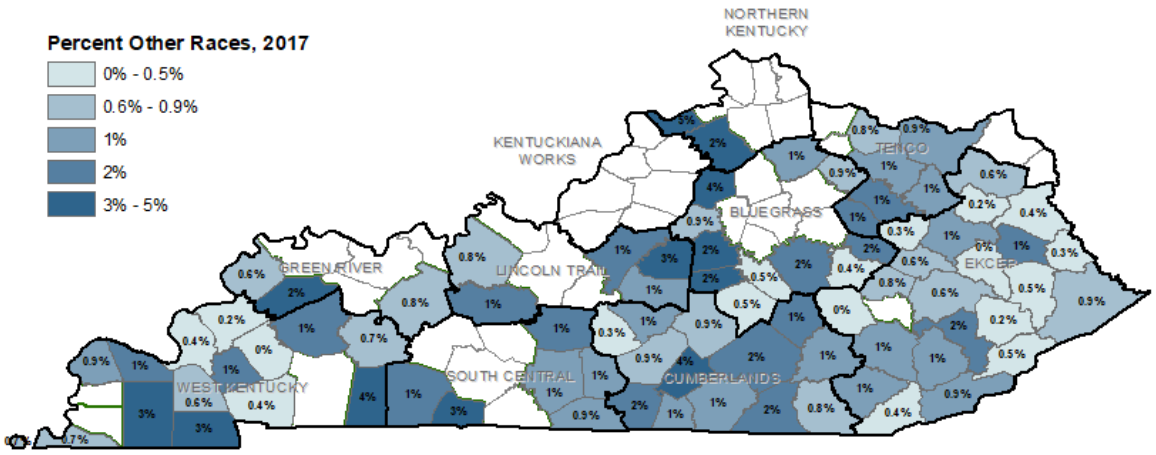
Up to 24 percent of the population in rural counties is African-American, with smaller percentages of individuals categorized as an "other race" or "two or more races," according to the U.S. Census (Exhibits 41-43). As noted earlier in this report, there tends to be higher diversity in the Western part of the state.

Exhibit 41 *Percent African-American Population in Rural Counties*



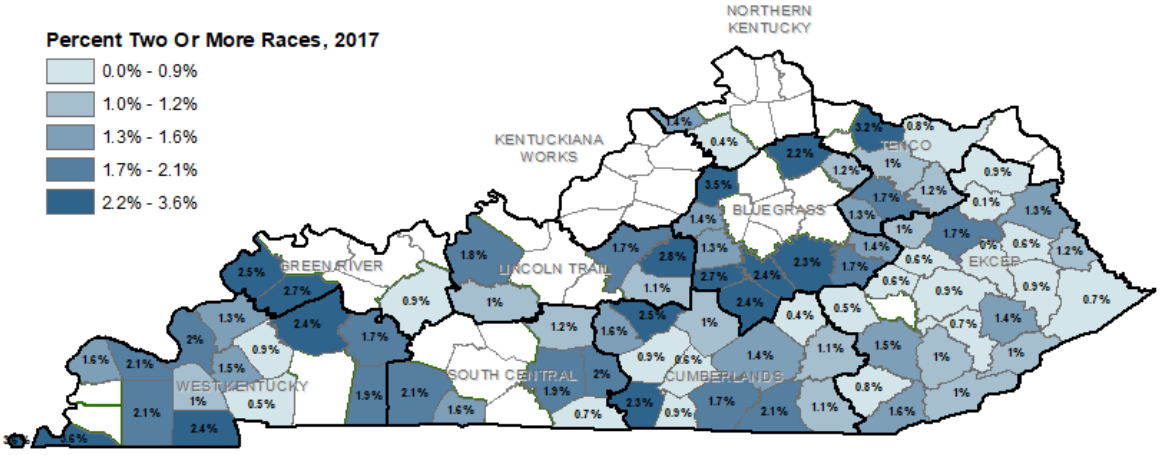
Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, CP-05; a lack of shading indicates urban counties

Exhibit 42 *Percent Population that is "Other Race" in Rural Counties*



Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, CP-05; a lack of shading indicates urban counties

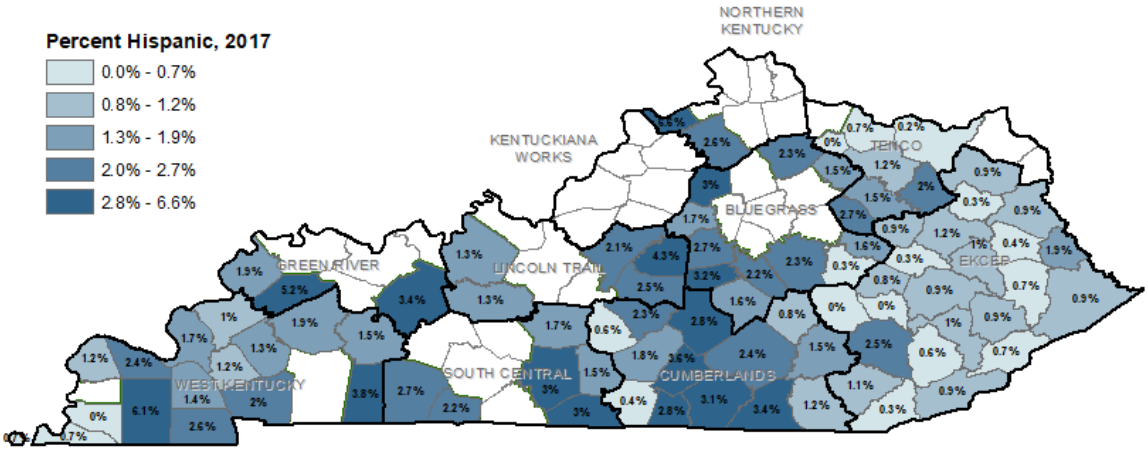
Exhibit 43 *Percent Population that is Two or More Races in Rural Counties*



Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, CP-05; a lack of shading indicates urban counties

Up to seven percent of rural counties is reported to be Hispanic. Interestingly, among the rural counties, some of the higher prevalence of Hispanic populations is in the central regions of the state, as is shown in Exhibit 44. This is likely due to the agricultural interests in these counties.

Exhibit 44 *Percent Hispanic Population in Rural Counties*

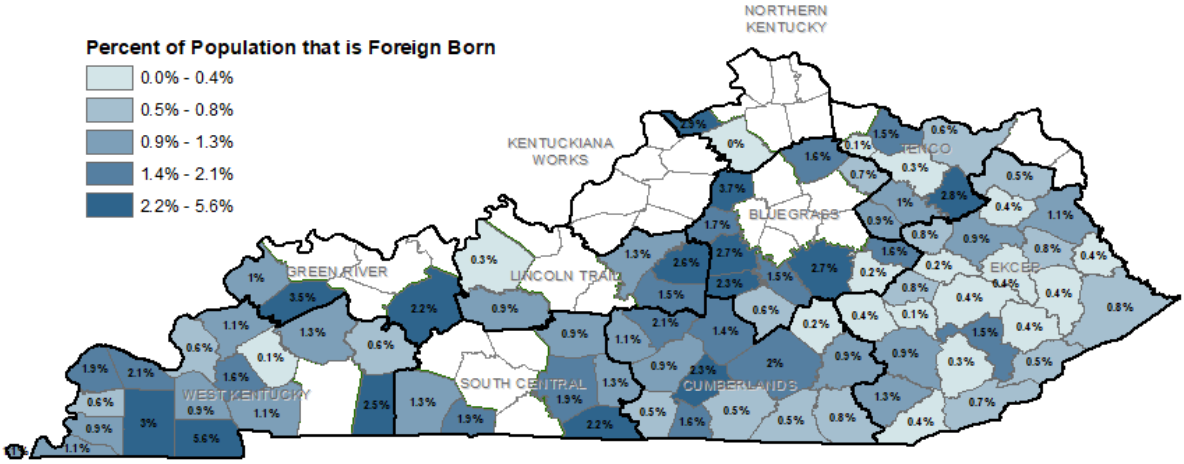


Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, CP-05; a lack of shading indicates urban counties

Recency of Immigration

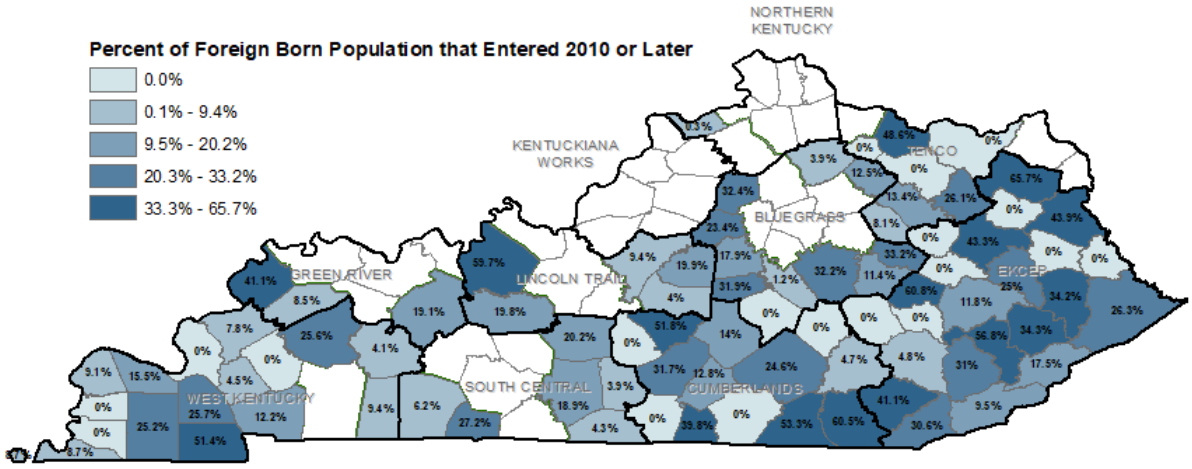
Up to six percent of the population in rural counties is foreign-born. The foreign-born population tends to be absent or less prevalent in the most eastern parts of the state; less than one percent of the population in the bottom quintiles of rural counties is foreign-born, according to the U.S. Census (Exhibit 45). It is this same region, however, that has experienced the greatest proportion of more recent immigrants (Exhibit 46). This suggests a shift in population trends over time, with the eastern parts of the state experiencing growth in the foreign-born population, which still remains a relatively small overall proportion of the total population.

Exhibit 45 *Percent Population that is Foreign Born in Rural Counties*



Data Source: United States Census American Community Survey 2017 Five Year Estimates Table DP02; a lack of shading indicates urban counties

Exhibit 46 *Percent of Foreign Born Population the Emigrated 2010 or Later in Rural Counties*

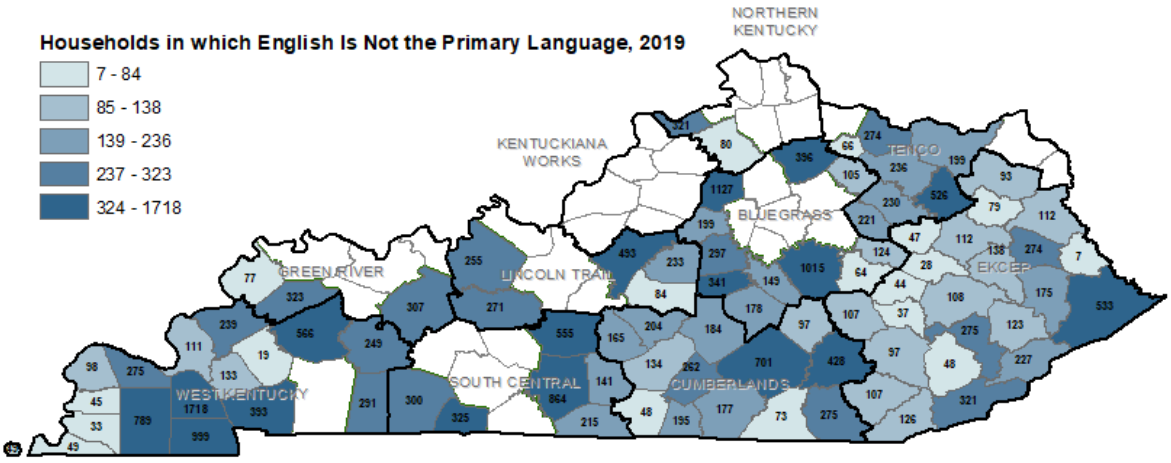


Data Source: United States Census American Community Survey 2017 Five Year Estimates Table DP02; a lack of shading indicates urban counties

Home or Primary Language

The estimated absolute numbers of households in which English is not the primary language is presented in Exhibit 47. As is shown, some rural counties have relatively few households for which English is a second language, while others have hundreds or more.

Exhibit 47 *Households in which English is not the Primary Language in Rural Counties*

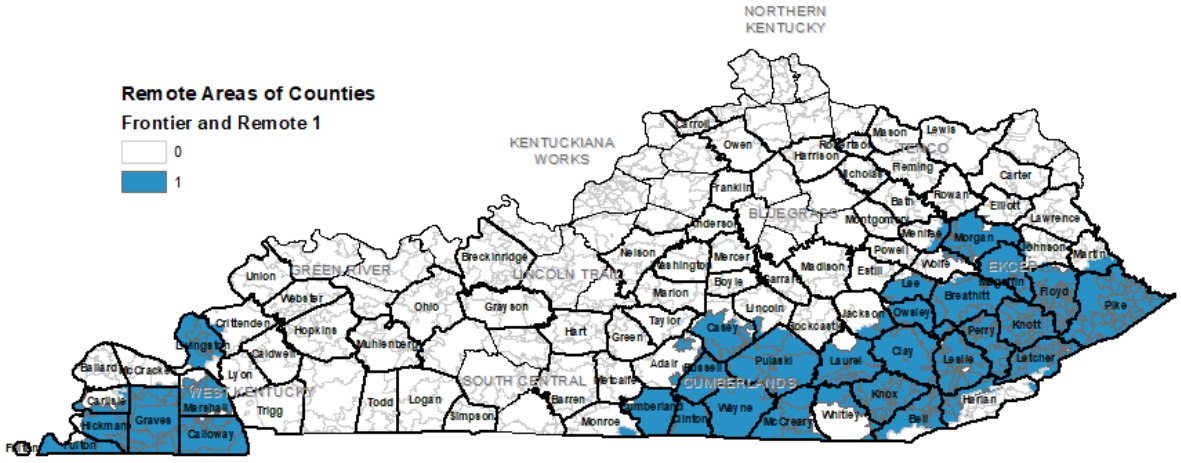


Data Source: Kentucky Center for Statistics, Early Childhood Profiles, 2014 to 2019; a lack of shading indicates urban counties

Distance from Urban Areas

The United States Department of Agriculture Economic Research Service definitions for frontier/remote areas can again be used to estimate the zip codes that are farthest from urban or metropolitan areas. In Frontier and Remote (FAR) areas labeled as "1", the majority populations live 60 minutes or more from urban areas of 50,000 or more. The rural counties that contain FAR 1 populations are shown in Exhibit 48. These include counties in the most western and more eastern (and mountainous) areas of the state.

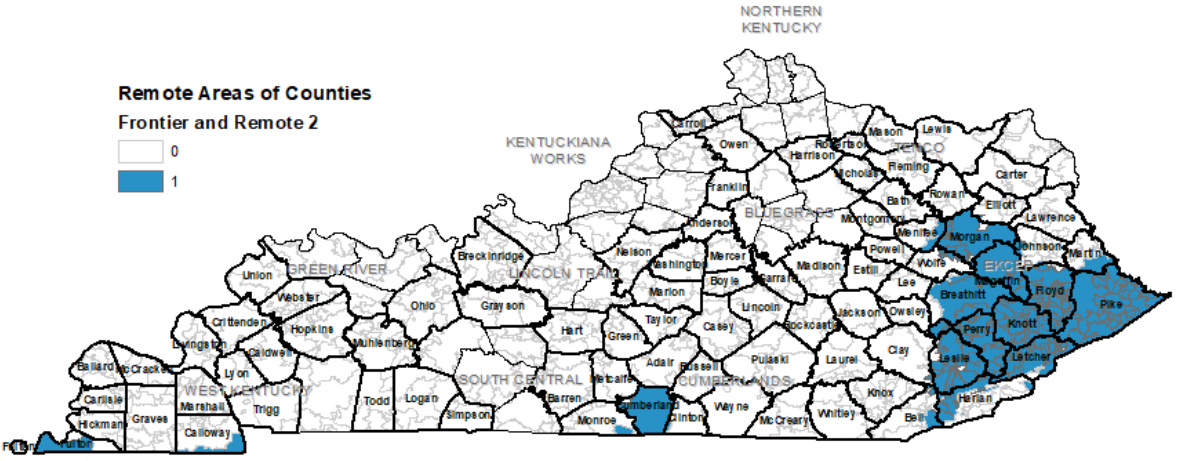
Exhibit 48 Frontier and Remote Area 1, in Rural Counties



Data Source: United States Department of Agriculture Economic Research Service

The rural counties that contain FAR 2 populations (defined as zip code areas in which the majority populations live 60 minutes or more from urban areas of 50,000 or more people and 45 minutes or more from urban areas of 25,000-49,999 people) are shown in Exhibit 48. As shown in Exhibit 49, the counties that contain FAR 2 populations are fewer than those in Exhibit 47 and include primarily counties in the eastern and mountainous part of the state.

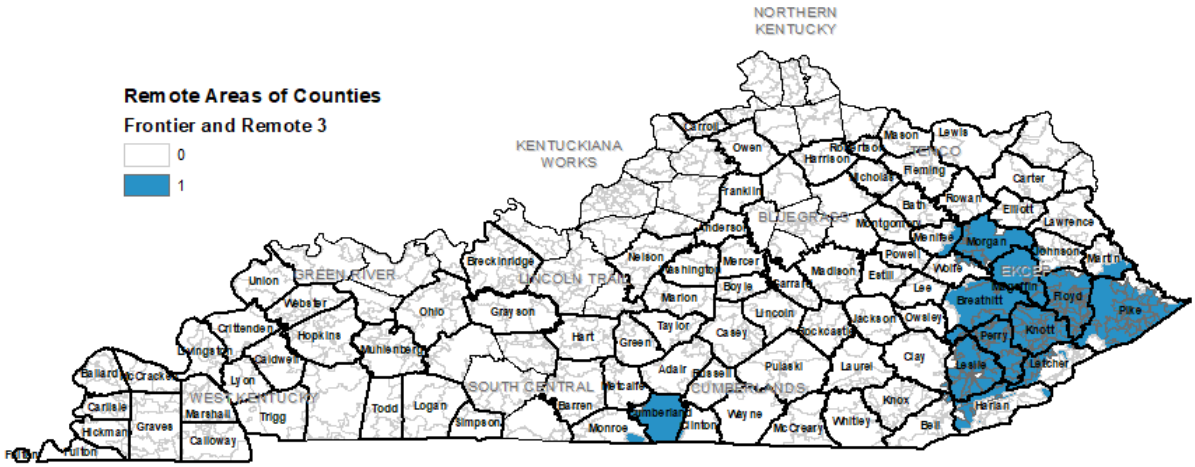
Exhibit 49 Frontier and Remote Area 2, in Rural Counties



Data Source: United States Department of Agriculture Economic Research Service

FAR 3 is defined as zip code areas in which the majority populations live 60 minutes or more from urban areas of 50,000 or more people; 45 minutes or more from urban areas of 25,000-49,999 people; and 30 minutes or more from urban areas of 10,000- 24,999 people. Exhibit 50 presents Kentucky's rural counties that contain FAR 3 populations. As can be seen, there are no western counties that contain FAR 3 populations and one central county with a FAR 3 population. The remaining counties are in the eastern parts of the state.

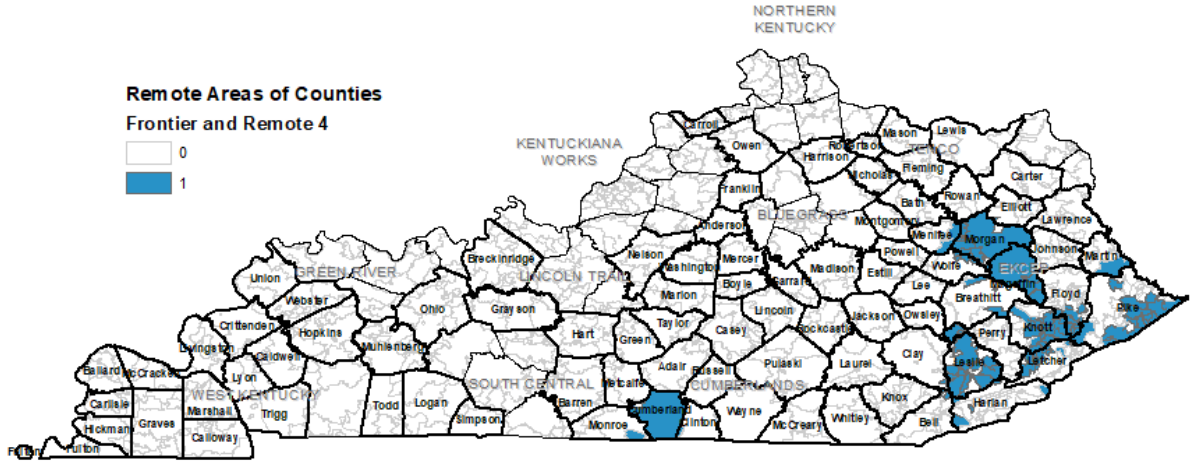
Exhibit 50 Frontier and Remote Area 3, in Rural Counties



Data Source: United States Department of Agriculture Economic Research Service

Finally, FAR 4 is defined as zip code areas in which the majority populations living 60 minutes or more from urban areas of 50,000 or more people; and 45 minutes or more from urban areas of 25,000-49,999 people; and 30 minutes or more from urban areas of 10,000- 24,999 people; and 15 minutes or more from urban areas of 2,500-9,999 people. Kentucky's FAR 4 counties are shown in Exhibit 51. Similar to prior exhibits, FAR populations are predominantly but not exclusively located in the eastern part of the state. These are the zip codes considered to be the most remote and to have the greatest concerns regarding access to programs and services, transportation, and internet.

Exhibit 51 Frontier and Remote Area 4, in Rural Counties

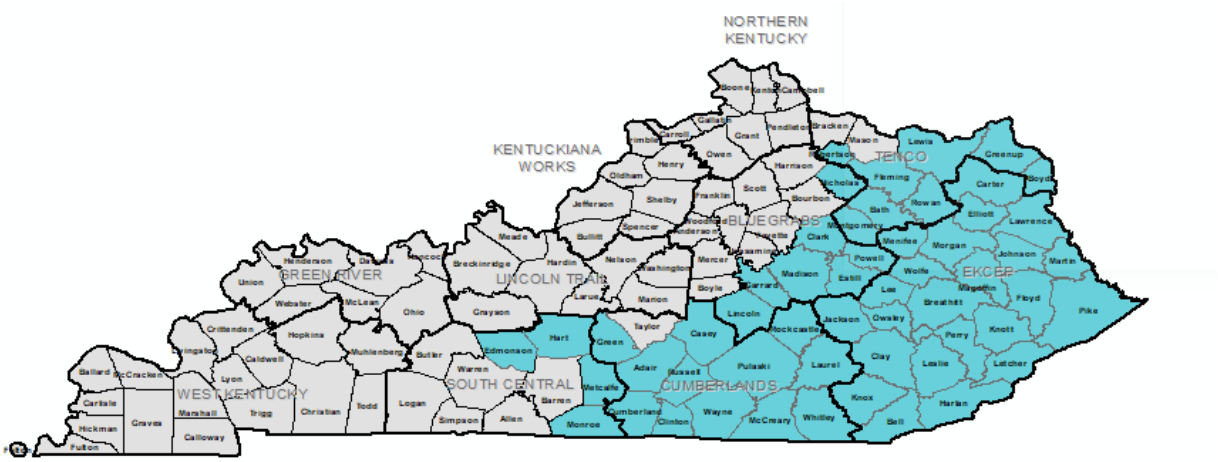


Data Source: United States Department of Agriculture Economic Research Service

Appalachia

The eastern-most part of Kentucky is the Appalachian region (Exhibit 52). Kentucky has 54 Appalachian counties (45% of all counties in Kentucky) which are identified by the Appalachian Regional Commission (ARC)[43] and include: Adair, Bath, Bell, Boyd, Breathitt, Carter, Casey, Clark, Clay, Clinton, Cumberland, Edmonson, Elliott, Estill, Fleming, Floyd, Garrard, Green, Greenup, Harlan, Hart, Jackson, Johnson, Knott, Knox, Laurel, Lawrence, Lee, Leslie, Letcher, Lewis, Lincoln, McCreary, Madison, Magoffin, Martin, Menifee, Metcalfe, Monroe, Montgomery, Morgan, Nicholas, Owsley, Perry, Pike, Powell, Pulaski, Robertson, Rockcastle, Rowan, Russell, Wayne, Whitley, and Wolfe.

Exhibit 52 *Kentucky's Appalachian Counties*



Data Source: Appalachian Regional Commission

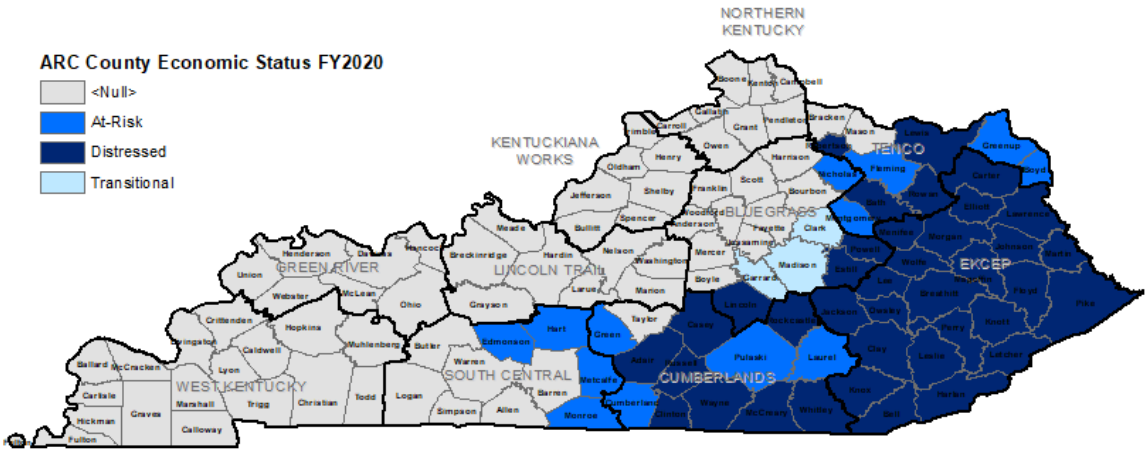
According to the ARC, some Appalachian counties are in more distress than others, based upon an analysis of three-year average unemployment rate, per capita market income, and poverty rates[44]. In fact, the ARC defines five levels of distress: distressed, at-risk, transitional, competitive, or attainment, in which distressed counties rank among the worst 10 percent, for the nation. Exhibit 53 presents the level of distress among Kentucky's Appalachian counties. County-level data presented in this report also contribute to the assessment of need within Appalachia.

> 54 Kentucky counties (or, 45% of all Kentucky counties) are Appalachian. Most of these are considered distressed.

[43] https://www.arc.gov/Appalachian_region/CountiesinAppalachia.asp

[44] https://www.arc.gov/appalachian_region/CountyEconomicStatusandDistressedAreasinAppalachia.asp

Exhibit 53 Distress Level of Kentucky's Appalachian Counties, FY 2020



Data Source: Appalachian Regional Commission

Findings from a recent report from the ARC[45] highlight some of the concerns for children and families in this region:

- Kentucky falls into Central Appalachia. Within this region, there has been a decline in population over time (2008-2012). At the same time there has been an increase in the poverty rate. The lowest median household income cited for Central Appalachia was $35,862.
- Central Appalachia does not have consistent or universal high-speed internet access. More specifically, the ARC reported that 64.3 percent of the population had access to broadband internet (compared to 72.3 percent for Appalachia as a whole and the national average of 78.1 percent). This is of particular concern given the importance of internet-based communications and services for parents and professionals.
- Twenty-five percent of households in Central Appalachia have no access to a computer, including smartphones (the national average is 12.8 percent). As noted above, this is of concern given the importance of computers and smartphones for facilitating communications and services for parents and professionals.

Several positive findings also were noted:

- Central Appalachia did not differ markedly from other Appalachia areas with regard to "*access to a vehicle, commute times, and percent of workers who drive to work alone*."
- Kentucky experienced the largest decrease (in the time period examined and within Appalachia) in poverty among older residents (over 65 years of age).
- The unemployment rate across Appalachia is decreasing, while graduation rates (high school and Institutes of Higher Education) are increasing.

Data Strengths and Needs

As noted earlier, Kentucky's data partners provide vital information on population trends, which can be used to understand the intersection of population growth or decline, and growth (or decline) in poverty. Further, these data highlight the shifting nature of demographics across the state

[45] https://wfpl.org/survey-report-reveals-disparities-in-appalachian-subregions/

and suggest that all counties, including the most rural of counties, have needs related to immigrant populations and populations for whom English is a second language. For rural counties, there is a concern that children and families experiencing high levels of need and those who need assistance due to language barriers be able to find the resources and support that they need. Thus, a secondary line of inquiry, which is presented next, reviews the capacity of statewide programs to respond to needs. This stated, there still are opportunities to develop dynamic data systems that allow new needs to emerge, at the local (county or community) levels in which they first are experienced—acknowledging that each county or community will have unique needs, which shift over time.

Initiatives to Improve Data

The Kentucky Center for Statistics is actively engaged in (a) bringing additional data partners into the state's unified data system and (b) further developing the state's unique identifier system. In so doing, state and local agencies will have access to data that they need to examine trends at local levels, which can lead to a more effective local response to needs.

Statewide Services that Respond to Poverty

The state supports young children and families in poverty through several statewide programs that include (but are not limited to) the Child Care Assistance Program, the Women Infants and Children program, Supplemental Nutrition Assistance Program, Kentucky Transitional Assistance Program, and Kentucky Children's Health Insurance Program[46]. Available information on service participation is presented below. Of note, there is disproportionate enrollment in public assistance programs, by race or ethnicity, which is consistent with different rates of poverty by group[47]. Also, as regards absolute numbers served, counties with higher populations tend to have higher numbers of children and families served. Thus, when possible, the change in service use (increase or decrease) also is presented, to help track the extent to which need and service use is growing or declining over time[48].

Child Care Assistance Program

The Child Care Assistance Program is operated by the Division of Child Care, which is located in the Cabinet for Health and Family Services. As noted on the program's webpage:

> The Child Care Assistance Program provides subsidies to help families pay for child care. The Division of Child Care is responsible for all child care provider support and The Division of Family Support helps clients apply for the program. The Division of

[46] There are additional programs or services that provide support in some but not all counties or regions of the state. These services are not included in this Needs Assessment, because they are not statewide in nature.
[47] Cited in Kids Count: https://datacenter.kidscount.org/data/tables/9789-children-in-families-that-receive-public-assistance-by-race-and-ethnicity?loc=19&loct=2#detailed/2/19/false/871,870,573,869,36,133,35,16/4038,4040,4039,2638,2597,4758,1353/19062,19063; African-American and Latino children under age 18 have higher participation rates, compared to White (non-Hispanic) children.
[48] One item for follow-up, and a data need, is the accurate assessment of the proportion of each county's eligible population that is served. It is challenging, for example, to accurately assess the proportion of children served versus the proportion of eligible children served. These calculations are confounded by different eligibility requirements, including ages served, for different programs and services.

> Child Care coordinates subsidy payments to providers, CCAP provider fraud reduction and registered providers.
>
> The goal of CCAP is to provide access to quality child care to enable parents to work, further their education and job training and/or participate in the Kentucky Temporary Assistance Program. Child care subsidies also are available for child protective services.
>
> Source: https://chfs.ky.gov/agencies/dcbs/dcc/Pages/ccap.aspx

The Courier-Journal reported in December 2018 that more families and children could be enrolled in the CCAP program ("Extra $42M means more Kentucky parents can get child care assistance", reported December 3, 2018)[49]. The article's author cited the state's increase in federal funds as the means for increasing enrollment. The author also noted that program freezes in 2013 negatively impacted program enrollment and viability:

> About 28,000 Kentucky children get child care through the program, down from about 42,000 children before the state froze the program in 2013 and cut eligibility for lack funds. Lawmakers restored funding the following year, but Brunner said in the meantime many centers closed and families dropped out.
>
> Source: Courier-Journal, December 3, 2018

Other changes that accompany the increase in funds were reported to include:

> Child care centers in most counties will see a rate increase of several dollars a day from the base rate of $25 a day. The changes vary by county, under a formula used by the state. Jefferson County child care centers will get $2 to $3 more per child, per day, depending on the age of the child.
>
> Parents won't get automatically kicked off the program if they get a wage increase that raises them above 165 percent of the federal poverty level — about $34,300 a year for a family of three. Now, families who qualify for the program at 165 percent of poverty can stay on the program as long as they earn less than 200 percent of poverty, or about $42,500 a year for a family of three.
>
> Students who are enrolled full-time in post secondary school or job training will no longer have to meet a separate work requirement to be eligible for child care assistance.
>
> Source: Courier-Journal, December 3, 2018

Kentucky Youth Advocates conducted follow-up in March 2019 with child care professionals, to determine the impact of increased funding[50]. Among the key findings (representing 127 professionals from 43 counties):

- Additional funds raise the child care provider reimbursement rates to the 40th percentile of market rates,
- 65% of survey participants reported that the funds helped them avoid closure, and
- 46% of survey participants already had used funds to retain staff.

[49] https://www.courier-journal.com/story/news/2018/12/03/more-kentucky-parents-qualify-child-care-assistance-program/2163899002/

[50] https://kyyouth.org/wp-content/uploads/2019/05/CCDBG-Survey-Infographic-Spring2019.pdf

Kentucky Youth Advocates also reported that "*only 11% of eligible Kentucky children and their families are being served by the Child Care Assistance Program.*[51]" Exhibit 54 presents information on participation in CCAP. As is shown, there has been a 21 percent increase in participation, between 2014 and 2019. This increase is not uniform across the state, however: the greatest increase is noted in the South Central and Cumberlands LWDAs while the smallest increase is noted in the Kentuckiana Works LWDA (noting that Kentuckiana Works has sustained the highest participation rates across LWDAs and time periods, with participation greater than 8000 in each of the years presented).

Exhibit 54 Child Care Assistance Program Participation 2014 to 2019

	Child Care Assistance Program Participation					Change
	2014	2015	2016	2017	2019	2014-2019
Kentucky	23761	24361	23969	26775	28678	21%
Bluegrass	5126	5065	5437	6720	6526	27%
Cumberlands	1378	1324	1297	1426	2007	46%
ECKEP	1027	973	968	1345	1356	32%
Green River	865	882	922	931	1115	29%
Kentuckiana Works	8243	8135	8013	8274	8912	8%
Lincoln Trail	1005	1078	1246	1301	1375	37%
Northern Kentucky	2540	2649	2538	3000	2974	17%
South Central	858	949	996	1011	1277	49%
TENCO	742	650	624	770	963	30%
West Kentucky	1819	2120	1928	1997	2173	19%

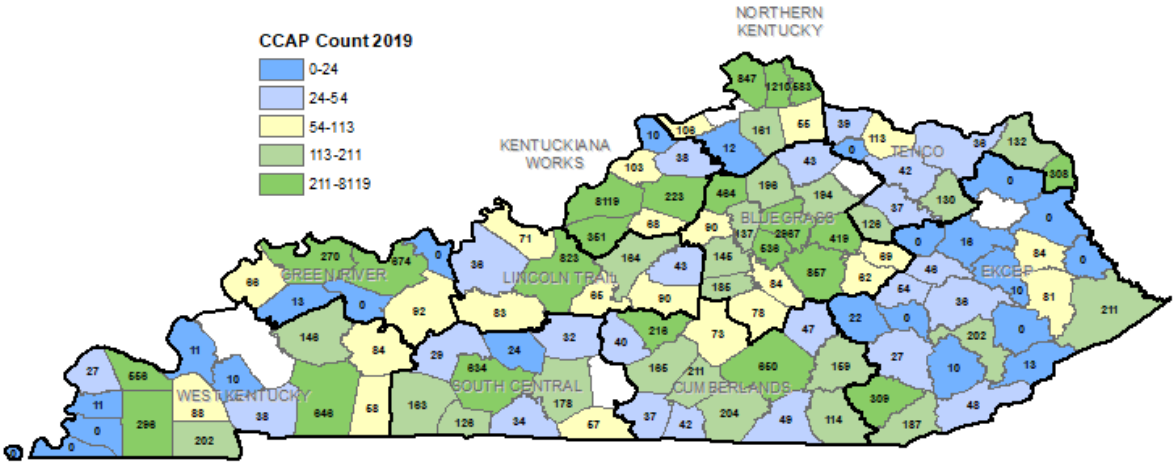
Data Source: KYSTATS Early Childhood Profile 2014 to 2019; *the Kentucky total count includes data from individual counties for which counts were suppressed

Counties with Highest CCAP Participation
Highest: Jefferson, Fayette, and Kenton

Exhibit 55 presents information regarding CCAP participation, by county for 2019 (including participation of children through age 12). Counties with relatively high participation are shaded in green while counties with relatively low participation are shaded in blue. Counties for which there was no information (or for which data were suppressed due to low sample sizes) do not have shading.

[51] Ibid

Exhibit 55 Child Care Assistance Program Participation by County, 2019



Data Source: KYSTATS Early Childhood Profile 2014 to 2019; *the Kentucky total count includes data from individual counties for which counts were suppressed; lack of shading indicates missing data

Women Infants and Children Program (WIC)

Kentucky's WIC program provides "*nutrition assistance and support to pregnant and breastfeeding women and families with children from birth to five years old.*[52]" The program is operated in the Nutrition Services Branch of the Division of Maternal and Child Health, which resides in the Department for Public Health of the Cabinet for Health and Family Services. Exhibit 56 presents information on child participation in WIC services, from 2017 to 2019; Kentucky has experienced a 27 percent increase in service participation between 2017 and 2019. The greatest increases have been noted in the Green River, Northern Kentucky, and Bluegrass LWDAs, while the smallest increases were noted in the Lincoln Trail LWDA.

[52] https://chfs.ky.gov/agencies/dph/dmch/nsb/Pages/wic.aspx

Exhibit 56 *Children Receiving WIC Benefits, 2017 to 2019*

	Children Receiving WIC Benefits			Change
	2017	2018	2019	2017-2019
Kentucky	83354	81990	106256	27%
Bluegrass	12818	12904	17324	35%
Cumberlands	8912	8474	10572	19%
ECKEP	12509	11930	14802	18%
Green River	3649	3503	5034	38%
Kentuckiana Works	13926	14157	18477	33%
Lincoln Trail	4924	4853	5712	16%
Northern Kentucky	6415	6427	8701	36%
South Central	6119	5935	7973	30%
TENCO	4289	4260	5460	27%
West Kentucky	9793	9547	12201	25%

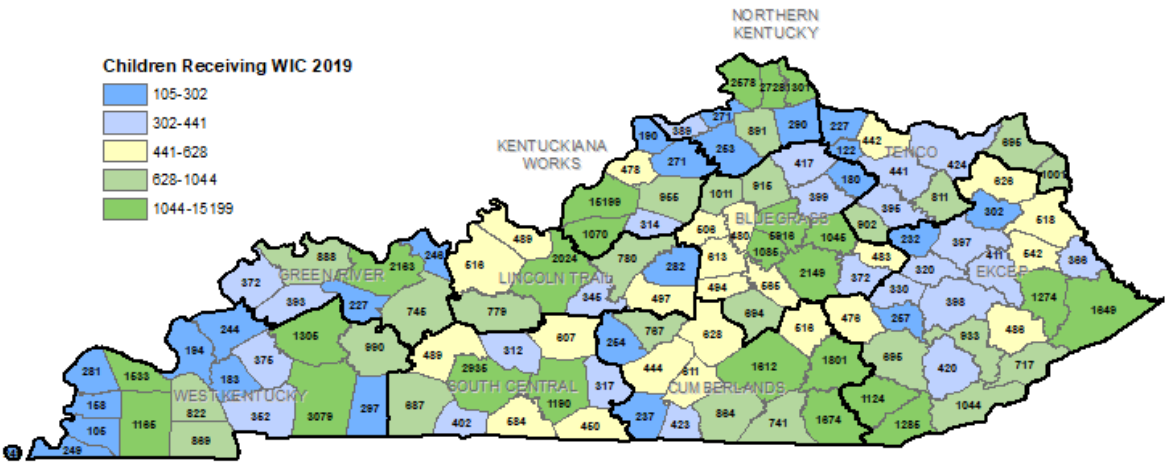
Data Source: KYSTATS Early Childhood Profile 2017 to 2019

Exhibit 57 presents the most currently available information on the number of children receiving WIC benefits, by county. Counties shaded in blue have the fewest participants while counties shaded in green have the greatest number of participants.

Counties with Highest and Lowest WIC Participation

Highest: Jefferson, Fayette, and Christian
Lowest: Hickman, Robertson, and Carlisle

Exhibit 57 *Children Receiving WIC Benefits, by County, 2019*

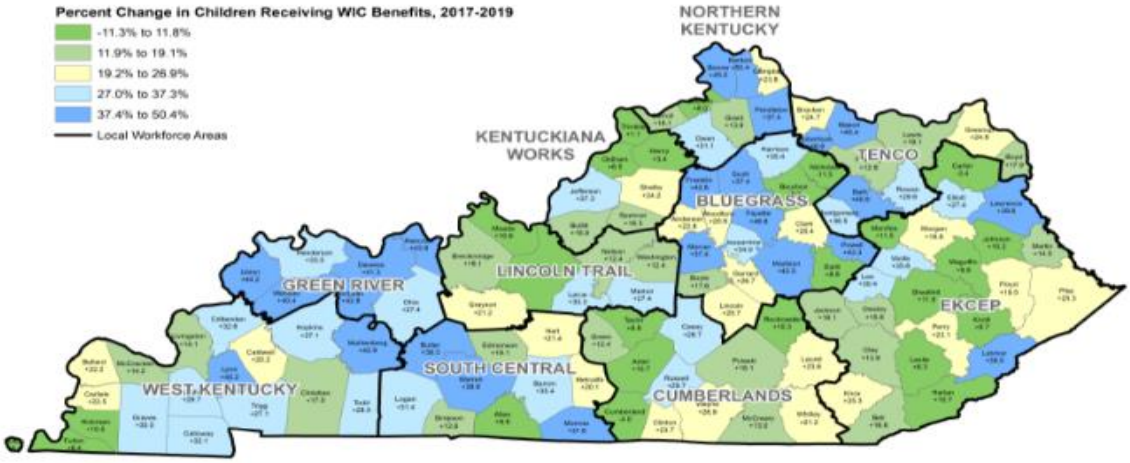


Data Source: KYSTATS Early Childhood Profile, 2019

It makes sense that counties with higher numbers of children also will have higher participation rates. County-level data also are available on the percent change in children who received WIC benefits, from 2017 to 2019 (Exhibit 58). Counties with the greatest increase in participation are shaded in blue while counties with the smallest increase (or, a decrease) in

participation are shaded in green. The counties with the greatest increase during this time period were Kenton, Robertson, and Fayette. The counties with a decrease during this time period included Nicholas, Cumberland, and Carter.

Exhibit 58 Change in Children Receiving WIC Benefits, 2017 to 2019



Data Source: KYSTATS Early Childhood Profile, 2019

Supplemental Nutrition Assistance Program (SNAP)

Kentucky's SNAP program is operated by the Nutrition Services Branch of the Division of Maternal and Child Health, which resides in the Department for Public Health of the Cabinet for Health and Family Services. As noted on the program's webpage:

> The Supplemental Nutrition Assistance Program (SNAP) helps people with little or no money buy food for healthy meals at participating stores. SNAP benefits increase a household's food buying power when added to the household's money.
>
> Source: https://chfs.ky.gov/agencies/dcbs/dfs/nab/Pages/snap.aspx

Exhibit 59 presents data retrieved from Kids Count, showing the monthly average number of children who received SNAP benefits (ages birth through 18). From 2014 to 2018 there was a statewide decrease, which was experienced in all LWDAs, attributed to an improving economy and changes in eligibility[53].

Exhibit 59 Monthly Average Number of Children Receiving SNAP Benefits, 2013 to 2016

	Monthly Average Number of Children Receiving SNAP Benefits					Change
	2014	2015	2016	2017	2018	2014 to 2018
Kentucky	293218	276541	255636	273701	261053	-11%
Bluegrass	45989	43392	39855	43198	41378	-10%
Cumberlands	27489	26474	24665	26907	25814	-6%
ECKEP	47414	46068	43734	46260	44038	-7%

[53] https://kypolicy.org/tracking-snap-in-kentucky/

Green River	14023	12909	12087	12859	12237	-13%
Kentuckiana Works	59725	55579	49433	52483	49438	-17%
Lincoln Trail	15869	14794	13646	14640	13626	-14%
Northern Kentucky	22967	21302	19316	20461	19318	-16%
South Central	19536	18253	16740	18316	18001	-8%
TENCO	15150	14170	13138	14258	13628	-10%
West Kentucky	25056	23600	23022	24319	23575	-6%

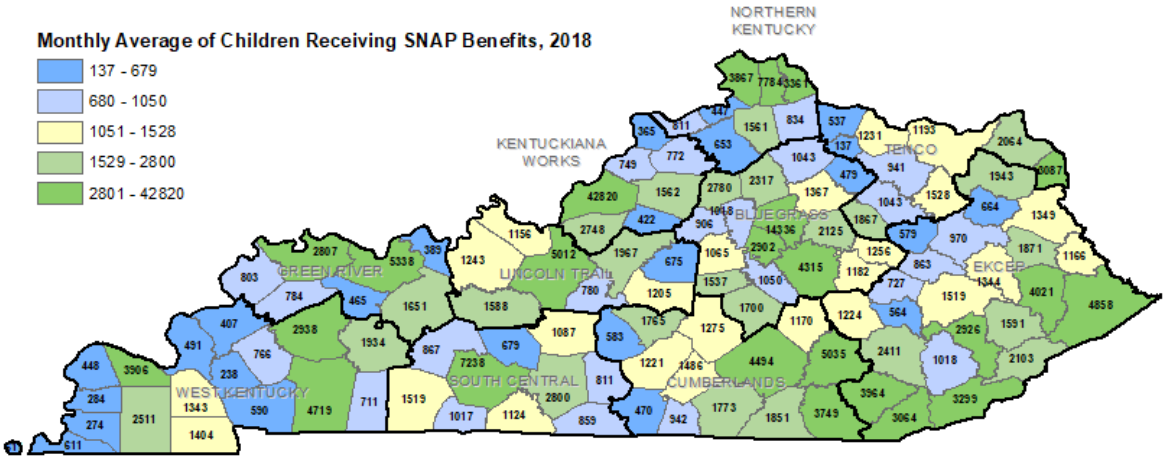
Data Source: Kids Count Children receiving SNAP (monthly average)

Exhibit 60 presents county-level information on the numbers of children receiving SNAP benefits, as of 2018. Counties with the highest numbers of participants are shaded in green while counties with the lowest numbers of participants are shaded in blue.

Counties with Highest and Lowest SNAP Participation

Highest: Jefferson, Fayette, and Kenton
Lowest: Robertson, Lyon, and Hickman

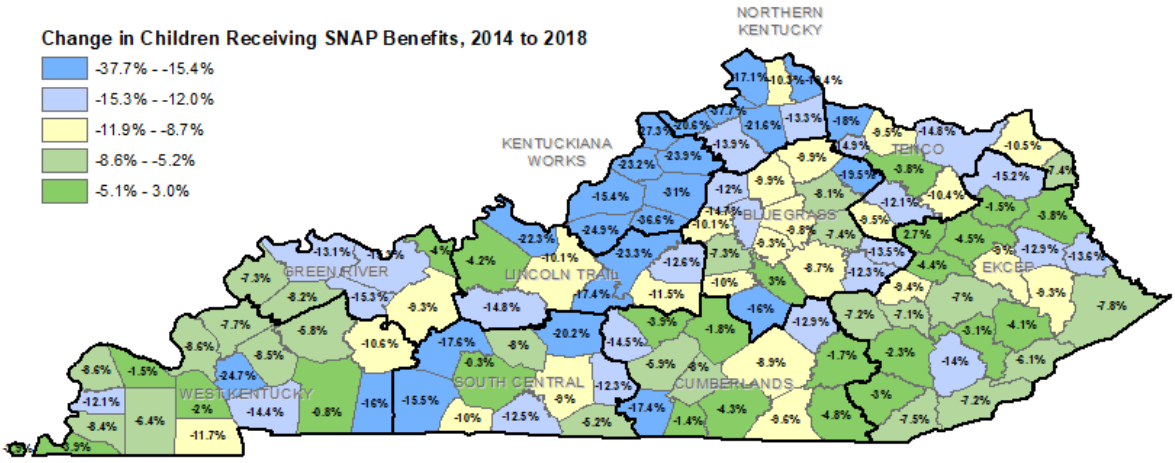
Exhibit 60 Children Receiving SNAP Benefits by County, 2018



Data Source: Kids Count Children receiving SNAP (monthly average)

Exhibit 61 presents county-level data on the percent change in children who received SNAP benefits from 2014 to 2018. Two counties were reported to have an increase, of three percent, each: **Menifee and Garrard**. Counties with the lowest decrease (or, an increase) are shaded in green while counties with the greatest decrease are shaded in blue.

Exhibit 61 *Change in Children Receiving SNAP Benefits, 2014 to 2018*



Data Source: Kids Count Children receiving SNAP (monthly average)

Kentucky Transitional Assistance Program (KTAP)

The Kentucky Transitional Assistance Program (KTAP):

> is the monetary assistance program established using federal funds from the Temporary Assistance for Needy Families block grant. KTAP provides financial and medical assistance to needy dependent children in Kentucky and the parents or relatives with whom the children live. KTAP also helps families find jobs or get training that leads to a job.
>
> Source: https://chfs.ky.gov/agencies/dcbs/dfs/fssb/Pages/ktap.aspx

KTAP is administered in the Family Self-Sufficiency Branch of the Division of Family Support, which resides in the Department for Community-Based Services of the Cabinet for Health and Family Services. Exhibit 62 presents information on the numbers of children (birth through 18) receiving KTAP benefits, by LWDA. Between 2014 to 2018, there was a statewide decrease in this number, with some LWDAs experiencing a larger decrease than others.

Exhibit 62 *Children Receiving KTAP Benefits, 2013 to 2016*

	Children Receiving KTAP Benefits					Change
	2014	**2015**	**2016**	**2017**	**2018**	**2014 to 2018**
Kentucky	34131	31834	32043	31415	29782	-13%
Bluegrass	5093	4872	4906	4802	4581	-10%
Cumberlands	3188	2998	3018	3070	3051	-4%
ECKEP	7486	6952	7110	7000	6710	-10%
Green River	1509	1356	1301	1268	1215	-19%
Kentuckiana Works	7057	6474	6520	6228	5434	-23%
Lincoln Trail	1139	1031	1039	1074	1029	-10%
Northern Kentucky	2421	2396	2409	2278	2160	-11%
South Central	1798	1690	1659	1680	1676	-7%
TENCO	1960	1843	1848	1843	1826	-7%

West Kentucky	2480	2222	2233	2172	2100	-15%

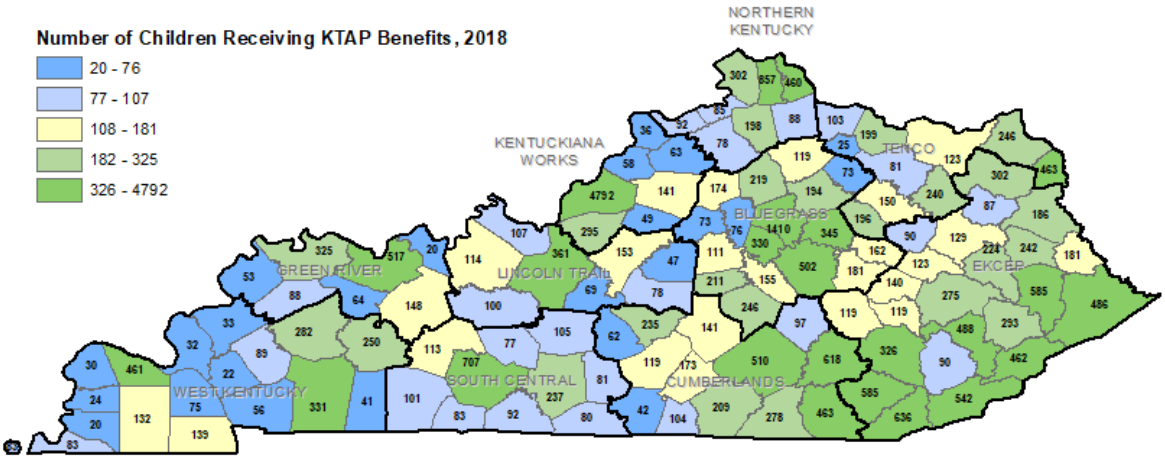
Data Source: Kids Count Children receiving KTAP (Average monthly number of children who received cash assistance from the Kentucky Transitional Assistance Program)

Counties varied in their levels of child participation in KTAP (Exhibit 63). Counties with the highest numbers of participants are shaded in green while counties with the lowest numbers of participants are shaded in blue.

Counties with Highest and Lowest KTAP Participation

Highest: Jefferson, Fayette, and Kenton
Lowest: Hancock, Hickman, and Lyon

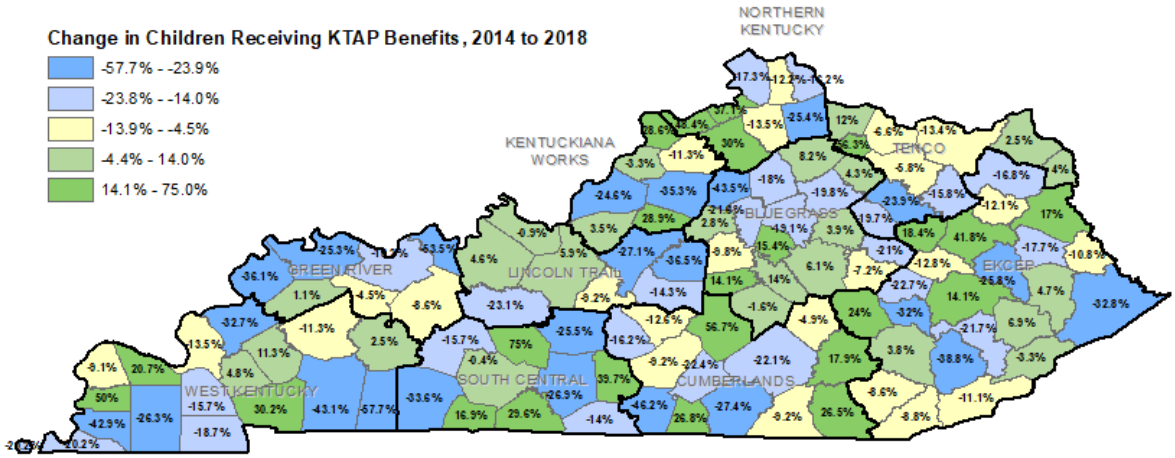
Exhibit 63 Children Receiving KTAP Benefits by County, 2018



Data Source: Kids Count Children receiving KTAP (Average monthly number of children who received cash assistance from the Kentucky Transitional Assistance Program)

There has been a range of change in child participation in KTAP from 2014 to 2018, which is presented in Exhibit 64. Counties with an increase (or, with the lowest level of decrease) are shaded in green while counties with the greatest decrease are shaded in blue.

Exhibit 64 Change in Children Receiving KTAP Benefits, 2013 to 2016



Data Source: Kids Count Children receiving KTAP (Average monthly number of children who received cash assistance from the Kentucky Transitional Assistance Program)

Medicaid

Kentucky's Medicaid services are administered by the Department for Medicaid Services within the Cabinet for Health and Family Services. According to the program's webpage:

> Kentucky Medicaid is a state and federal program authorized by Title XIX of the Social Security Act to provide healthcare for eligible low-income residents including children, families, pregnant women, the aged and the disabled. Eligibility is determined by a number of factors, including family size, income and the federal poverty level. Eligibility for Supplemental Security Income recipients, the aged, blind and disabled are based on additional requirements such as income and resource limits.
>
> Source: https://chfs.ky.gov/agencies/dms/Pages/default.aspx

Exhibit 65 presents information on the average monthly number of children (ages birth through 18) enrolled in Medicaid. There was an overall statewide increase in participation between 2014 and 2017, with the greatest increase experienced in the Green River LWDA. The ECKEP LWDA experienced a decrease of two percent and was the only LWDA to experience a decrease in participation.

Exhibit 65 Average Monthly Number of Children Enrolled in Medicaid, 2014 to 2017

	Number of Children Enrolled in Medicaid				Change
	2014	**2015**	**2016**	**2017**	**2014 to 2017**
Kentucky	573682	561237	611059	601569	5%
Bluegrass	92931	90408	99510	98275	6%
Cumberlands	53571	51897	55651	54688	2%
ECKEP	83196	80657	84932	81880	-2%
Green River	28078	28167	31079	30729	9%
Kentuckiana Works	111869	111545	121251	119283	7%
Lincoln Trail	34300	33522	36448	36005	5%
Northern Kentucky	49223	47544	53485	52712	7%
South Central	39723	38858	43065	42826	8%
TENCO	29978	28856	30970	30632	2%
West Kentucky	50813	49783	54668	54539	7%

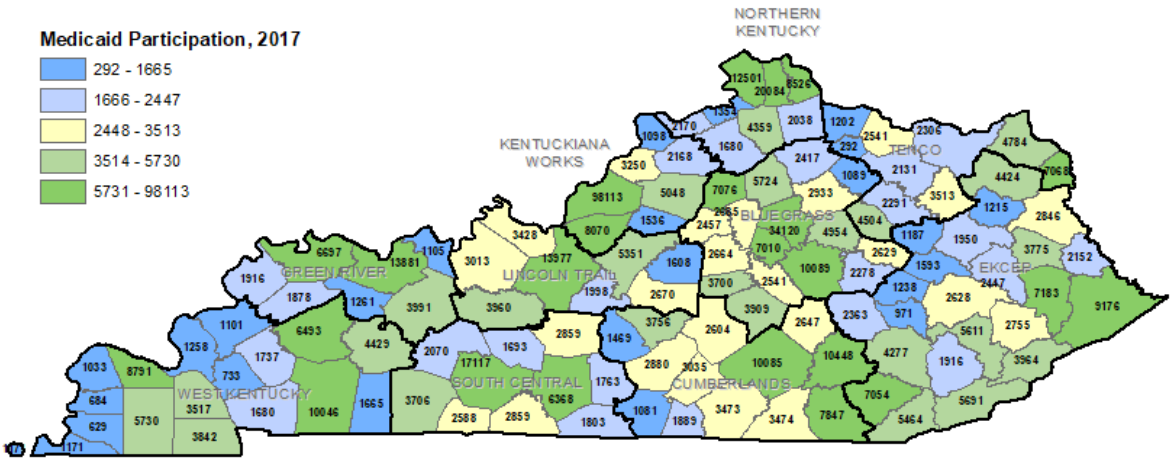
Data Source: Kids Count Children enrolled in Medicaid (average monthly number) in Kentucky

Exhibit 66 presents county-level information on the number of children participating in Medicaid, in 2017. Counties with the highest numbers of participants are shaded in green while counties with the lowest numbers of participants are shaded in blue.

Counties with Highest and Lowest Medicaid Participation

Highest: Jefferson, Fayette, and Kenton
Lowest: Robertson, Hickman, and Carlisle

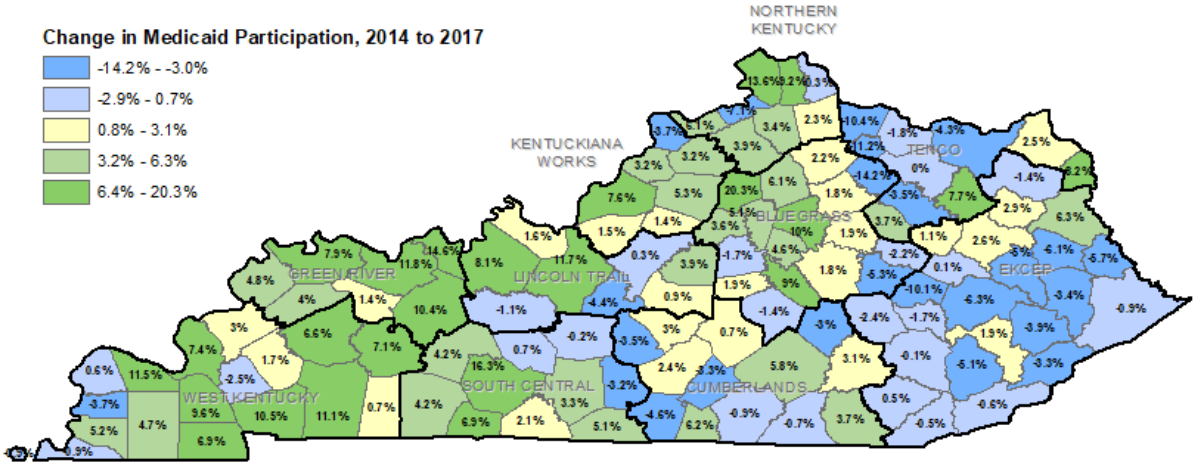
Exhibit 66 *Average Monthly Number of Children Participating in Medicaid by County, 2017*



Data Source: Kids Count Children enrolled in Medicaid (average monthly number)

A number of counties experienced a decrease in Medicaid participation between 2014 and 2017, as is shown in Exhibit 67. Counties that experienced the greatest increase are shaded in green while counties that experienced the lowest level of increase or a decrease are shaded in blue.

Exhibit 67 *Change in Children Receiving Medicaid Benefits, 2014 to 2017*



Data Source: Kids Count Children enrolled in Medicaid (average monthly number) in Kentucky

Kentucky Children's Health Insurance Program (KCHIP)

The Kentucky Children's Health Insurance Program is an extension of Medicaid, with enrollment available through the Department for Community Based Services offices, as well as online. The program provides:

> free or low-cost health insurance for children younger than 19 without health insurance. Children in families with incomes less than 213 percent of the federal poverty level are eligible.

Source: https://kidshealth.ky.gov/Pages/index.aspx

Exhibit 68 presents information on child participation in KCHIP, wherein data reflect children ages birth through five and older. Between 2014 and 2017 there was a statewide increase in participation, which was relatively consistent across LWDAs, with the exception of ECKEP.

Exhibit 68 Child Participation in KCHIP Benefits, 2014 to 2017

	Number of Children Enrolled in KCHIP				Change
	2014	**2015**	**2016**	**2017**	**2014 to 2017**
Kentucky	116177	113102	123404	138445	19%
Bluegrass	18219	18666	20929	23589	29%
Cumberlands	11990	11299	11671	12700	6%
ECKEP	14226	13086	13140	14005	-2%
Green River	6032	5971	6361	7196	19%
Kentuckiana Works	23258	22904	25797	30214	30%
Lincoln Trail	8269	7892	8572	9402	14%
Northern Kentucky	9129	9181	10450	11817	29%
South Central	8936	8920	9898	11227	26%
TENCO	5481	5230	5780	6217	13%
West Kentucky	10637	9953	10806	12078	14%

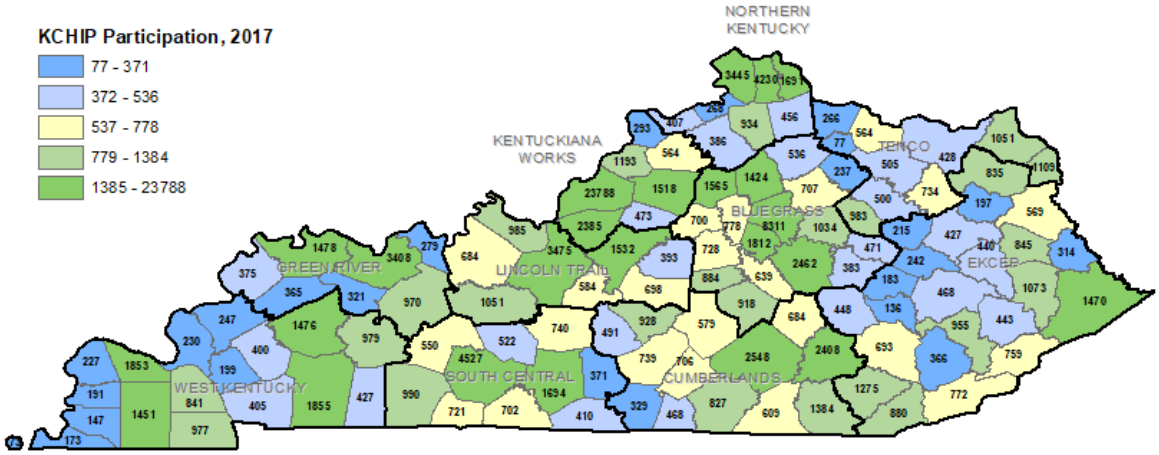
Data Source: Kids Count Kentucky Children's Health Insurance Program (average monthly number)

Exhibit 69 presents county-level information on the number of children participating in KCHIP, in 2017. Counties with the highest numbers of participants are shaded in green while counties with the lowest numbers of participants are shaded in blue.

Counties with Highest and Lowest KCHIP Participation

Highest: Jefferson, Fayette, and Warren
Lowest: Robertson, Owsley, and Hickman

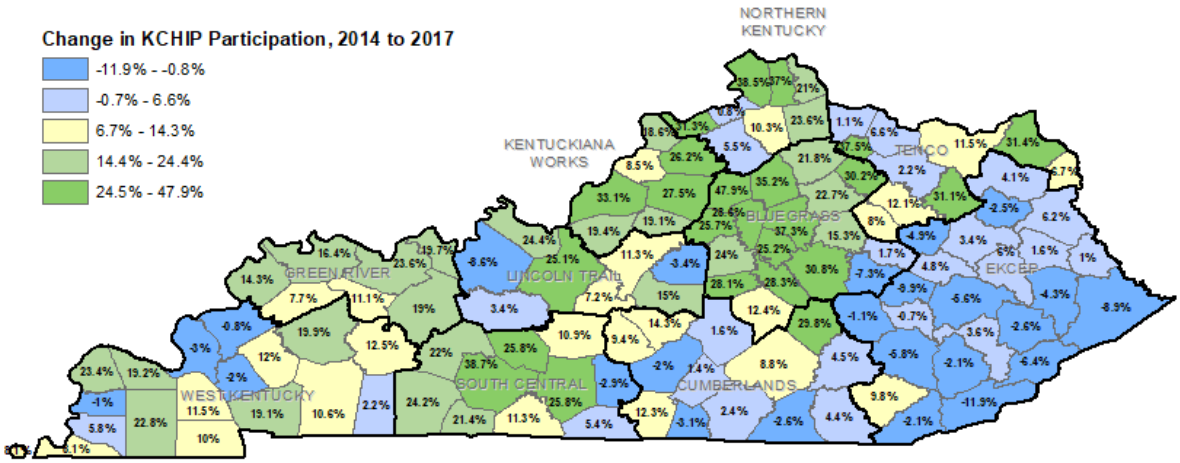
Exhibit 69 Child Participation in KCHIP Benefits by County, 2017



Data Source: Kids Count Kentucky Children's Health Insurance Program (average monthly number)

Exhibit 70 presents the change in children received KCHIP benefits, from 2014 to 2017. Counties that experienced the greatest increase are shaded in green while counties that experienced the lowest level of increase or a decrease are shaded in blue.

Exhibit 70 Change in Children Receiving KCHIP Benefits, 2014 to 2017



Data Source: Kids Count Kentucky Children's Health Insurance Program (average monthly number)

Low Income Home Energy Assistance Program (LIHEAP)

Kentucky's Low Income Home Energy Assistance Program (LIHEAP) is provided through the Policy Development Branch of the Division of Family Support, within the Department for Community Based Services of the Cabinet for Health and Family Services. The program channels funding from the federal Department of Health and Human Services to eligible participants, in the form of several services:

> The LIHEAP home heating program has two main components: Subsidy and Crisis. When funds are available, a third component to help with summer cooling costs is offered.
>
> The subsidy component operates in November and December to help residents at or below 130 percent of the federal poverty level pay home heating costs for which they are responsible either by direct payment or as an undesignated portion of their rent. In addition to income guidelines, eligible applicants may not have liquid resources in excess of $2,000 except when a household member has a catastrophic illness, in which case applicants may have as much as $4,000 in liquid assets if those assets are used for medical and living expenses.
>
> The crisis component of LIHEAP operates from early January until the middle of March, or until all funds are expended. Clients must meet the criteria listed above and be in a crisis situation involving imminent loss of heating energy (applicants must provide a utility disconnect notice); have four or fewer days worth of fuel oil, propane, kerosene, wood or coal available; or, have received an eviction notice citing unpaid rent (applies to applicants whose heating costs are included as an undesignated portion of the rent. **Households at or above 75% of poverty level must pay a portion or co-payment of the minimum amount necessary to alleviate the crisis**.
>
> The summer cooling program is only offered when additional federal or state funds

are available. It provides eligible households with a one-time payment to the household's cooling (electric) provider. Air conditioners may be provided for households where residents are at risk for health problems associated with excess heat.

Source: https://chfs.ky.gov/agencies/dcbs/dfs/pdb/Pages/liheap.aspx

The program is included in this report because many families who are found eligible also have young children (Exhibit 71). From 2013 to 2017, statewide, there have been decreases in the number of households with young children found to be eligible and receiving services. Overall, in 2017, 11.8% of income-eligible households with young children received heating assistance.

Exhibit 71 *Kentucky Participation in the Low Income Home Energy Assistance Program (LIHEAP)*

	Kentucky Participants in Low Income Home Energy Assistance Program					Change
	2013	2014	2015	2016	2017	2013-2017
State Income-Eligible Households - Child 5 and Under	81,992	80,126	77,608	74,151	75,628	-8%
Total Households Served - Child 5 and Under	25,043	23,777	21,340	19,764	19,446	-22%
Assisted Households - Child 5 and Under - Heating	17,611	15,750	14,287	11,312	11,417	-35%
Assisted Households - Child 5 and Under - Winter or Year Round Crisis	16,165	16,433	15,841	15,203	15,149	-6%
Percent of Income-Eligible Households With a Child 5 and Under Served by Heating Assistance	17.5%	16.1%	14.8%	12.1%	11.8%	-33%

Benefind

Benefind is a web-based services portal, located at benefind.ky.gov, that

allows Kentucky's families to easily access public assistance benefits and information 24/7 through an online application and account. The goal of Kentucky's public assistance programs is to build strong families and obtain services such as food, cash and medical assistance to become self-sufficient. You can use benefind from any computer that has internet access.

Assistance Programs
Supplemental Nutrition Assistance Program (SNAP) - helps individuals and families stretch their food budget and buy healthy foods.

Kentucky Transitional Assistance Program (KTAP) - provides cash assistance to families with children to help pay for basic needs such as rent, utilities, and other household expenses.

Medicaid - offers assistance to help cover costs for needed medical care including preventive health care.

Child Care Assistance Program - offers assistance to working families to pay for Child Care services.

Through benefind, individuals and families can:

- Create a Citizen account to access all of benefind's features
- Prescreen to determine if you and your family may be eligible for benefits
- Start an application for benefits
- Access and review basic information about your benefits
- Report changes to your benefit case
- Submit requested verification documents, and
- View all electronic notices and correspondence related to your case.

Source: benefind.ky.gov

Benefind can facilitate the search and application for services, for families with computer and internet access. The website also notes that individuals also can search and apply for services via a toll-free number, the DCBS office in Frankfort, or by having a trained staff person contact them. Benefind also notes that "*Free language assistance and/or other aids and services are available upon request.*"

Data Strengths and Needs

This sub-section provides information on the extent to which statewide services to respond to poverty are utilized, on the county and regional levels. It is important to note that other resources and services may be available to eligible children and families—but are not included in this report, as this report captures state-facilitated services intended for delivery in each county. One of the strengths of the current data set is the availability of the data that are shown, allowing a county-level review of need and service use. That stated, the system can be improved by (a) facilitating an understanding of all resources flowing into local communities and (b) developing a rigorous methodology for compiling and reporting the proportion of each county's eligible population that is served. As noted earlier, this can be challenging when programs and services have different eligibility requirements, records on individual child and family eligibility may or may not be available in centralized databanks, and child and family eligibility can change over time in response to shifting child and family conditions.

Initiatives to Improve Data

Kentucky is utilizing the PDG to complete a state-level fiscal mapping project (to be completed in winter 2019). This project will map the state-level program streams that fund early childhood initiatives. More than 30 streams have been identified so far.

Focus Populations: Synthesis

This section presents data to respond to the following questions:

1. **Who are the vulnerable or underserved children in your state? What are their characteristics in terms of race/ethnicity, recency of immigration, language spoken at home, poverty and low-income status, concentration in certain cities or town and/or neighborhoods?** As regards the overall population, a comparison of population values from 2000 to 2017 shows an increase, statewide, of 4.1% (while a comparison of values from 2010 to 2017 shows a decrease of 1.9%). Projections forward, from 2017 to 2030, suggest an increase of 1.9%. At the same time, there has been relatively little change over the past decade in representation of different racial groups as well as the population that identifies as Hispanic or Latino.

The state's primary definition for vulnerability is poverty. Between 2010 and 2017, there was a decrease in the percent of families with young children who were living in poverty (-1.2%). That stated, total population poverty in some counties was as high as 41.7%, while as much as 68.5% of children were at 100% or less of the Federal Poverty Level (FPL). In fact, in some counties, more than 20% of children existed in deep poverty, or at less than 50% of FPL. An analysis of poverty by race or ethnicity suggests that, across the state, poverty continues to be felt more extensively or deeply among communities of color.

Despite the availability of services that respond to poverty, many stakeholders express ways in which services can or should be more affordable. The statewide Preschool Development Planning Community Feedback Survey received feedback from over 800 respondents and indicated a need to:

> Kentucky's Race to the Top Early Learning Challenge Grant Validation Study (2018) included feedback from over 2700 parents enrolled in child care, Head Start, and preschool programs across the state. Seventy-one percent (n=1964) of participating parents reported that cost was a factor when choosing an early care and education option for their young child or children.

- Improve the affordability of services for children with special learning or developmental needs (reported by 68.1% of respondents; children who are eligible for early intervention services can be served through the Individuals with Disabilities in Education Act Parts B and C. Thus, this response merits more investigation.);
- Improve the affordability of services for highly vulnerable children (children exposed to traumatic experiences or environments; 68% of respondents);
- A need for additional supports for working families (67.2% of respondents; examples included child care subsidies or job training); and
- Improve the affordability of child care or preschool (61.3% of respondents).

In contrast, services for which affordability was not highly ranked as problematic included parent education (22.2%), Head Start/Early Head Start (22.7%), and family support (26.2%)[54]. Moving forward, Kentucky will learn more about access to programs and services, wherein access can be a

[54] The response patterns for parent education and family support may reflect interest in or desire for services as well as reflections on affordability. Additional services that were ranked for affordability included mental health services for children, mental health services for adults and families, health and nutrition services for children and families, resources or services that help children transition into kindergarten, substance abuse or opioid abuse services, domestic or intimate partner violence services, adoption/foster care services, and apprenticeship programs for young professionals.

function of affordability but also location or other factors. Kentucky's focus includes access to services that support transitions, and services among "working families" or families who have significant needs yet are not income eligible for services[55]. Community members who participated in PDG B-5 grant focus groups, for example, noted children in middle income or working poor families are being left out of services. Focus group members also noted that, in general, Kentucky's children need better access to health care and healthy food. They reported children's need for proper rest and exercise, raising concerns about child and family environments, inclusive of early care and education programming. Finally, there are concerns about the lack of activities for children—a concern that may apply to children older than age five.

Families who are foreign-born reside in each region of the state, but typically, the eastern-most counties have lower levels of foreign-born citizens or residents. These areas may be experiencing growth in immigrant populations, however, as is suggested by data on the percent of the foreign-born population that has arrived in the past ten years. This will have implications for how state and local services are implemented, especially as regards community ability to work with children and families for whom English is a second language.

a. What are the strengths and the weaknesses of the data you have available on this population? Are there any initiatives under way to improve these data? There are vulnerable children in every county. Counties with large populations (e.g., Jefferson, Fayette) will of course have larger absolute numbers of children and families in need and will have higher service use statistics. One of the strengths of the existing data are that county-level statistics are available at the county-level, which helps inform local communities. Moving forward, data systems can be improved by continuing to develop metrics of service saturation, based not only on the total population of children and families, or the estimated numbers in need, but also the numbers who are eligible for services, using the state's existing requirements across programs.

There also is more to learn about the needs and effectiveness and efficiency of services for migrants and English Learners. While publicly-funded services can be mandated to provide supports, members of this population also may desire private services such as licensed or certified child care. There are little systematic data on the ability of English Learners to connect with services that facilitate service utilization. This is an area in which the state may consider further developing its data system.

2. **Who are the children who live in rural areas in your state/territory? What are their characteristics in terms of race/ethnicity, recency of immigration, language spoken at home, poverty and low-income status?** Kentucky used several different approaches to identify rural counties. The least sensitive in the Office of Rural Health Policy's definitions, which identify rural, partially rural, and non-rural counties. Using this approach, 86 of Kentucky's 120 counties (72%) are considered rural while 16 (13% of 120) are considered partially rural. This section also contains information on Appalachia, or the 54 counties in the eastern end of the state. In only five counties is less than 20 percent of the population considered rural: Jefferson, Fayette, Kenton, Boone, and Campbell—home to some of the state's largest cities or urban areas.

[55] A follow-up survey (also statewide and online) is currently in progress and includes questions that probe these and other issues.

Rural counties in the eastern half of the state tend to have smaller overall populations of young children, compared to the metropolitan counties in the western half of the state. These tend to be the counties where a decline in the population of young children is anticipated over the next 10+ years. These also are counties where poverty, and the correlates of poverty, are highest and in some cases at critical levels (as measured by the percentage of children in poverty or deep poverty). The balance of population growth and poverty growth has implications for the anticipated level of investment to be made in these counties moving forward.

a. **Are they concentrated in certain regions of the state/territory?** As noted above, there only are five counties in which less than 20 percent of the population is considered rural. In fact, there are 41 counties in which the entire population is considered rural. One region, however, that merits additional attention is the Appalachian region. This majority of this region is distressed, and may still lack access to foundation resources such as health care, mental health care, early care and education facilities, adequate transportation, and internet services.

b. **Are data available on how far they typically live from an urban area?** Kentucky used the United States Department of Agriculture Economic Research Service definitions for frontier/remote areas to identify zip codes that are farthest from urban areas, starting with zip codes at least 60 minutes from urban areas with a population of 50,000 or more. The areas that are most remote tend to be in the Appalachian region.

c. **What are the strengths and the weaknesses of the data you have available on this population?** Kentucky is pleased to have strong data partners in the Kentucky Center for Statistics, the Kentucky State Data Center and Kentucky Youth Advocates, which compile and makes publicly available county-level data on many issues of relevance for children and families in need. There also is a need to develop metrics, to the county-level, on the unduplicated number of children and families eligible and waiting for services or denied services (i.e., be found ineligible). This is of particular concern for working families, who may earn enough income to fail to qualify for services yet experience stress and income vulnerability, such that they desire and seek out services.

d. **Are there any initiatives under way to improve these data?** With PDG funding, Kentucky is developing and improving its unique identifiers for children and families, so as to better track the unduplicated numbers of children served and awaiting services. Kentucky also is completing a state fiscal mapping exercise, to map the different funding streams that support early childhood programs and services.

Section 3. Number of Children Being Served and Awaiting Service in Early Care and Education Programs

Unduplicated Children Served in Existing Programs

This section contains information on participation in early care and education programs, which include the Kentucky preschool program, licensed and certified child care, and Head Start/Early Head Start.

Public Preschool

Exhibit 72 presents data on the number of children who participated in Kentucky's public preschool program, for which there has been an increase in participation from 2014 to 2019. The largest increase in participation was in the Lincoln Trail LWDA; there was a slight decrease in Kentuckiana Works.

Exhibit 72 Estimated Participation in Preschool Programs, 2014 to 2019

	Estimated Participation in Preschool Programs						Change
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2014-2019**
Kentucky	22492	22611	21080	22400	22740	24714	10%
Bluegrass	3668	3715	3450	3496	3553	3976	8%
Cumberlands	1962	2014	1950	1950	2008	2257	15%
ECKEP	1891	1932	1896	1792	1831	1934	2%
Green River	1667	1759	1692	1678	1703	1735	4%
Kentuckiana Works	3935	3769	2856	4192	3954	3891	-1%
Lincoln Trail	1537	1736	1736	1770	1787	2120	38%
Northern Kentucky	2243	2168	2083	2093	2292	2383	6%
South Central	2124	2089	1993	2133	2183	2471	16%
TENCO	962	927	936	1050	1104	1320	37%
West Kentucky	2505	2502	2488	2246	2327	2627	5%

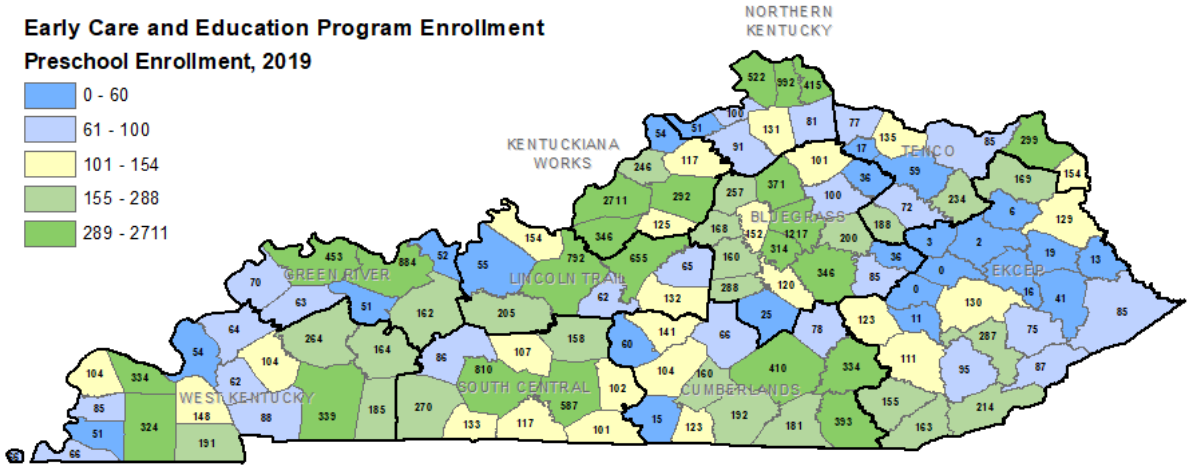
Data Source: KYSTATS Early Childhood Profiles, 2014 to 2019

County-level participation data are presented in Exhibit 73. Counties with the highest numbers of participants are shaded in green while counties with the lowest numbers of participants (including no participants) are shaded in blue.

Counties with Highest and Lowest Public Preschool Participation

Highest: Jefferson, Fayette, and Kenton
Lowest: Lee, Wolfe, and Morgan

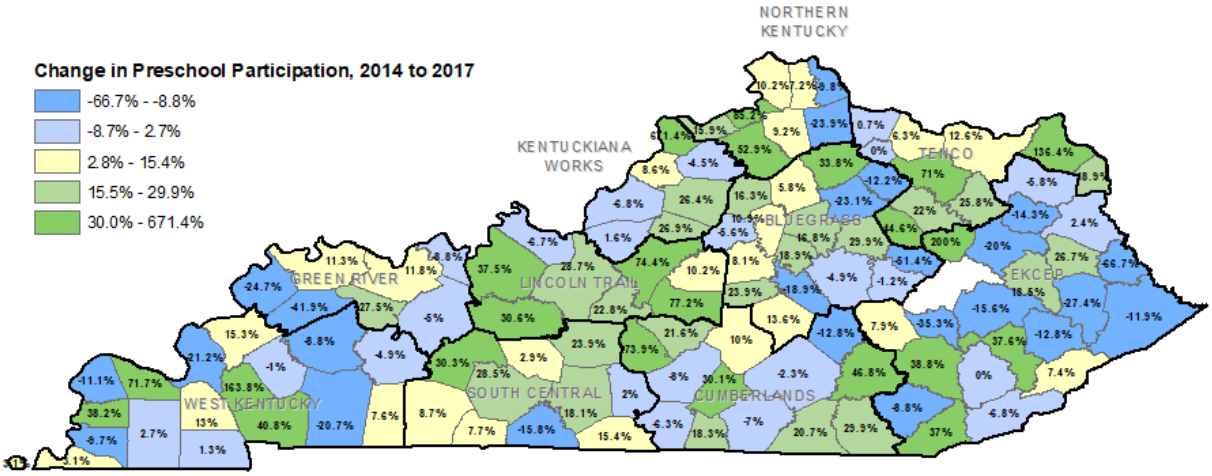
Exhibit 73 *Estimated Participation in Preschool Programs, by County, 2019*



Data Source: KYSTATS Early Childhood Profiles, 2019

Exhibit 74 presents change in preschool participation from 2014 to 2019. Counties that experienced the greatest increase are shaded in green while counties that experienced the lowest level of increase or a decrease are shaded in blue. Of note, Lee and Wolfe counties are reported to have no participation.

Exhibit 74 *Change in Preschool Participation, 2014 to 2019*



Data Source: KYSTATS Early Childhood Profiles, 2019; lack of shading indicates missing data

Head Start

Data on Head Start participation is presented in Exhibit 75, remembering that Head Start programs may be offered in public preschool programs or licensed child care. **Thus, these numbers may, in part, reflect duplicated counts—un-duplicating participation data is one of Kentucky's data needs.** While there was a statewide decrease in Head Start participation between 2014 and 2019, some LWDAs experienced increases.

Exhibit 75 *Estimated Participation in Head Start Programs, 2014 to 2019*

	Estimated Participation in Head Start Programs					Change
	2014	2015	2016	2017	2019	2014-2019
Kentucky	14659	12864	13841	13144	13875	-5%
Bluegrass	2093	1896	2098	1982	2243	7%
Cumberlands	1171	954	1175	926	1060	-9%
ECKEP	3520	3259	3049	3228	3630	3%
Green River	863	811	811	866	654	-24%
Kentuckiana Works	2201	1485	2096	1675	1647	-25%
Lincoln Trail	676	650	727	699	716	6%
Northern Kentucky	696	568	671	705	603	-13%
South Central	681	652	718	646	692	2%
TENCO	1182	1091	1099	962	884	-25%
West Kentucky	1576	1498	1397	1455	1746	11%

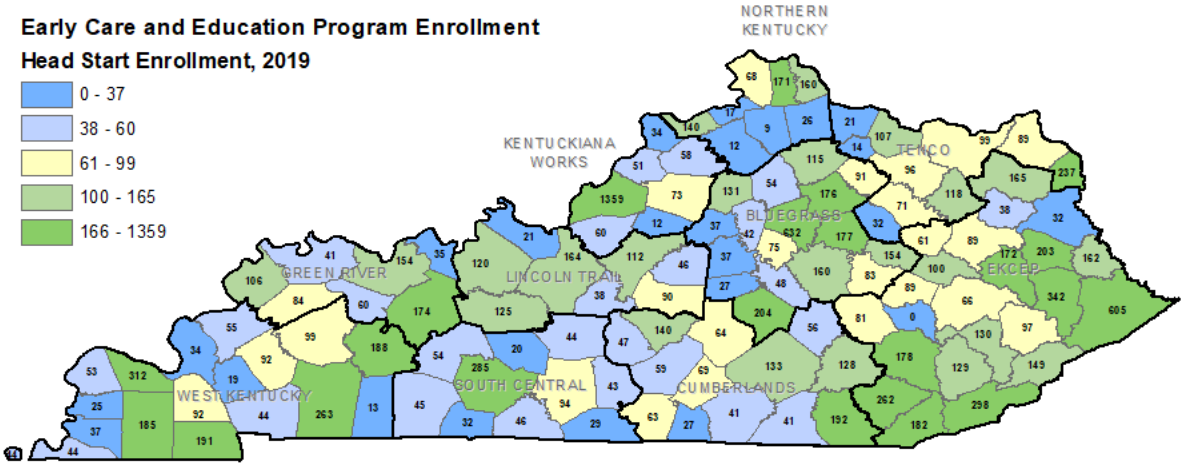
Data Source: KYSTATS Early Childhood Profiles, 2014 to 2019

County-level data for 2019 are presented in Exhibit 76. Counties with the highest numbers of participants are shaded in green while counties with the lowest numbers of participants (including no participants) are shaded in blue.

Counties with Highest and Lowest Head Start Participation

Highest: Jefferson, Fayette, and Pike
Lowest: Owsley, Grant, and Owen

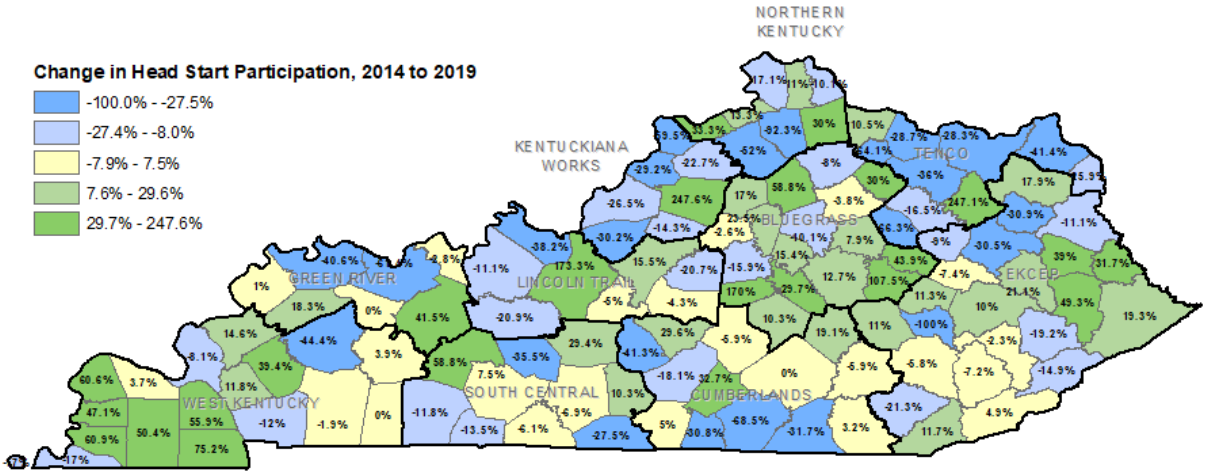
Exhibit 76 *Estimated Participation in Head Start Programs, by County, 2019*



Data Source: KYSTATS Early Childhood Profiles, 2019

Exhibit 77 presents change in Head Start participation between 2014 and 2019. Counties that experienced the greatest increase are shaded in green while counties that experienced the greatest decrease are shaded in blue.

Exhibit 77 Change in Head Start Participation, 2014 to 2019



Data Source: KYSTATS Early Childhood Profiles, 2019

Private (Licensed or Certified) Child Care

Finally, Exhibit 78 presents estimated total licensed or certified child care capacity. Statewide, there has been a decrease in estimated capacity between 2014 and 2019. However, some LWDAs experienced increases, as shown in the exhibit.

Exhibit 78 Estimated Child Care Capacity, 2014 to 2019

	Estimated Child Care Capacity					Change
	2014	**2015**	**2016**	**2017**	**2019**	**2014-2019**
Kentucky	176688	170142	167746	166254	164879	-7%
Bluegrass	42325	41125	40041	39838	39603	-6%
Cumberlands	6765	6649	6614	6415	6398	-5%
ECKEP	7005	7016	7133	6524	6564	-6%
Green River	7429	7142	7319	7258	7487	1%
Kentuckiana Works	54391	51733	50660	48926	48718	-10%
Lincoln Trail	10854	10176	10271	10107	10257	-6%
Northern Kentucky	20555	19888	19480	20151	19048	-7%
South Central	8268	8368	8582	8900	9133	10%
TENCO	6433	6027	6027	6259	6553	2%
West Kentucky	12663	12018	11619	11876	11118	-12%

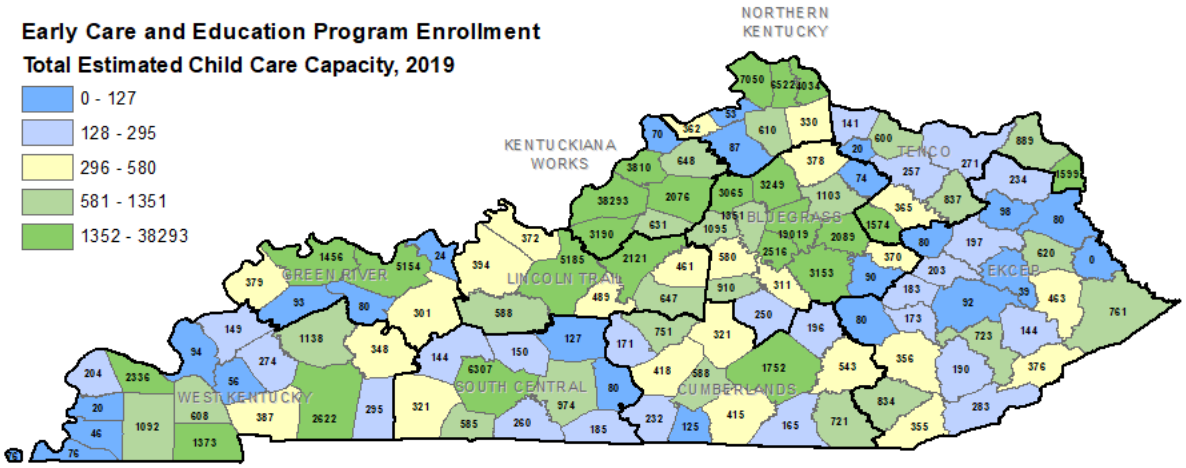
Data Source: KYSTATS Early Childhood Profiles, 2014 to 2019

County-level data for estimated child care capacity in 2019 is shown in Exhibit 79. Counties with the highest numbers of participants are shaded in green while counties with the lowest numbers of participants (including no participants) are shaded in blue.

Counties with Highest and Lowest Private Child Care Capacity

Highest: Jefferson, Fayette, and Boone
Lowest: Martin, Carlisle, and Robertson

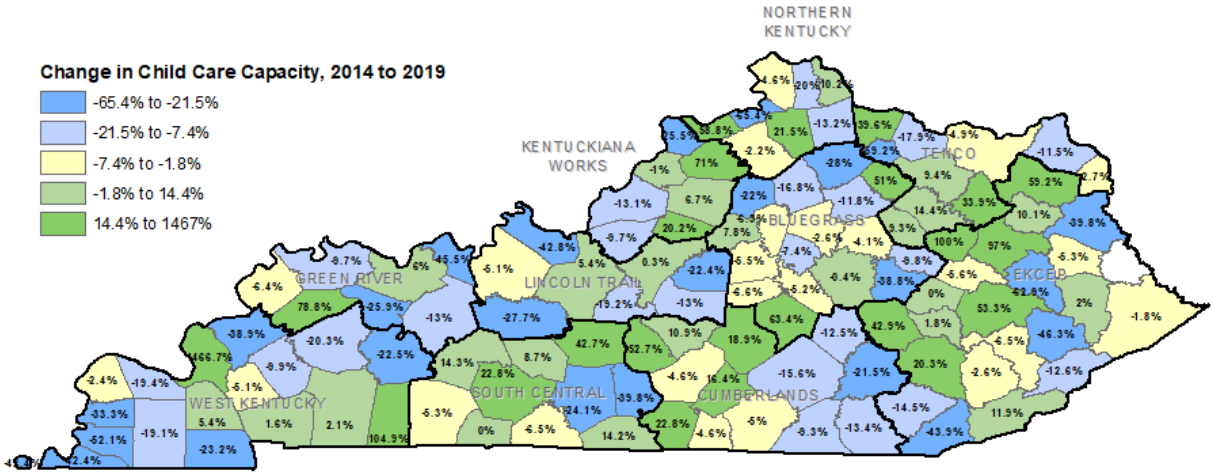
Exhibit 79 *Estimated Child Care Capacity, by County, 2019*



Data Source: KYSTATS Early Childhood Profiles, 2019

Exhibit 80 presents change in child care capacity in each county, from 2014 to 2019. Counties that experienced the greatest increase are shaded in green while counties that experienced the greatest decrease are shaded in blue. Of note, there is no licensed or certified private child care in Martin County.

Exhibit 80 *Change in Child Care Capacity, 2014 to 2019*



Data Source: KYSTATS Early Childhood Profiles, 2019; lack of shading indicates absence of licensed or certified care

Registered and Family Friend or Neighbor (FFN) Care

The Division of Child Care describes registered providers as:

> A registered early childhood provider typically is a family member, friend or neighbor. Care is provided in the child's home or the provider's home. An early childhood provider may not care for more than three children not related to the caregiver or more than six children if they are a sibling group.
>
> A registered professional may care for no more than eight children during hours of operations. This includes three children not related to the professional and up to five of the professional's own children or a sibling group related to the professional of no more than six children and the professional's own children, not to exceed eight children at any given time.
>
> A registered early childhood professional must meet all requirements of the Child Care Assistance Program (CCAP) … Registered professional applicants must meet the minimum health, safety and training requirements and not live within the same household as the child. A registered professional may care for children in the child's home or their home.
>
> Source: https://chfs.ky.gov/agencies/dcbs/dcc/Pages/providers.aspx

As noted above, registered care providers can participate in the CCAP but do not participate in Kentucky All STARS and thus do not have a quality rating. Further, registered providers are not listed in Benefind, the state's web-based search engine. As of August 2019, there are 79 registered providers in the state, located in 32 counties. Thus, this is not a prevalent form of care across the state.

More informal, and quite possibly more prevalent, than registered care providers are the network of FFN providers. FFN care consists of care providers who often "fill in the gaps" or help families "round out" their child care needs. Grandparents, other family members, friends, neighbors, babysitters, nannies, and au pairs all can be members in the FFN network. It is possible for families to use both formal and informal (FFN) care providers to meet their needs for non-parental care (such as when parents are at work or at school). At this time, however, there is no systematic means of collecting data on this network of care providers. Moving forward, it will be helpful to consider how to engage non-traditional or informal care providers, to ensure they are linked to resources and supports.

Services to Support Participation in Early Care and Education Programs

Children Supported through the Child Care Development Fund (CCDF)

Data on participation in Kentucky's Child Care Assistance Program (CCAP) are provided in Section 2. The Administration for Children and Families make additional state-level information available for participating states, based on required annual reports. These data inform the understanding of current need for and participation in the state's subsidized child care program (which includes school-age children). For example, Exhibit 81 presents annual information for 2014 to 2017 on the average number of families and children served each month. As can be seen, there has been a steady increase in service participation over this time period.

Exhibit 81 Kentucky Participation in Child Care, Average Monthly Adjusted Number (including School-Age Care), 2014 to 2017

	Kentucky Participation in Child Care, Average Monthly Adjusted Number (including School-Age Care)				Change
	2014	**2015**	**2016**	**2017**	**2014 to 2017**
Average Number of Families Served	4900	5300	7500	8400	71%
Average Number of Children Served	9500	10100	14200	15800	66%

Data Source: Administration for Children and Families Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables, 2014 to 2017

Exhibit 82 presents participation data by type of site (including participation of students utilizing school-age care). From 2014 to 2017 there were increases in participation in child care centers, compared to child homes or family child care providers.

Exhibit 82 Kentucky Participation in Child Care, by Type (including School-Age Care), 2014 to 2017

	Kentucky Participation in Child Care, by Type (including School-Age Care)				Change
	2014	**2015**	**2016**	**2017**	**2014 to 2017**
Child Home	1%	1%	--	--	-1%
Family Home	7%	5%	4%	3%	-4%
Group Home	1%	1%	1%	1%	--
Center	91%	94%	95%	95%	4%
Licensed/Regulated	97%	98%	99%	99%	2%
Legally Operating without Regulation	3%	2%	1%	1%	-2%

Data Source: Administration for Children and Families Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables, 2014 to 2017

Kentucky has experienced a decrease in the number of programs that receive CCDF resources, as is shown in Exhibit 83. The decrease is most dramatic among child homes and family child care providers. This may reflect a decline in participation or a decline in the number of available facilities.

Exhibit 83 Kentucky Providers Receiving CCDG Funds (including School-Aged Care), 2014 to 2017

	Kentucky Providers Receiving CCDG Funds (including School-Aged Care)				Change
	2014	**2015**	**2016**	**2017**	**2014 to 2017**
Child Home	106	80	67	76	-28%
Family Home	634	457	343	310	-51%
Group Home	65	56	55	53	-18%
Center	1619	1506	1384	1386	-14%
Total	2424	2099	1849	1825	-25%

Data Source: Administration for Children and Families Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables, 2014 to 2017

There has been some, slight, growth in the percent of young children receiving CCAP funds from 2014 to 2017 (as a percentage of all children receiving subsidy). The data presented in Exhibit 84 suggest that growth has occurred among infants and toddlers. Also of note, there was a decline in the proportion of African-American children who received CCAP support, in this same time period (Exhibit 85).

Exhibit 84 Kentucky Children Participating in CCAP, by Age, Birth to 5, Average Monthly Percentage, 2014 to 2017

	Kentucky Children Participating in CCAP, by Age, Birth to 5, Average Monthly Percentage				Change
	2014	2015	2016	2017	2014 to 2017
0 to 1 year	5%	8%	7%	7%	2%
1 to 2 years	10%	12%	12%	12%	2%
2 to 3 years	12%	13%	13%	14%	2%
3 to 4 years	13%	13%	13%	13%	--
4 to 5 years	13%	12%	12%	12%	-1%
Percent Birth to 5 (of all children receiving subsidy support)	53%	57%	58%	59%	6%

Data Source: Administration for Children and Families Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables, 2014 to 2017

Exhibit 85 Kentucky Children Participating in CCAP, by Race or Ethnicity (including School-Aged Care), 2014 to 2017

	Kentucky Children Participating in CCAP, by Race or Ethnicity (including School-Aged Care)				Change
	2014	2015	2016	2017	2014 to 2017
Native American/ Alaska Native	--	--	--	--	--
Asian	--	--	--	--	--
Black/ African-American	31%	30%	29%	28%	-3%
Native Hawaiian/ Pacific Islander	--	--	--	--	--
White	44%	43%	43%	44%	--
Multi-Racial	--	--	--	--	--
Invalid or Not Reported	24%	26%	27%	28%	4%
Latino Ethnicity	5%	5%	4%	4%	-1%

Data Source: Administration for Children and Families Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables, 2014 to 2017

Exhibit 86 provides **national** statistics on the age of children and the settings that are supported by CCAP resources. If Kentucky is similar to the nation as a whole, there has been an increase in the use of center-based care for children of all ages. This may reflect a decrease in the availability of other types of care, such as care provided in family child care or group programs.

Exhibit 86 NATIONAL Children Participating in CCAP, by Age and Setting, Average Monthly Percentage, 2014 to 2017

		NATIONAL Children Participating in CCAP, by Age and Setting, Average Monthly Percentage				Change
		2014	2015	2016	2017	2014 to 2017
Infants (0 to <1 yr)	Child Home	4%	3%	3%	2%	-2%
	Family Home	21%	19%	18%	17%	-4%
	Group Home	7%	8%	8%	7%	--
	Center	69%	70%	70%	72%	3%
	Invalid Setting	--	1%	2%	2%	2%
Toddlers (1 yr to <3 yrs)	Child Home	3%	2%	2%	2%	-1%
	Family Home	17%	16%	15%	14%	-3%
	Group Home	8%	8%	8%	8%	--
	Center	72%	73%	73%	74%	2%
	Invalid Setting	--	1%	2%	1%	1%
Preschool (3 yrs to <6 yrs)	Child Home	2%	2%	2%	2%	--
	Family Home	14%	13%	12%	12%	-2%
	Group Home	6%	6%	6%	6%	--
	Center	77%	78%	78%	80%	3%
	Invalid Setting	--	1%	2%	1%	1%

Data Source: Administration for Children and Families Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables, 2014 to 2017

While parent employment remains the primary reason for CCAP participation (Exhibit 87), Kentucky has experienced growth in the percentage of children who receive support because of involvement in protective services. These data align with information provided later in the report on the rise in participation in the state's services for children experiencing abuse or neglect.

Exhibit 87 Kentucky Children Participating in CCAP, Reasons for Care, Average Monthly Percentage of Families, 2014 to 2017

	Kentucky Children Participating in CCAP, Reasons for Care, Average Monthly Percentage of Families				Change
	2014	2015	2016	2017	2014 to 2017
Employment	86%	89%	88%	84%	-2%
Training/ Education	5%	4%	3%	2%	-3%
Both Employment & Training/Education	4%	3%	2%	2%	-2%
Protective Services	5%	4%	6%	11%	6%

Data Source: Administration for Children and Families Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables, 2014 to 2017

Unduplicated Children Awaiting Services in Existing Programs

Kentucky is developing its ability to compile and analyze unduplicated counts of children served and numbers of children waiting to be served, across programs. The CCAP program reports that there are no children currently waiting to receive subsidy support for which they are eligible, which is consistent with reports from the National Women's Law Center in February 2018[56]. As regards participation in early care and education programs in general, Rous, B., Sherif, V. & Singleton, P. (2018)[57] reported that 56.6% of providers in the 2017 market rate study reported a waiting list, which was a 15.3% increase from the 2015 market rate study.

Data Strengths and Needs

Kentucky's integrated data system could benefit from more rigorous data on the following aspects of early care and education programming:

- Availability of child care placements by location, star rating, and age. Such data would assist the state in tracking the availability of high quality early care and education and ensuring young children of all age groupings have access to a program in their community.
- Regular updated data on enrollment in private (and specifically licensed or certified) child care, by location, star rating, and age. Enrollment data can help the state track demand for services. These data should include waiting list information, to track the number of children desiring care who are not able to access a program. Waiting list information that can be analyzed by the age of the child as well as child and family circumstances (such as the days or shifts that care is needed) would be a benefit to the state.
- The licensing status, enrollment, and availability of placements at Head Start and Early Head Start programs. Many Head Start programs in the state are affiliated with licensed child care or public preschools. Some, however, are independent. It will be helpful for the state to develop better and routinely updated data on Head Start/Early Head Start programs, to more accurately track scheduled assessments and training and technical assistance, as well as the total availability of care in counties.

Initiatives to Improve Data

The Kentucky Center for Statistics' work to further develop and improve both a state unique identifier and the number and scope of data partners are examples of current initiatives, both of which are supported through the PDG. This work is intended to include Head Start grantees, so as to make progress on un-duplicating, at the county-level, the number of children served across early care and education programs. One aspect of the work (also was noted earlier) is the need to tease apart numbers of children, numbers of children in poverty, and numbers of children eligible for different services. This will help state and local agencies determine what level and type of resources are necessary, and the mix of policies and practices for leveraging funding that can ensure more children are served.

[56] https://nwlc.org/resources/state-by-state-fact-sheets-child-care-assistance-policies-2018/

[57] Rous, B., Sherif, V. & Singleton, P. (2018). *Kentucky's 2017 child care market rate survey.* Lexington, KY: Human Development Institute, University of Kentucky.

Children Served and Waiting to be Served in Early Care and Education Programs: Synthesis

This section presents data that respond to the following questions:

1. **What data do you have describing the unduplicated number of children being served in existing programs? What are your biggest data gaps or challenges in this area?**
2. **What data do you have describing the unduplicated number of children awaiting service in existing programs? What are your biggest data gaps or challenges in this area?**
3. **What are the strengths and the weaknesses of the data you have available on children being served? Are there any initiatives under way to improve these data?**

This is an area where Kentucky can make clear and specific gains. While data groups such as the Kentucky Center for Statistics have methods for compiling and reporting, on the county-level, the number of children enrolled in publicly-supported programs, there still is duplication across programs. Further, there is little systematic data captured on total enrollment and total demand for services, which can inform state and local efforts to incubate and foster high quality care (that is affordable and accessible to children and families).

The state does not currently have a waiting list for its CCAP, which provides subsidized care to eligible children. At the same time, data from recent market rate studies show that some sites maintain waiting lists of students and in one county there is no private child care—which raises questions about how families with infants and toddlers find high-quality, affordable, and accessible care arrangements. The issue of child care deserts is discussed in the next section.

Section 4. Quality and Availability of Early Care and Education Programs

Quality of Care Across Settings

Systems Strengths Across Settings

Many Kentucky families use licensed, certified or regulated early care and education facilities to serve child and family needs—which include the need for child developmental or educational supports as well as supports that ensure parents can participate in the workforce or attend training or courses to advance their skills and qualifications. Thus, early care and education services (which include child care, Head Start/Early Head Start, and public preschool) are necessary infrastructure in every county.

> Focus group participants noted that Kentucky All STARS is a system strength, with a strong history of progress.

One of Kentucky's strengths is its Tiered Quality Rating and Improvement System (QRIS) that defines, promotes, and supports the advancement of quality in early care and education programs. Kentucky All STARS utilizes a hybrid five-star rating scale, including blocks for the first two levels and a points system for levels 3-5. Each level includes domains and standards with point-values assigned. Four domains make up the Kentucky All STARS ratings:

- Family and Community Engagement,
- Classroom and Instructional Quality,
- Staff Qualifications and Professional Development, and
- Administrative and Leadership Practices.

Briefly,

- To obtain a 1-star rating, programs must meet regulatory requirements.
- To obtain a 2-star rating, programs must complete the required standards in levels one and two: Classroom and Instructional Quality and Staff Qualifications and Professional Development.
- To advance to STARS levels 3 through 5, programs must
    - Meet level 2 requirements,
    - Participate in an environmental observation (the minimum score required increases at each level),
    - Earn the minimum number of points assigned within each of the four domains, and
    - Earn an additional range of points from their choice of the four domain(s) (the range of points increase at each level).

Kentucky All STARS is a unified system. This means that private child care, public preschool, and Head Start or Early Head Start facilities all can participate, with standards that are meaningful and impactful across these different settings.

Kentucky All STARS Participation and Ratings

Kentucky All STARS is a mandatory system requiring participation by all programs receiving public funds, with advancement to higher quality levels (above level 1) being voluntary. During migration from the state's prior QRIS (STARS for KIDS NOW), licensed private child care programs entered Kentucky All STARS at level 1 and public preschools and Head Start programs entered at level 3. Exhibit 88 presents information on participation by type of program. Of note, **Head Start/Early Head Start typically are grouped with either licensed child care or preschool sites, depending upon site licensing and location**. (Kentucky's need to un-duplicate site and child records was noted in Section 3.) As can be seen, more than 50% of programs have a 3 star or higher rating. This is, in part, due to Kentucky rating guidelines, which provide a "basement" rating of 3 stars for public preschool and Head Start/Early Head Start programs.

Exhibit 88 Kentucky All STARS Participation and Ratings, by Type of Program, April 2019

	Total Sites	Current Kentucky All STARS Participation and Ratings					
		Missing or None	1 star	2 star	3 star	4 star	5 star
Kentucky	2679	47	868	229	460	377	698
Child Care Centers: Type I	1834	41	703	182	356	334	218
Child Care Centers: Type II	54	--	29	7	5	8	5
Certified	243	4	136	40	29	27	7
Public Preschool	547	1			70	8	468
Licensed Military	1	1					

Data Source: Data extracts from Kentucky Department of Education (June 2018) and the Division of Child Care (April 2019)

Early care and education programs are not evenly distributed across the state, with a greater number of sites present in those parts of the state that have higher populations of young children. This phenomenon is illustrated in Exhibit 89 (and discussed further in a later section on child care deserts).

Exhibit 89 Kentucky All STARS Participation and Ratings, by LWDA and Star Rating, April 2019

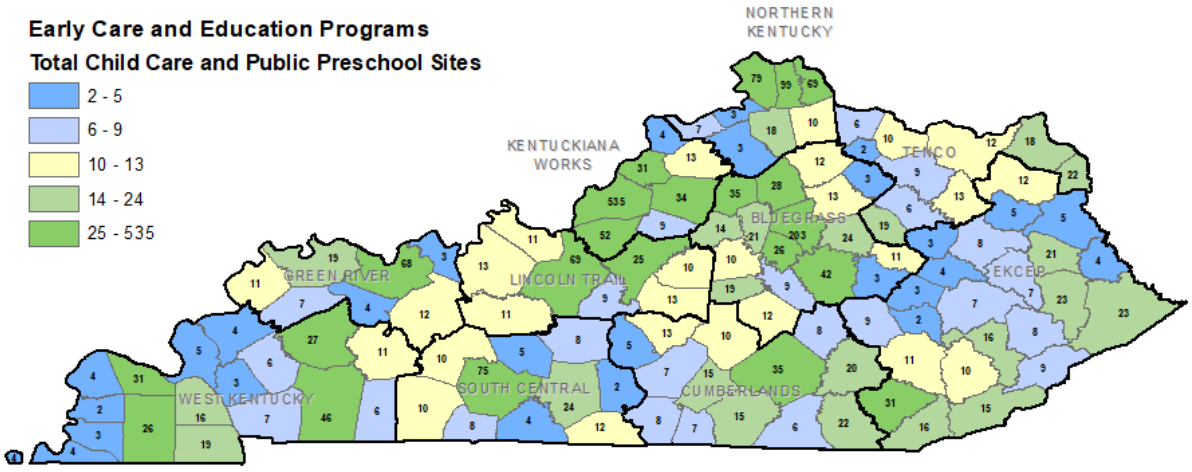
	Total Rated Sites	Current Kentucky All STARS Participation and Ratings				
		1 star	2 star	3 star	4 star	5 star
Kentucky	2632	868	229	460	377	698
Bluegrass	475	197	58	54	61	105
Cumberlands	172	18	19	54	26	55
ECKEP	249	12	34	62	29	112
Green River	122	30	3	37	7	45
Kentuckiana Works	661	305	54	108	103	91
Lincoln Trail	162	59	21	18	21	43
Northern Kentucky	289	76	18	37	76	82
South Central	168	69	4	23	16	56
TENCO	115	39	5	24	17	30

West Kentucky	219	63	13	43	21	79

Data Source: Data extracts from Kentucky Department of Education (June 2018) and the Division of Child Care (April 2019)

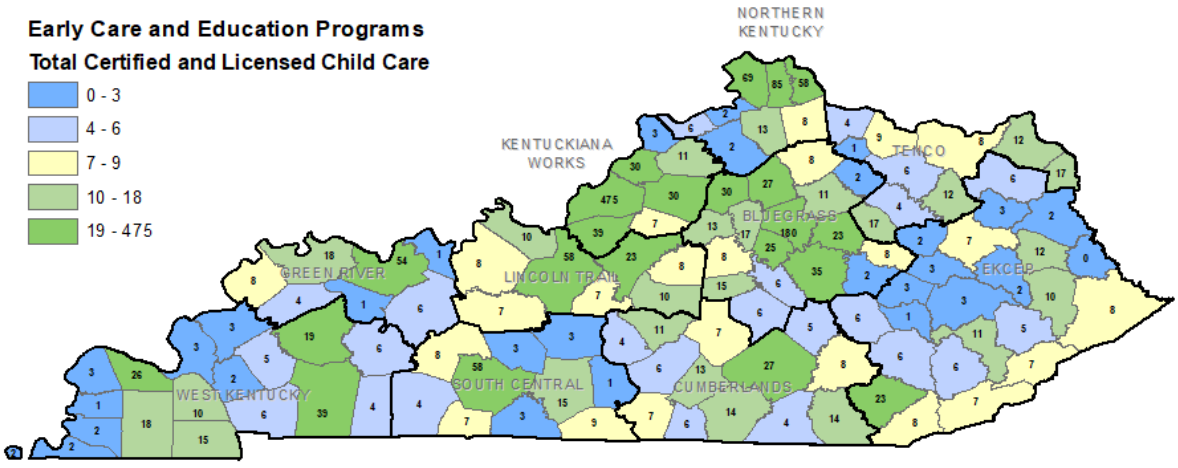
Each county has at least one program—but not every county has every type of program (licensed or certified child care, Head Start, or public preschool; Exhibits 90 through 92). Of note, Martin County has no licensed or certified child care programs. Exhibit 90 presents all certified and licensed child care programs along with public preschool programs. Exhibit 91 presents just certified or licensed programs, and Exhibit 92 presents just public preschool programs. Counties shaded in green have higher numbers of facilities than counties shaded in blue or yellow.

Exhibit 90 *Total Number of Certified and Licensed Private Child Care **and** Public Preschool Programs, by County, 2019*



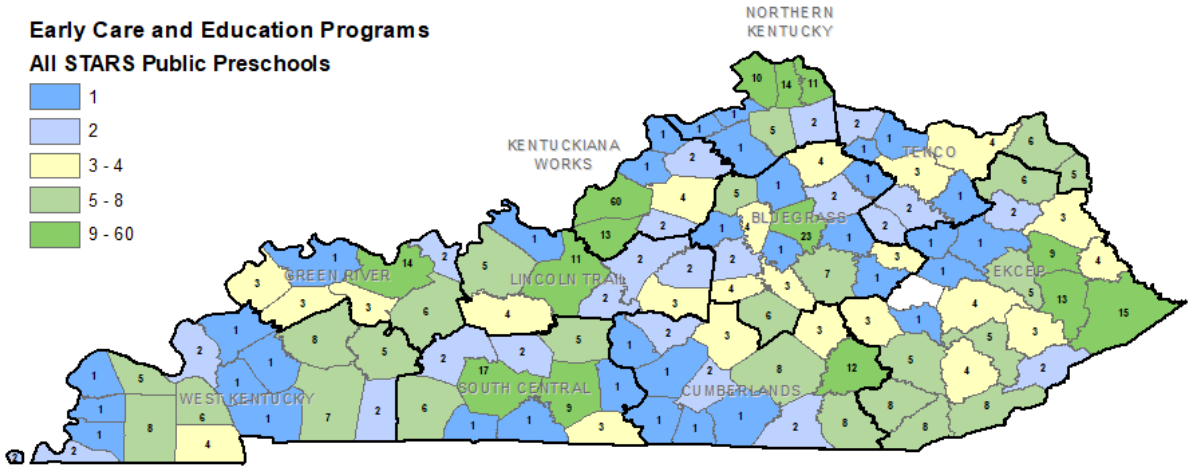
Data source: KYSTATS Early Childhood Profile, 2019

Exhibit 91 *Total Number of Certified and Licensed Private Child Care Programs, by County, 2019*



Data source: KYSTATS Early Childhood Profile, 2019

Exhibit 92 *Total Number of Public Preschool Programs, by County, 2019*



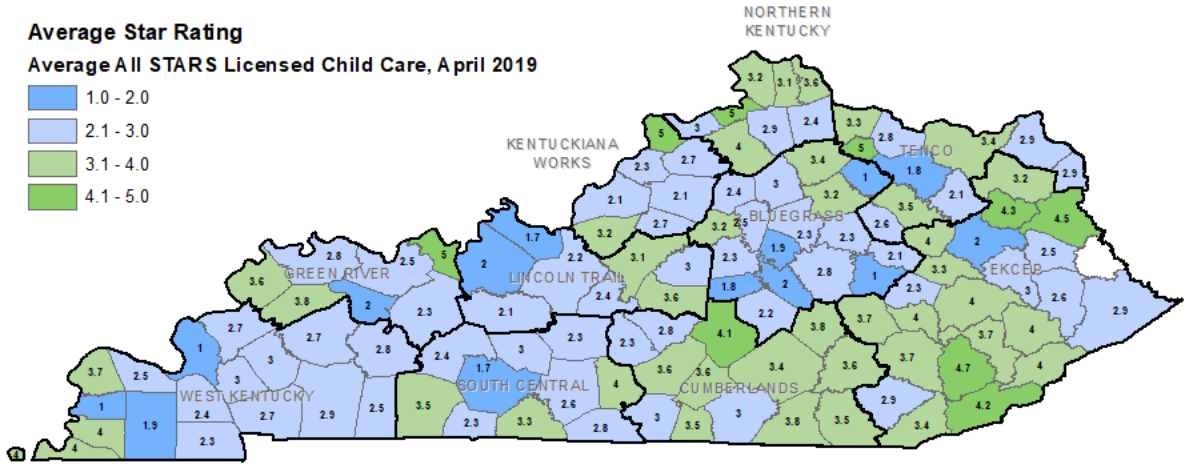
Data source: KYSTATS Early Childhood Profile, 2019; lack of shading indicates missing data

In addition, the distribution of quality varies by county, as is shown in Exhibits 93 and 94. Exhibit 93 presents the average star rating of licensed and certified child care programs, by county. Counties shaded in green have higher average quality and counties shaded in blue, lower.

Counties with Highest and Lowest Average Quality Child Care Programs

Highest: Trimble, Robertson, Hancock, and Gallatin
Lowest: Carlisle, Estill, Livingston, and Nicholas

Exhibit 93 *Map of Average Star Quality by County, Licensed and Certified Child Care Programs, April 2019*



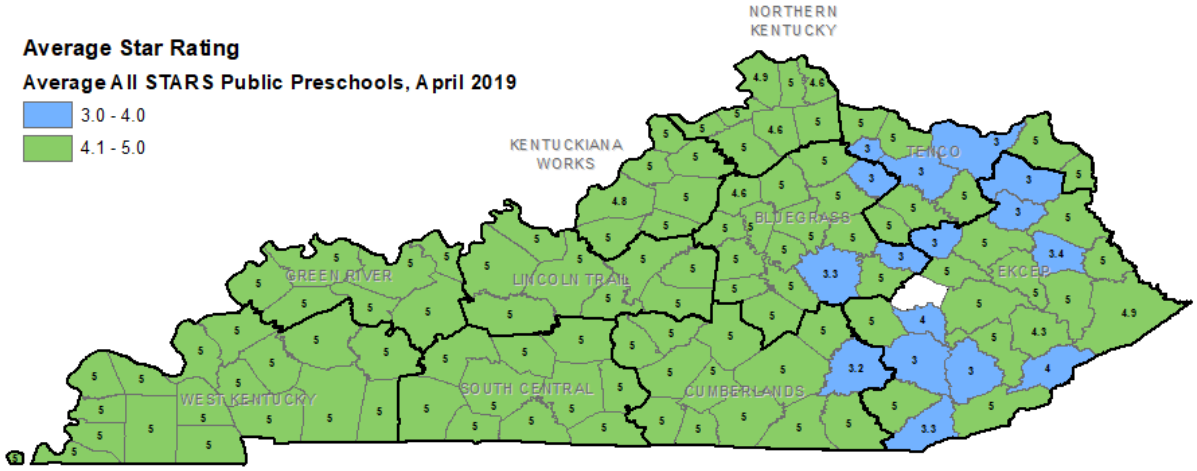
Data source: KYSTATS Early Childhood Profile, 2019; lack of shading indicates absence of licensed or certified care

In contrast to licensed and certified child care programs, across Kentucky, most counties offer only five star rated public preschool programs (Exhibit 94)[58]. Of note, the counties in which the

[58] Counties where data are missing are not shaded.

average quality of public preschool programs is less than 4.1 are in the eastern part of the state. However, as is shown above, some of the counties that have opportunities to grow the quality of preschool programs also have relatively high (3 star or higher) average ratings of licensed or certified child care.

Exhibit 94 *Map of Average Star Quality by County, Public Preschool Programs, April 2019*



Data source: KYSTATS Early Childhood Profile, 2019; lack of shading indicates missing data

Systems Gaps or Needs Across Settings and Counties

Children or Families Living in Child Care Deserts

Some Kentucky counties struggle to provide sufficient care—in Martin County, for example, there is no licensed or certified child care available. Exhibit 95 presents estimates regarding the existence of child care deserts in the state, wherein a child care desert is

> any census tract with more than 50 children under age 5 that contains either no child care providers or so few options that there are more than three times as many children as licensed child care slots.
>
> Source: Center for American Progress (https://childcaredeserts.org)

According to the Center for American Progress, in Kentucky[59]:

- 50% of people, overall, live in a child care desert. When analyzed by race, 52% of non-Hispanic, whites live in a child care desert, compared to 42% non-Hispanic Black or African-American, or 45% Hispanic or Latino.
- Child care deserts exist in rural locations more strongly than urban with 1,370,155 individuals living in rural child care deserts, compared to 122,601 urban and 732,292 suburban.
- Child care deserts are more common in lower income communities (55% of individuals in child care deserts live in the lowest income neighborhoods compared to 43% who live in the highest income neighborhoods).

[59] https://childcaredeserts.org/?state=KY

For this report, the incidence of child care deserts was calculated for Kentucky counties by:

- Extracting the estimated population of children ages birth to four from the United States Census Bureau's American Community Survey and
- Calculating the estimated total early care and education capacity, using data extracted from KYSTATS Early Childhood Profiles. In this calculation, total early care education capacity reflects the total capacity of child care programs plus preschool enrollment. **This count may under-estimate available care, however.** Head Start capacity, for example, may be included in child care and preschool estimates in some cases but not in others. Further, population estimates date to 2017 while child care and preschool capacity reflect 2019 counts. **Kentucky is developing its capacity to further compile and analyze these types of data.**

As can be seen in Exhibit 95, the ECKEP LWDA can be classified as a regional child care desert—across the counties in this region, the ratio of children ages birth to four to capacity is 3.1.

Exhibit 95 Child Care Deserts

	Ratio of Population of Children Ages Birth to Four: Estimated Early Care and Education (ECE) Capacity		
	Estimated Population	**Estimated ECE Capacity**	**Ratio of Population to Capacity**
Kentucky	276883	189593	1.5
Bluegrass	50083	43579	1.1
Cumberlands	19717	8655	2.3
ECKEP	26057	8498	3.1
Green River	13675	9222	1.5
Kentuckiana Works	62010	52609	1.2
Lincoln Trail	17274	12377	1.4
Northern Kentucky	29897	21431	1.4
South Central	19470	11604	1.7
TENCO	12275	7873	1.6
West Kentucky	26425	13745	1.9

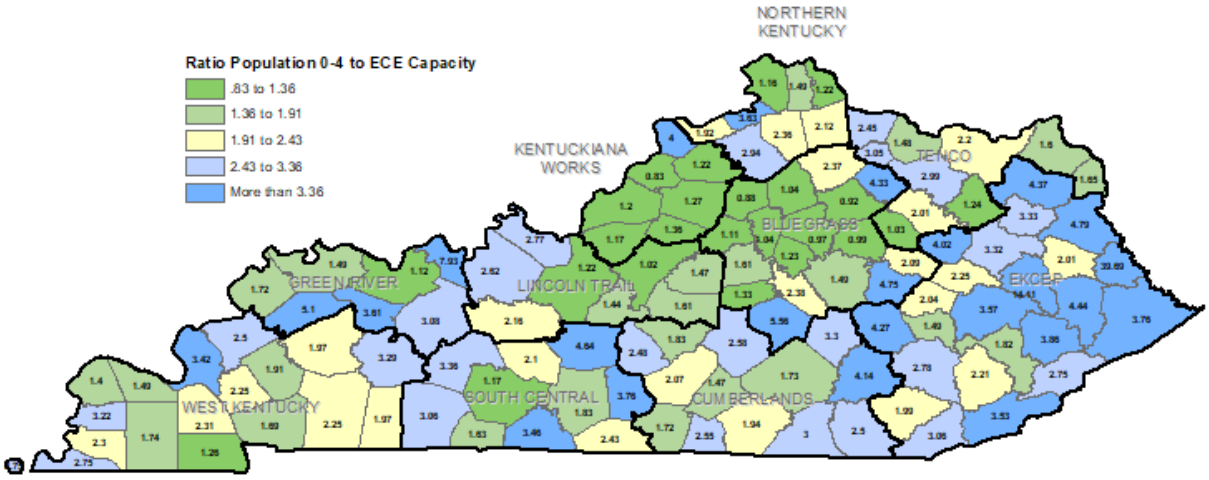
Data Source: American Community Survey Population Estimates; KYSTATS early Childhood Profile, 2019

Data presented in Exhibit 96 illustrates that the incidence of child care deserts also varies across counties. Counties shaded in blue experience a higher incidence of deserts than counties shaded in green. **Martin County, for example, only provides public preschool.**

County Incidence of Child Care Deserts

Highest: Martin, Magoffin, and Hancock
Lowest: Oldham, Franklin, and Bourbon

Exhibit 96 *Child Care Deserts (Ratio of 3 or Higher), by County*



General Availability and Accessibility of Care

There still are gaps in quality or access to quality programs, as reported by focus group participants. The reported challenges include:

- The availability of child care for parents who work second or third shifts or ensuring there is care in which the hours of operation align with parent work schedules. *(Data exported from the Benefind system (for 1221 sites for which data were available) indicate that 20% of licensed or certified sites provide care during non-traditional hours.)*
- Scheduling care for children of different ages within the same family (e.g., one child may be able to participate in a full-day program while another is only able to participate in a half-day program).
- Lack of care options for infants and toddlers. *(While specific information on ages served and the number of available placements by age is lacking, available data from Kentucky's Benefind system (reflecting 1875 of 2114 sites for which data were available) indicate that 56% of licensed or certified facilities accept infants, 65% accept toddlers, and 87% accept two year olds or children up to school age.* ***These data also suggest a lack of care options for infants and toddlers.*** *In brief, there are 72 counties in which there are fewer than five providers reporting some form of infant care and 59 counties in which there are fewer than five providers reporting some form of toddler care.)*
- A general lack of care options,
- A need to find children not yet served in the early care and education system, and
- Ensuring rural counties and communities have sufficient access to high quality programs and resources.

Finally, additional data exported from the Benefind system indicate that 34% of all (n=2112) licensed or certified sites provide transportation. There are 16 counties in which no licensed or certified sites provide transportation and 80 counties in which fewer than 5 licensed or certified sites provide some form of transportation for children.

Kentucky also received feedback on the need for child care or preschool programs from its Preschool Development Planning Community Feedback Survey (for which there were more than 800 respondents). Described earlier in this report, the survey received participation from parents of young children as well as early care and education professionals and other community and state stakeholders. Survey participants were asked to rate the urgency of different needs in the state. More specifically, participants were asked to rank the urgency of improving the affordability, quality, or coordination (among other factors) of a range of services within the early childhood system.

As regards **child care or preschool programs**, the most highly ranked needs were (a) **improving the affordability of services** (61.3% of respondents) and (b) **increasing the availability of services or making sure each community has this service** (59.6%). Less highly ranked (but still identified as a need by at least 50% of survey participants) were needs such as (a) ensuring there is an easy website to learn about or find services (56.8%); (b) increasing coordination across state agencies that provide these types of services (55%); (c) making sure services or information are available in more than one language (53.8%); (d) increasing coordination across local agencies that provide these types of services (53.6%); and e) making it easier to find and use services (53%).

As regards **Head Start or Early Head Start programs**, survey respondents did not report the same level of need for improving affordability, quality, coordination, etc., as that identified for child care or preschool programs. For example, 45.9% of respondents reported the need to make sure there is an easy website to learn about or find services while 45.5% of respondents reported the need to make sure services or information are available in more than one language. This may reflect an overall higher level of quality and accessibility for Head Start services or a lack of awareness of different aspects of Head Start services.

Workforce and Training Needs

A professional, qualified, and well-trained workforce is the foundation of the system. Workforce development needs for early care and education programs were examined in the state's recent RTT-ELC validation study. Data were collected in two ways: administrator surveys, which were collected with the 300+ participating sites, and a Universal Survey, which was available to all early care and education professionals in the state (which received more than 660 responses). Excerpts from the validation study findings for these surveys are presented below.

Administrator Survey Findings

Technical assistance is a critical support for maintaining and improving quality; 83% of participating administrators reported knowing the identify of their technical assistance coach. However, there was a range of responses across types of sites: 79% of private child care administrators, compared to 94% of public preschool and 88% of Head Start administrators, reported knowing their technical assistance provider, coach, or consultant. Overall, administrators reported that the top supports for improving quality were:

- Knowing who to contact for help, coaching, or technical assistance,
- Grants or financial assistance to buy materials and resources for classrooms,
- Access to intentional, face-to-face, trainings and professional development opportunities in my area, and
- Support or assistance to understand how to stay at high quality in the future.

Exhibit 97 presents the full range of responses reported by administrators, overall and disaggregated by operational model.

Exhibit 97 Administrator Feedback on Supports for Improving Quality

	Important or Very Important			
	Overall (n=301)	Private Child Care (n=210)	Public Preschool (n=48)	Head Start (n=43)
Knowing who to contact for help, coaching, or technical assistance	93% (280)	98% (205)	79% (38)	86% (37)
Grants or financial assistance to buy materials and resources for classrooms	89% (266)	94% (196)	65% (31)	91% (39)
Access to intentional, face-to-face, trainings and professional development opportunities in my area	88% (264)	94% (197)	65% (31)	84% (36)
Support or assistance to understand how to stay at high quality in the future	88% (264)	94% (197)	75% (36)	72% (31)
Financial assistance or support to retain more highly qualified staff	86% (256)	92% (190)	71% (34)	74% (32)
Financial assistance or support to attract more highly qualified staff	85% (255)	92% (192)	69% (33)	70% (30)
A peer mentor, coach, or TA provider I can talk to	85% (253)	91% (189)	63% (30)	79% (34)
Grants or financial assistance to improve my site (e.g., landscaping, building repairs, painting)	84% (252)	90% (188)	54% (26)	88% (38)
Access to online or computer-based trainings and professional development opportunities	84% (250)	92% (191)	63% (30)	67% (29)
Guidance or assistance in using incentives to purchases materials for my site that align with what I need to do to improve my star rating	83% (249)	90% (189)	63% (30)	70% (30)
Access to a reliable internet connection	83% (248)	82% (170)	83% (40)	88% (38)
On-site assistance in walking through and understanding the requirements for ALL STARS ratings	81% (244)	88% (185)	52% (25)	79% (34)
Support or assistance to understand how to afford and pay for high quality practices	81% (243)	89% (186)	65% (31)	60% (26)
Regular, on-site, assistance in meeting the requirements for ALL STARS ratings (e.g., help with curriculum and lesson planning, screening and assessments, learning environments, and developmentally appropriate practices)	79% (236)	84% (175)	56% (27)	79% (34)
Online or computer-based support for meeting the requirements for ALL STARS (e.g., help with curriculum and lesson planning, screening and assessments, learning environments, and developmentally appropriate practices) ratings	77% (231)	86% (179)	54% (26)	60% (26)
Access to technical equipment such as a computer or scanner	76% (226)	78% (163)	79% (38)	58% (25)

Online or computer-based support for understanding the requirements for ALL STARS ratings	75% (226)	84% (176)	52% (25)	58% (25)
Assistance or support in becoming accredited	74% (221)	76% (159)	52% (25)	86% (37)

Participants provided additional suggestions for supports, which are shown below and grouped by operational model.

Private Child Care

- Continued support even after reaching higher stars
- Financial assistance for staff salaries
- Grants to assist families that may not qualify for the subsidy program but struggle to pay for quality childcare.
- Our quality changes every time we have staff turnover. I rarely find someone with any formal education in EC. We could use ways to recruit quality staff.
- Parent/community education on why STAR is important
- We need school age specific regs

Public Preschool

- A clear crosswalk between KY preschool, childcare, Head Start, regulations
- Fee training for clock hours online

Head Start

- Understanding KY career lattice level

Universal Feedback Survey Findings

All early care and education professionals across the state were eligible to participate in a Universal Survey conducted as one component of the RTT-ELC validation study (for which there were over 660 responses). On this survey, respondents were asked to report on the nature and availability of preferred forms of support. The most preferred forms of support (Exhibit 98) included:

- Ongoing discussions and trading ideas in Professional Learning Communities (PLCs) or Communities of Practice,
- Observing others in high quality sites or classrooms (having things modeled for me),
- Offsite professional development trainings or classes, and
- On site coaching with external consultants/coaches.

Exhibit 98 Preferred Methods for Receiving Support

	Most Preferred or Acceptable
Ongoing discussions and trading ideas in Professional Learning Communities or Communities of Practice	87% (428)
Observing others in high quality sites or classrooms (having things modeled for me)	86% (422)
Offsite professional development trainings or classes	85% (417)
On site coaching with external consultants/coaches	85% (416)
Participating in a professional group made up of my peers in my county or across the state	81% (398)

Peer learning and supervision from staff in my same school/site	80% (389)
Online trainings and courses	79% (384)

These methods of support were not necessarily widely or easily available (Exhibit 99). For example, half (50%) of respondents reported that Professional Learning Communities or Communities of Practice are very or somewhat available, while 42% reported the same for "observing others in high quality sites or classrooms." Slightly more than half (56%) of respondents reported that on-site coaching is very or somewhat available, while 66% of respondents reported the same for offsite professional development.

Exhibit 99 Availability of Different Types of Support

	Very or Somewhat Available
Online trainings and courses	66% (440)
Offsite professional development trainings or classes	66% (437)
On site coaching with external consultants/coaches	56% (372)
Peer learning and supervision from staff in my same school/site	52% (347)
Ongoing discussions and trading ideas in Professional Learning Communities or Communities of Practice	50% (335)
Participating in a professional group made up of my peers in my county or across the state	46% (305)
Observing others in high quality sites or classrooms (having things modeled for me)	42% (280)

Professionals may experience challenges when accessing or using professional supports. To test this idea, individuals who participated in the Universal Survey were asked to report on the extent to which various factors served as barriers. Respondents include administrators as well as teachers and other staff. Results are presented in Exhibits 100 and 101.

As is shown in **Error! Reference source not found.** 100, between 15% and 42% of respondents reported that there were no barriers to different types of professional support. Of 496 respondents reporting at least one barrier, the primary ones include finding time or substitutes so they can attend training (Exhibit 100) and cost or affordability of training (**Error! Reference source not found.** 101).

Exhibit 100 *Barriers to Receiving Support: Non-Cost Barriers*

	Of individuals who reported having at least one barrier...			No Barriers
	Time or Substitutes	Transportation or Location	Other	
On site coaching with external consultants/coaches	49% (242)	6% (32)	9% (46)	24% (118)
Offsite professional development trainings or classes	57% (281)	17% (82)	7% (35)	17% (84)
Online trainings and courses	26% (128)	2% (8)	8% (42)	42% (209)
Peer learning and supervision from staff in my same school/site	46% (227)	4% (22)	16% (80)	30% (148)
Observing others in high quality sites or classrooms (having things modeled for me)	66% (329)	15% (74)	10% (51)	15% (75)
Ongoing discussions and trading ideas in Professional Learning Communities or Communities of Practice	42% (207)	11% (53)	15% (73)	32% (158)
Participating in a professional group made up of my peers in my county or across the state	50% (247)	15% (72)	15% (74)	22% (109)

Exhibit 101 *Barriers to Receiving Support: Cost Factors (n=496)*

	Of individuals who reported having at least one barrier...		
	Cost or Affordability	Need Computer	Need Internet
On site coaching with external consultants/coaches	34% (171)	2% (12)	1% (7)
Offsite professional development trainings or classes	38% (190)	2% (9)	1% (7)
Online trainings and courses	26% (129)	7% (36)	5% (25)
Peer learning and supervision from staff in my same school/site	9% (47)	1% (3)	1% (4)
Observing others in high quality sites or classrooms (having things modeled for me)	13% (65)	0% (2)	0% (2)
Ongoing discussions and trading ideas in Professional Learning Communities or Communities of Practice	11% (57)	2% (10)	2% (9)
Participating in a professional group made up of my peers in my county or across the state	14% (71)	1% (6)	1% (7)

Data Strengths and Needs

Kentucky will continue to develop its ability to analyze child care deserts across the state, including closer examination of deserts for infant and toddler spaces as well as children with specific learning or care needs (such as children exposed to trauma). In addition, and as noted earlier in this

report, Kentucky has identified a need to track unduplicated numbers of sites (and children enrolled in sites) with a specific need related to Head Start and Early Head Start facilities.

As regards the early care and education workforce, Kentucky's Early Care and Education Training Records Information System (ECE-TRIS) is a voluntary, web-based, database for tracking training and professional development records. ECE-TRIS is available for use by licensed and private child care programs. The Kentucky Department of Education uses a separate system for tracking training and professional development of its public preschool educators. Moving forward, there are opportunities to improve (a) participation in ECE-TRIS; (b) align required fields in Division of Child Care (DCC) and Kentucky Department of Education (KDE) databases; (c) conduct additional analyses on participation in professional development opportunities across DCC and KDE; and (d) review and ensure the consistency and accessibility of professional development opportunities for all educators or professionals. Finally, the data collected in the RTT-ELC validation study may serve as a baseline against which to measure future progress.

Initiatives to Ensure High-Quality Care is Available to Vulnerable Children

Assessing the Ability to Respond to Vulnerable Children

Kentucky also assessed the ability of early care and education programs to respond to the needs of highly vulnerable children in its RTT-ELC grant validation study. The study team incorporated questions specific to the needs of vulnerable children in the Universal Survey that was available to all early care and education professionals across the state. For this aspect of the study, the study team referenced Adverse Childhood Experiences, which are described in Figure 3 (which notes that children with higher numbers of Adverse Childhood Experiences may be considered more vulnerable). Excerpts from study findings are presented below.

Universal Feedback Survey Findings

Early childhood professionals responding to the Universal Survey were asked to report on children they served who they considered to have high Adverse Childhood Experiences scores (scores of 2 or higher). As can be seen in Exhibit 102, 63% of respondents reported working with children that have ACES of 2 or higher. On average, respondents reported that 15 children in their classrooms had high ACES.

Figure 3. Adverse Childhood Experiences Score (ACES)

For the study, ACES were defined using guidance from the Centers for Disease Control (CDC; https://www.cdc.gov/violenceprevention/acestudy/) as the abuse, household challenges, and neglect that may occur and have harmful effects in a person's first 18 years of life.

ACES indicators can include parent mental health issues, parent substance abuse issues, parent incarcerations, parents who are separated or divorced, violence within the home, sexual, physical, or emotional abuse, and emotional and physical neglect (cf: https://www.cdc.gov/violenceprevention/ acestudy/about.html).

Highly vulnerable children may have a high number of Adverse Childhood Experiences.

Exhibit 102 Early Childhood Professionals' Feedback on Serving Children with High ACES

	Percent/Number of respondents working with children with 2+ Adverse Childhood Experiences (ACES)	Average number of children with 2+ ACES scores in site or classroom
Overall	*63% (421)*	*15*
Private Child Care	44% (186)	11
Public Preschool	12% (49)	18
Head Start	17% (70)	16

Despite the prevalence of children with ACES, many early education professionals may not have formal professional development or training specific to ACES (Exhibit 103). Overall, about half of respondents (50.3%) reported no formal training, with higher proportions of respondents in private child care programs reporting an absence of formal training.

Exhibit 103 Early Childhood Professionals' Feedback on Training Specific to ACES

	No formal professional development or training on ACES
Overall	*50% (334)*
Private Child Care	66% (195)
Public Preschool	51% (31)
Head Start	38% (33)

As can be seen in Exhibit 104, for the respondents who reported they had not received training in ACES, the reasons tended to be that the professional was "just learning about ACES," or that this was new information. Note as well, however, that some professionals also reported an absence of training or professional development opportunities on this topic, at locations convenient to them. Notably, very few respondents reported that working with children with high ACES was outside of their professional responsibilities.

Exhibit 104 Early Childhood Professionals' Feedback on Reasons for Absence of Training or Professional Development for ACES

	All EC Professionals (n=334)	Professionals in Private Child Care (n=195)	Professionals in Public Preschool (n=31)	Professionals in Head Start (n=33)
I am just learning about ACES/ this is new information for me	55% (185)	62% (121)	52% (16)	42% (14)

There hasn't been a training or professional development opportunity near me	35% (116)	30% (59)	42% (13)	48% (16)
I don't have the technology to access online events	2% (7)	4% (7)	0% (0)	0% (0)
I can't afford to attend a training or professional development event	7% (24)	9% (17)	10% (3)	3% (1)
This is not yet a priority at my site or school	10% (34)	9% (17)	26% (8)	12% (4)
I have not had the time or interest	2% (8)	3% (6)	0% (0)	0% (0)
I don't believe this is my role as an early educator or teacher	1% (5)	2% (3)	0% (0)	3% (1)
Other	10% (33)	10% (19)	0% (0)	12% (4)

Despite the lack of formal training, as shown in Exhibit 105, many respondents reported having either numerous or a good range of skills and tools for working with children to:

- Build positive relationships (77% of respondents),
- Build social skills (75%), and
- Cope with difficult behaviors or challenging feelings or emotions (62%).

Exhibit 105 Early Childhood Professionals' Feedback on Skills and Tools

Extent to which staff believe they have the skills & tools needed to work with children:	**Respondent reported either numerous or a good range of skills and tools**
...to build their social skills.	75% (394)
...struggling with difficult behaviors or challenging feelings or emotions.	62% (322)
...to build positive relationships.	77% (400)

Exhibit 106 presents additional information from respondents who reported working with children with high ACES scores, on the strategies that professionals use frequently or extensively, to work with children who have high ACES. The most popular strategy was to give parents referrals to Family Resource and Youth Services Centers (35% of respondents), followed by giving parents referrals to social or human services programs in the community (29% of respondents). The least cited strategy was Strengthening Families: A Protective Factors Framework (10%).

Exhibit 106 Early Childhood Professionals' Feedback on Strategies Used for Working with Children with High ACES

	Use frequently or extensively
I give parents referrals to or partner with Family Resource and Youth Services Centers.	35% (148)
I give parents referrals to social or human services programs in the community.	29% (124)
I give parents referrals to other parent support or education programs.	26% (108)
Other referrals	23% (98)
I collaborate with on-site/agency parent support specialists or case managers.	22% (91)
I give parents referrals to Born Learning Academies.	22% (92)
I participate in training or professional development on trauma-informed (or related) practices.	14% (59)
Trauma-informed practices	12% (52)
Another socio-emotional framework (for example, the Pyramid Model or the CASEL model)	11% (45)
Strengthening Families: A Protective Factors Framework.	10% (41)

Working with children with high ACES may create additional stress for professionals, especially when professionals do not believe they have the training or resources that they need. Universal survey respondents also were asked to report on their own overall levels of fatigue and enthusiasm; findings are presented in Exhibit 107. Among respondents who reported working with children with high ACES scores, about a three-fourths (76%) reported frequent or occasional fatigue; very few (14%), however, reported feelings of indifference towards their students. It was more common for professionals to feel a sense of accomplishment from their work, as well as enthusiasm or excitement for their work. However, it also is important to note that, overall, about three-fourths (74%) of respondents also reported occasional feelings of stress or anxiety about their work. A slightly smaller proportion (65%) reported frequent or occasional feelings of "burnout". This was more common among professionals in private child care sites.

Exhibit 107 Early Childhood Professionals' Feedback Working with Children with High ACES on Frequently or Occasionally Feeling Fatigue or Enthusiasm

Professionals currently experiencing:	All EC Professionals (n=421)	Professionals in Private Child Care (n=186)	Professionals in Public Preschool (n=49)	Professionals in Head Start (n=70)
A sense of fatigue or exhaustion	76% (321)	80% (149)	80% (39)	71% (50)

Feelings of indifference towards or distance from your students	14% (61)	14% (26)	10% (5)	17% (12)
A sense of accomplishment from your work	87% (367)	90% (167)	86% (42)	81% (57)
A sense of burnout from the demands of your work	65% (272)	71% (132)	57% (28)	54% (38)
A sense of stress or anxiety about your work	74% (313)	74% (138)	73% (36)	67% (47)
A sense of enthusiasm or excitement about your work	88% (371)	90% (168)	84% (41)	83% (58)

In reviewing Exhibit 107, it is interesting to note the pattern of responses across the three operational models, remembering that Head Start respondents may be co-located with private child care or public preschool respondents. As will be discussed later, one of the challenges of the unified Kentucky All STARS rating system is the presence of additional regulations and requirements—Head Start for example responds to federal as well as state guidelines. At the same time, Head Start and public preschool professionals may have access to resources and supports that professionals working in private child care sites do not. Thus, longer-term plans for the unified system may incorporate retention strategies, including strategies that address workplace working conditions or climate, to recognize and help respond to the stress and anxiety reported by many survey respondents.

Kentucky also can use these data to inform and enhance its professional development opportunities for professionals, including professionals who provide technical assistance, coaching, mentoring, and training to educators. Of note, many respondents reported providing referrals to parents and families that are struggling; **few (10%) cited the Strengthening Factors Protective Framework, which is part of Kentucky's overall strategy for responding to vulnerable families and families in crisis** (and will be discussed in a later section). Thus, these data will help the state reflect on how professionals can be supported so that they in turn can support vulnerable children and families.

Informing Parents about Quality

The primary state supports for assisting parents with learning about and finding early care and education programs are Benefind (discussed in Section 2) and the Child Care Resource and Referral network, which includes the following agencies:

Western Kentucky University Child Care Resource & Referral
1906 College Heights Blvd., #11098
Bowling Green, KY, 42101-1098

4C for Children - Northern Kentucky Regional Office
525 West 5th Street
Covington, KY, 41011

Child Care Aware of Kentucky
126 Mineral Industries Building/UK
Lexington, KY, 40506

Community Coordinated Child Care, Inc. (4-C)
1215 South 3rd Street
Louisville, KY, 40203-2905

Child Care Aware® of Green River/Pennyrile
1800 W 4th Street
Owensboro, KY, 42301

Child Care Council of Kentucky
2501 Sandersville Road, Suite 120
Lexington, KY, 40511

Additional information about quality is available on state websites such as the Kentucky Governor's Office of Early Childhood (https://kidsnow.ky.gov/families/Pages/default.aspx) and through Community Early Childhood Councils. Online search engines also are available through Child Care Aware. Parents can submit applications for child care assistance, online, through Kentucky's Benefind system (https://benefind.ky.gov/).

Exhibit 108 presents information, provided by the Office of Child Care, on the estimated numbers of families that received consumer education (including school age care). The Office of Child Care noted that, in Kentucky, resources are available through printed materials, electronic media, and counseling at Child Care Resource and Referral agencies.

Exhibit 108 *Kentucky Consumer Education Efforts (including School Age Care), 2014 to 2017*

	Kentucky Consumer Education Efforts (including School Age Care)				Change
	2014	**2015**	**2016**	**2017**	**2014 to 2017**
Estimated Number of Families Receiving Consumer Education	46,048	--	21,298	36,377	-21%

Data Source: Administration for Children and Families Office of Child Care Child Care and Development Fund Statistics CCDF Data Tables, 2014 to 2017

To date, more than 300 parents have responded to the Access to Care and Transitions Parent Survey. While this survey's data collection is ongoing, data from 171 respondents can be used to further assess how parents are learning about child care and education programs. More specifically, when parents were asked "*Where did you get information about child care or early education (e.g. private child care, public preschool, Head Start/Early Head Start) for your children?*":

- 64.9% of respondents indicated friend and family,
- 34.5% indicated internet or Google, and
- 33.9% indicated teachers or child care providers in the community.

Responses that received less than 10% responses included Child Care Aware (2.9%) and Benefind (2.9%). Other responses included First Steps and other media, among other sources. Thus, these data suggest that the state's systems for informing parents is not the primary resource used by

parents. As noted above, data collection is ongoing; these findings may be updated this year. Also of interest:

- 38.6% of respondents reported receiving written information about child care or early education options in the past year or so.
- Of the 66 respondents who reported receiving written information, 83.3% reported that the information was clear and easy to read. All of 65 respondents reported that the information was in their primary language (note: this version of the survey is in English).

Further, focus group participants reported on the need to close information gaps for parents, such as:

- What to expect from educators in early care and education settings (and, conversely, what educators should expect from parents),
- How parents can connect with other parents (e.g., for support, to help finding resources or programs), and
- Kentucky All STARS rating or school statistics.

> Over 2700 parents from RTT-ELC validation study sites participated in parent surveys. Fifteen percent reported using a site's Kentucky All STARS rating in making the decision to enroll their children at a specific site.

Data collected in the validation study suggested that too few parents used the Kentucky All STARS rating as a decision factor when choosing care. To wit, the study team collected parent survey data from 2,780 parents at participating sites. Parents were asked to provide feedback on a number of concepts—including the factors that they believed were indicative of or important for quality. As shown in **Error! Reference source not found.**t 109, 15% of 2,709 reported using All STARS ratings in making the decision to enroll their children at a specific site. Higher proportions of parents using private child care or Head Start agreed with this item than those enrolling in public preschool programs.[60]

Exhibit 109 Parent feedback on use of All STARS rating to make enrollment decisions

Yes, used All STARS rating in making decision to enroll child			
Overall (n=2709)	Private Child Care (n=1599)	Public Preschool (n=606)	Head Start (n=504)
15% (394)	17% (267)	9% (54)	14% (73)

Exhibit 110 presents parent feedback on what they believed was important for quality at early learning sites. As is shown, five items received the most support (81% to 95%) from parents:

- I know my child will be safe here,
- The teachers use lots of different types of activities to promote child learning,
- The program ensures that children are in warm and nurturing classrooms,
- The program is always trying to find ways to improve its quality, and
- The teachers use lesson plans that work for the age of my child (or children).

[60] Entry into preschool or Head Start sites is based on eligibility; these programs target at-risk children as defined by income or special needs status. The cost of care also may be a strong factor in parents' choice of care.

Six additional items that 71% to 77% of parents rated as important were:

- I like the setting my child (or children) will be in, and whether they'll be in someone's home, in a preschool classroom, or a child care center,
- The program reaches out to parents and find ways to send information home,
- The program staff have a lot of experience in early childhood education,
- The location, and how easy or difficult it is for me to get there,
- The program likes hearing from parents and having parents visit on-site, and
- The cost, and whether or not I can afford it.

The five items with the least support (29% to 40%) from parents included:

- The program hires teachers that have a four-year college degree, such as an Bachelor's Degree in Early Childhood Education,
- The director or owner of the site has a two-year college degree, such as an Associate Degree in Early Childhood Education,
- The program hires teachers that have a two-year college degree, such as an Associate Degree in Early Childhood Education,
- The director or owner of the site has a four-year college degree, such as an Bachelor's Degree in Early Childhood Education, and
- The program's All STARS star rating.

These responses suggest that parents are concerned with items that correspond to **nurturing, safety, variety and age-appropriateness of activities, experience of staff, and family communications**. It is noteworthy that parents are not [yet] connecting these items to Kentucky All STARS, which was designed to promote and support these types of factors. **Thus, one take-away from parent responses may be the need to conduct additional outreach and education related to indicators of quality and All STARS' design.**

Exhibit 110 *Parent feedback on factors indicative of or important for quality (n=2779)*

		Agreement
Items with greatest support from parents	I know my child will be safe here.	95% (2645)
	The teachers use lots of different types of activities to promote child learning.	90% (2497)
	The program ensures that children are in warm and nurturing classrooms.	87% (2421)
	The program is always trying to find ways to improve its quality.	82% (2267)
	The teachers use lesson plans that work for the age of my child (or children).	81% (2245)
	I like the setting my child (or children) will be in, and whether they'll be in someone's home, in a preschool classroom, or a child care center.	77% (2127)
	The program reaches out to parents and find ways to send information home.	76% (2121)
	The program staff have a lot of experience in early childhood education.	76% (2118)

	The location, and how easy or difficult it is for me to get there.	75% (2071)
	The program likes hearing from parents and having parents visit on-site.	72% (1996)
	The cost, and whether or not I can afford it.	71% (1964)
Items with moderate support from parents	The program creates special activities to help when children start at the site or move into a new classroom.	65% (1820)
	The teachers regularly test my child for how well he or she is learning.	63% (1746)
	The program takes care of the staff with different types of benefits.	61% (1690)
	The program asks for parent feedback when creating learning plans for their child.	61% (1689)
	The teachers follow the guidelines that Kentucky's state agencies have provided for creating and using lesson plans.	60% (1681)
	The program has learning activities and events for parents.	60% (1678)
	The teachers regularly go to trainings.	56% (1564)
	I know the providers or teachers share my beliefs or values.	55% (1515)
Items with least support from parents	The program's All STARS star rating.	40% (1103)
	The **director or owner** of the site has a four-year college degree, such as a Bachelor's Degree in Early Childhood Education.	37% (1020)
	The program hires **teachers** that have a two-year college degree, such as an Associate's Degree in Early Childhood Education.	35% (981)
	The **director or owner** of the site has a two-year college degree, such as an Associate's Degree in Early Childhood Education.	32% (888)
	The program hires **teachers** that have a four-year college degree, such as a Bachelor's Degree in Early Childhood Education.	29% (813)

Quality and Availability of Early Care and Education Programs: Synthesis

This section addressed the following questions:

1. **What would you describe as your ECCE current strengths in terms of quality of care across settings? What would you describe as key gaps in quality of care across settings?** Focus group participants identified Kentucky All STARS, the state's TQRIS, as a strength. Participation in Kentucky All STARS mandatory for any site that receives any form of public funding, which means that almost every early care and education program in the state participates. Licensed or certified sites enter Kentucky All STARS at level 1, while public preschool and Head Start sites enter Kentucky All STARS at a level 3 on the five-level system, in part because these facilities have stronger federal and state requirements related to professional education or credentials. Kentucky All STARS is a unified system—meaning that its standards are applicable to the three primary models (child care, preschool, and Head Start). As will be discussed later, there still is flexibility in Kentucky All STARS to accommodate the different regulatory requirements attached to these models. With support from a Race to the Top Early Learning Challenge grant, Kentucky was able to make tremendous gains in participation and quality over the past five years. That

stated, a review of quality across the state helps identify counties and regions where overall or average quality still has room to grow.

2. **What are the strengths and the weaknesses of the data you have available on quality?** Kentucky has an opportunity to better integrate Head Start and Early Head Start services into its early childhood data system. At present, because Head Start/Early Head Start can be offered in conjunction or co-located with public preschool or private child care centers, there is no good estimate of the total unduplicated number of sites and children served. Further, the nature of the Head Start relationship with either public preschool or private child care centers can cause confusion regarding which standards or requirements apply, when the site is submitting its materials to maintain or advance in star rating.
3. **What would you describe as key gaps in availability?** Kentucky continues to develop its ability to analyze the existence and severity of child care deserts across the state. This report contains estimates as to the existence of deserts—with estimates limited by questions about the duplication of existing participation data and gaps in knowledge about total need for care (by age and eligibility). Moving forward, Kentucky has an opportunity to hone its definition of child care deserts and, to the extent unduplicated numbers (and ages) of children served, waiting to be served, and eligible for subsidies or other supports can be made available, more rigorously identify child care deserts at the county-level. In general, based on existing estimates, child care deserts more frequently occur in rural areas of the state.
4. **What initiatives do you currently have in place to inform parents about what constitutes a high-quality child care center and how different centers match up in terms of quality? What could be improved in this area?** Kentucky's primary resources for informing parents about quality and availability of care are Benefind and its Child Care Resource and Referral system, with additional information available through state websites and Community Early Childhood Councils. Of note, initial feedback from parents suggests that parents most often receive information from friends, family, internet searches, and teachers or child care providers in their communities. Thus, there may be an opportunity to raise awareness in general about the nature of high-quality care and how to find it.
5. **What do you see as your biggest need and opportunity in improving the quality and availability of care particularly for vulnerable or underserved children and those in rural areas?** Kentucky recently assessed the ability of its early child and education professionals to respond to children with Adverse Childhood Experiences (ACES), as one component of its Race to the Top Early Learning Challenge grant validation study. Study findings suggested that, while many professionals work with children with high ACES, not all professionals have had formal training or professional development on working with vulnerable children. Despite this, many professionals reported having strategies for working with vulnerable children and families. The most frequently cited strategies, however, were the use of referrals to community resources. The information gleaned from the study can help inform Kentucky's professional development and training opportunities.

Section 5. Gaps in Data or Research to Support Collaboration Between Programs/Services and Maximize Parental Choice

Service Needs of Families with Children

Kentucky's conceptualizes its early childhood care and education as more than its availability of high-quality early care and education programs. Therefore, this section of the report provides information on the wide range of additional needs and services reported for Kentucky's children and families. Data are presented in several domains:

- Homelessness, Housing, and Food Insecurities;
- Child and Families in Need of Protective or Preventive Services;
- Children in Out-of-Home Care;
- Teen Parents and Single-Parent Households; and
- Perinatal Period and Maternal Depression.

Homelessness, Housing, and Food Insecurities

It is not surprising, given Kentucky's experience with poverty, to find that many children and families are struggling with home and food security. In fact, in 2014, Kentucky was ranked 42nd in the nation with regard to child homelessness by the National Center on Family Homelessness[61]. Kentucky's composite score represented:

1) Extent of Child Homelessness (adjusted for state population);
2) Child Well-Being;
3) Risk for Child Homelessness; and
4) State Policy and Planning Efforts.

At the time of that report, Kentucky ranked 50th in the nation for extent of child homelessness, 42nd in the nation for child well-being, 36th in the nation for risk of child homelessness, and 20th in the nation for state policy and planning efforts. The United States Interagency Council on Homelessness also posts information about this concern[62]. For example, the Kentucky Department of Education reported 27,603 homeless students in its 2016-2017 school year, most of whom (n=21,328) were served through the practice of living with extended family or friends[63].

The Kentucky Housing Corporation (KHC) provides "point-in-time" estimates of homelessness (conducted in January of each year). The KHC includes the following individuals in its K-Count (its annual measure of homelessness[64]), with estimates shown in Exhibit 93:

> …an individual or family must have a primary nighttime residence that is a public or private place not meant for human habitation (i.e, unsheltered); or is living in a publicly- or privately-operated shelter designated to provide temporary living

[61] https://www.air.org/sites/default/files/downloads/report/Americas-Youngest-Outcasts-Child-Homelessness-Nov2014.pdf
[62] https://www.usich.gov/homelessness-statistics/ky/
[63] Per the National Health Care for the Homeless Council: "An individual may be considered to be homeless if that person is "doubled up," a term that refers to a situation where individuals are unable to maintain their housing situation and are forced to stay with a series of friends and/or extended family members." https://www.nhchc.org/faq/official-definition-homelessness/
[64] http://www.kyhousing.org/Specialized-Housing/Pages/K-Count.aspx

arrangements, which includes congregate shelters, transitional housing, and hotels or motels paid for by charitable organizations or by federal, state, and local government programs (i.e., sheltered).

Source: http://www.kyhousing.org/Specialized-Housing/Documents/K-Count%20InfoSheet.pdf

The KHC notes that Lexington and Louisville conduct counts that are separate from the K-Count; the KHC makes data from these counties available in its annual counts, which are presented in Exhibit 111. While homelessness across the state has decreased over time, there have been increases in the Lincoln Trail, South Central, West Kentucky, Northern Kentucky, and Green River LWDAs.

> The percent of children, in individual school districts, who are considered homeless is presented in Appendix D21.

Exhibit 111 *Estimated "Point-in-Time" Homelessness*

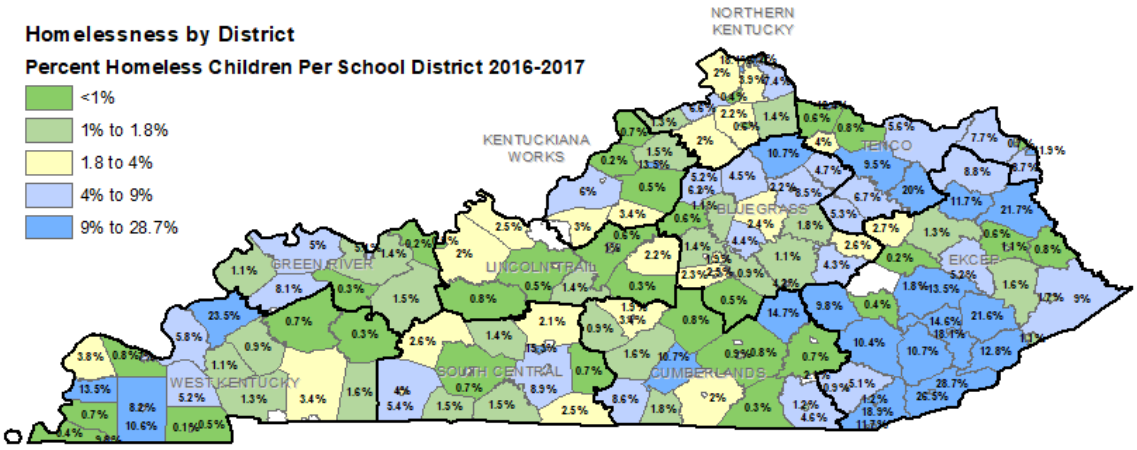
	Estimated Homeless Population				Change
	2015	**2016**	**2017**	**2018**	**2015-2018**
Kentucky	4852	4237	4025	3688	-24%
Bluegrass	1439	1253	1244	917	-36%
Cumberlands	244	192	65	78	-68%
ECKEP	301	227	291	297	-1%
Green River	269	257	309	278	3%
Kentuckiana Works	1593	1181	1091	990	-38%
Lincoln Trail	44	84	90	71	61%
Northern Kentucky	327	342	252	340	4%
South Central	155	175	185	210	35%
TENCO	237	302	281	229	-3%
West Kentucky	243	224	217	278	14%

Data Source: Kentucky Housing Corporation K-Count Point-in-Time Estimates, 2015 to 2018

Additional data are presented below. For example, Exhibit 112 presents information on homelessness, as experienced in school districts (for school year 2016-2017). Unsurprisingly, homelessness appears to overlap with counties experiencing higher levels of poverty, with some districts reporting homelessness at or above nine percent. Counties in which a greater proportion of students experience homelessness are shaded in blue while counties in which a lower proportion of students experience homelessness are shaded in green.

> **Districts with Highest and Lowest Levels of Homelessness**
>
> **Highest:** Harlan, Crittenden, and Lawrence
> **Lowest:** Murray, Fort Thomas, Hancock, Oldham, and Wolfe

Exhibit 112 *Percent of Children Experiencing Homelessness, 2016-2017*



Data Source: Kentucky Department of Education, Percent of Children Experiencing Homelessness, 2016-2017, by School District

It is challenging to get an estimate of the total number of young children affected by homelessness. Data from the United States Interagency Council on Homelessness indicate that, in 2018, there were 286 families experiencing homelessness, statewide. Thus, this is another area in which Kentucky may further develop its capacity to gather and use data.

Housing Problems

Another lens into the issue of home insecurity is housing stress, or the extent to which housing is a source of economic concern or is sub-standard or inadequate as a residence. For further insights into this issue, the Kentucky State Data Center provides links to the Comprehensive Housing Affordability Strategy (CHAS) dataset, which is sponsored by Housing and Urban Development. This dataset tracks the percent of households that have severe housing problems, which include:

(1) housing lacks complete kitchen facilities;
(2) housing lacks complete plumbing facilities;
(3) housing is overcrowded; or
(4) housing has a high cost-burden.

Exhibit 113 presents data from the CHAS dataset, showing a relatively consistent incidence and persistence of housing concerns across the state, when organized by LWDA.

Exhibit 113 *Percent of Households with Severe Housing Problems*

	Percent of Households with Severe Housing Problems			Change
	2009-2013	2010-2014	2011-2015	2009-2015
Kentucky	14%	14%	14%	--
Bluegrass	16%	16%	15%	-1%
Cumberlands	14%	15%	15%	1%

ECKEP	15%	15%	14%	-1%
Green River	12%	13%	12%	--
Kentuckiana Works	15%	15%	15%	--
Lincoln Trail	13%	13%	13%	--
Northern Kentucky	14%	14%	13%	-1%
South Central	16%	14%	14%	-2%
TENCO	14%	14%	13%	-1%
West Kentucky	11%	13%	13%	2%

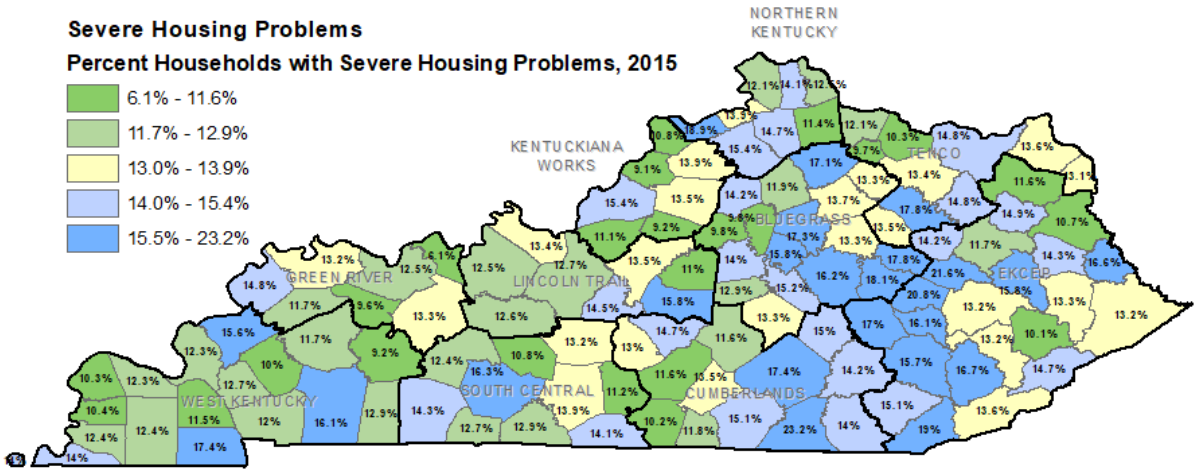
Data Source: Kentucky State Data Center Comprehensive Housing Affordability Strategy and American Community Survey Five-Year Estimates Table S1101

Counties with Highest and Lowest Levels of Severe Housing Issues

Highest: McCreary, Wolfe, and Lee
Lowest: Hancock, Oldham, Spencer, and Muhlenberg

While housing stress may be consistent across LWDAs, a further examination of county-level data (such as are shown in Exhibit 114) suggests variation within LWDAs and across counties. Counties in which a greater proportion of students experience severe housing problems are shaded in blue while counties in which a lower proportion of students experience severe housing problems are shaded in green. Unsurprisingly, many counties that struggle with poverty also struggle with affordable and adequate housing[65].

Exhibit 114 *Percent Households with Severe Housing Problems, 2015*



Data Source: Kentucky State Data Center Comprehensive Housing Affordability Strategy and American Community Survey Five-Year Estimates Table S1101

[65] Thus, it is not surprising that housing stress also varies by race or ethnicity. Data from the American Community Survey, cited by Kids Count (https://datacenter.kidscount.org/data/tables/7678-children-living-in-households-with-a-high-housing-cost-burden-by-race?loc=19&loct=2#detailed/2/19/false/871,870,573,869,36,868,867,133,38,35/10,11,9,12,1,185,13/14832,14833) indicate that 38% of African-American, 30% of children who are two or more races, and 21% of White (non-Hispanic) children under 18 live in households in which "more than 30 percent of monthly household pretax income is spent on housing-related expenses, including rent, mortgage payments, taxes and insurance by the child's race and ethnicity."

Food Security

The United States Department of Agriculture provides definitions for food security[66], as follows:

Food Security

- **High food security***:* no reported indications of food-access problems or limitations.
- **Marginal food security***:* one or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake.

Food Insecurity

- **Low food security***:* reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake.
- **Very low food security***:* Reports of multiple indications of disrupted eating patterns and reduced food intake.

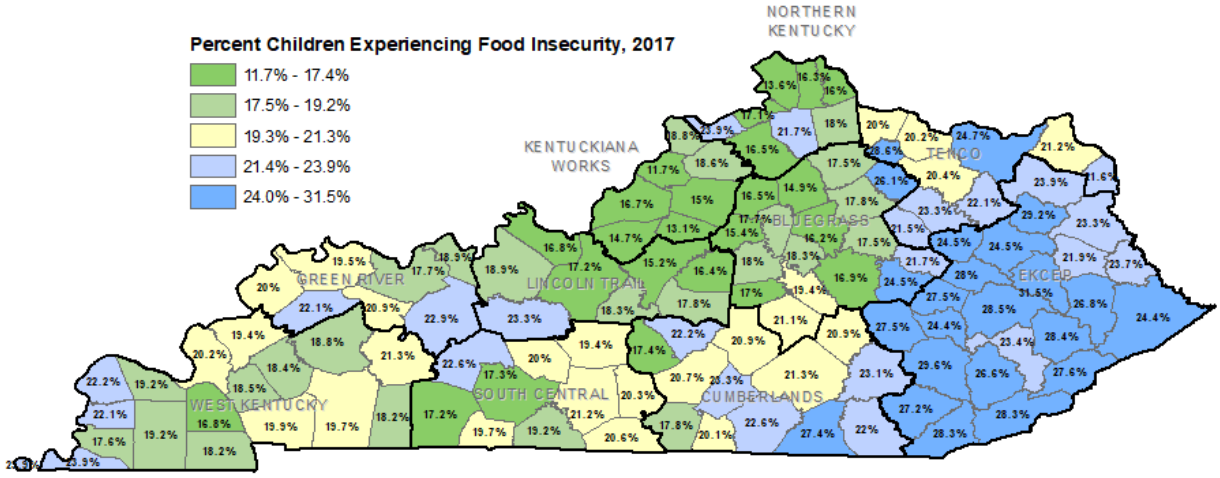
The hunger-relief organization Feeding America reports that, in 2017, there were 186,660 food insecure children in Kentucky, which amounts to a child food insecurity rate of 18.4% (the national rate is 17%)[67]. Further, Feeding America reports that, of the children who are considered food insecure, 30 percent are likely ineligible for federal nutrition programs (due to income above program guidelines, or income at 185% FPL; nationally, the ineligibility rate is 21%). Counties in the eastern parts of the state experience the greatest challenges with food insecurity, which is not surprising given the alignment of food insecurity with poverty in its incidence and severity (Exhibit 115). Counties in which a greater proportion of students experience food insecurity are shaded in blue while counties in which a lower proportion of students experience food insecurity are shaded in green.

Counties with Highest and Lowest Levels of Food Insecurity

Highest: Magoffin, Clay, and Elliott
Lowest: Oldham, Spencer, and Boone

[66] https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security.aspx
[67] https://map.feedingamerica.org/county/2017/child/kentucky

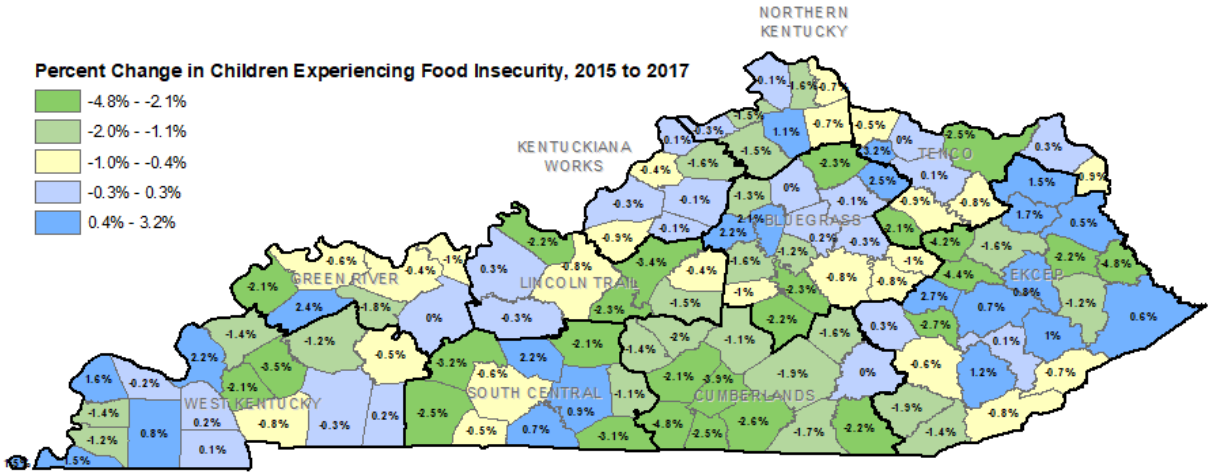
Exhibit 115 *Percent of children experiencing food insecurity, 2017*



Data Source: Feeding America; https://map.feedingamerica.org

Exhibit 116 presents data, also from Feeding America, on changes in the percent of children experiencing food insecurity, between 2015 and 2017. Counties with the largest increase (or smallest decrease) in children experiencing food insecurity are shaded in blue while counties with the greatest decrease are shaded in green.

Exhibit 116 *Change in children experiencing food insecurity, 2015 to 2017*



Data Source: Feeding America; https://map.feedingamerica.org

The incidence of food insecurity also is aligned with that of poverty in that it is felt more deeply by families of color and by single-parent households. For example, the United States

Department of Agriculture[68] reports that, in 2017, the following groups experienced food insecurity at rates higher than the national average (11.8 percent):

- All households with children (15.7 percent),
- **Households with children under age 6 (16.4 percent; *emphasis added*),**
- Households with children headed by a single woman (30.3 percent),
- Households with children headed by a single man (19.7 percent),
- Women living alone (13.9 percent),
- Men living alone (13.4 percent),
- Black, non-Hispanic households (21.8 percent),
- Hispanic households (18.0 percent), and
- Low-income households with incomes below 185 percent of the poverty threshold (30.8 percent; the Federal poverty line was $24,858 for a family of four in 2017).

Similarly, participants in the Preschool Development Planning Community Feedback Survey also reported on the importance of **health and nutrition services for families**. According to respondents, the issues in greatest need of attention included (a) **making sure services or information are available in more than one language (60.8% of respondents)** and (b) **making sure there is an easy website to learn about or find services (58.4%)**. The following issues also were of concern for at least 50% of respondents:

- Increasing the availability of services or making sure each community has this service (57.5%);
- Increasing coordination across state agencies providing these types of services (55%);
- Increasing coordination across local agencies providing these types of services (54.8%);
- Improving outreach and education about services (54.2%);
- Make it easier to find and use services (52.8%); and
- Increase the range of service options or types of services (50.4%)

Statewide Services that Respond to Homelessness, Housing, and Food Insecurity

Continuum of Care

The Continuum of Care, a service of the Kentucky Housing Corporation (KHC) provides services for families that are homeless. As stated on the program's website:

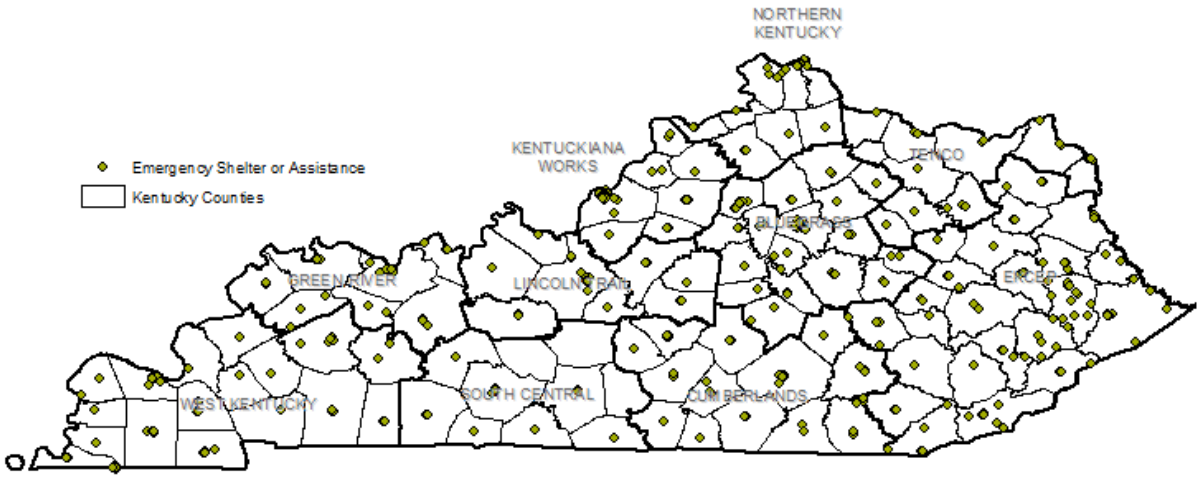
> Continuum of Care (CoC) refers to the comprehensive approach of addressing homelessness by providing a continuum of housing programs and services. These services include outreach, intake, and assessment; emergency shelter services; transitional housing services; and permanent supportive housing for people with disabilities.
>
> Source: http://www.kyhousing.org/Specialized-Housing/Pages/Continuum-of-Care.aspx

[68] https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/key-statistics-graphics.aspx#map

Services are available through regional coordination, with regions shown in Exhibit 117. Of note, Fayette and Jefferson counties are not incorporated into a CoC region but provide stand-alone services. Individual offices or sites for emergency shelter or assistance are shown in Exhibit 118.

Exhibit 117 *Continuum of Care Regions*

Exhibit 118 *Emergency Shelter or Assistance Locations*



Food Banks

An internet search identified multiple food banks in Kentucky to help respond to these needs. Feeding Kentucky (https://feedingky.org/) for example helps to advocate and develop resources to address hunger in Kentucky, through its regional structure shown in Exhibit 119. Feeding Kentucky also hosts a searchable database of food banks (https://feedingky.org/find-a-food-bank/). Parents or service providers with access to computers and the internet can use this database to find services. In addition, food banks and related services may be incorporated into the missions of other county non-profit agencies and local communities of faith.

Exhibit 119 *Feeding Kentucky Regions*

Children and Families in Need of Protective or Preventive Services

The Louisville Courier Journal recently reported (March 29, 2019) that Kentucky has the highest rate of child abuse in the country[69]. Citing data from the Children's Bureau of the U.S. Department of Health and Human Services, the state's 2017 rate of child abuse was 22.2 (per 1000), a figure that was more than double the national rate of 9.1. Additional data on children in need of protective or preventive services are available from the Administration for Children and Families (ACF), in the form of annual child maltreatment reports that compile data submitted by each state[70]. These reports provided statewide data on the number of children (ages 0 to 17) who received investigations, along with the findings from investigations (Exhibit 120). As can be seen in Exhibit 120, there has been an increase in the number and rate of investigations over time, as well as the number of substantiated investigations.

Exhibit 120 *Children receiving investigations for abuse or neglect*

	Number of children receiving an investigation					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Kentucky	70,908	71,674	74,170	71,876	80,405	13.4%
Rate per 1000 Children	69.8	70.7	73.3	71.1	79.6	14%

[69] https://www.courier-journal.com/story/news/2019/03/29/kentucky-indiana-child-abuse-rates-highest-country-federal-data/3308373002/

[70] U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2019). *Child Maltreatment 2017*. Available from https://www.acf.hhs.gov/cb/research-data-technology/ statistics-research/child-maltreatment.

Substantiated investigations[71]	18,985	19,751	20,934	22,031	25,119	32%
Alternative response[72]	2,777	3,275	15,071	7,812	3,605	30%
Alternative response—non-victim	23,904	17,320				
Unsubstantiated[73]	39,259	45,876	54,496	57,473	71,536	
Closed with no finding[74]	2,104	2,375	1,718	1,527	1,792	-15%
Other or unknown[75]	384	24	42	97	46	-88%
Total (duplicated count)	87,413	88,621	92,261	88,940	102,098	17%

Data Source: Administration for Children and Families Child Maltreatment Report Tables 3-1 and 3-2 (2017)

The estimated numbers of young children with substantiated abuse or neglect are presented in Exhibit 121, by LWDA. These data show the estimated population of children ages birth through five, with substantiated cases of abuse or neglect, between 2014 and 2016. As shown in Exhibit 121, overall there was an increase in the percent of children with substantiated cases. The increases were largest in the Lincoln Trail LWDA; a decrease was experienced in the Green River LWDA.

Exhibit 121 Substantiated Abuse or Neglect by LWDA

	Estimated Population of Children Ages Birth through Five, Substantiated for Abuse or Neglect			**Change**
	2014	**2015**	**2016**	**2014-2016**
Kentucky	16553	17917	19132	16%
Bluegrass	2714	3047	3522	30%
Cumberlands	1118	1209	1264	13%
ECKEP	2339	2557	2758	18%
Green River	923	1034	860	-7%
Kentuckiana Works	3130	3296	3335	7%
Lincoln Trail	622	661	838	35%
Northern Kentucky	1874	1849	2000	7%
South Central	1120	1238	1345	20%
TENCO	1288	1430	1700	32%
West Kentucky	1425	1596	1510	6%

Data Source: KYSTATS Early Childhood Profiles 2014 to 2016

[71] Substantiated Children (duplicate count): The number of children (duplicate count) who received an investigation disposition that concludes the allegation of maltreatment or risk of maltreatment was supported or founded by state law or policy.

[72] Alternative Response Children (duplicate count): The number of children (duplicate count) who received the provision of a response other than an investigation that determines if a child or family needs services. A determination of maltreatment is not made and a perpetrator is not determined.

[73] Unsubstantiated Children (duplicate count): The number of children (duplicate count) who received an investigation disposition that concludes there was not sufficient evidence under state law to conclude or suspect that the child was maltreated or at-risk of being maltreated.

[74] Closed With No Finding Children (duplicate count): The number of children (duplicate count) who received a disposition that does not conclude with a specific finding because the CPS response could not be completed.

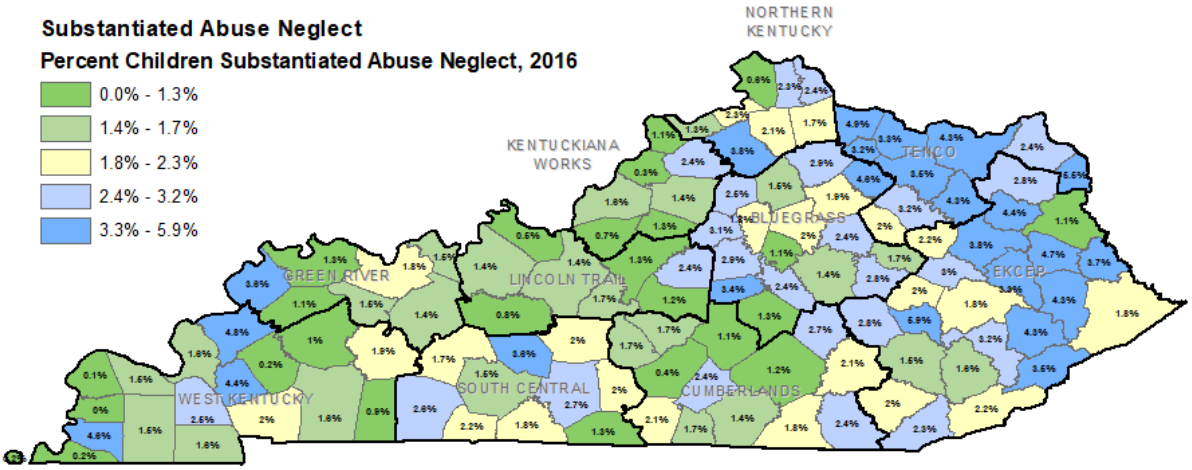
[75] Other Children (duplicate count): The number of children (duplicate count) who received a disposition of "other," which is used by states if none of the other dispositions are applicable. Unknown Children (duplicate count): The number of children (duplicate count) for whom a disposition is unknown or missing.

County-level data are presented in Exhibit 122. Counties with the lowest substantiation rates are shaded in green while counties with the highest substantiation rates are shaded in blue.

Counties with Highest and Lowest Substantiation Rates

Highest: Owsley, Boyd, and Bracken
Lowest: Carlisle, Ballard, and Fulton

Exhibit 122 *Percent Cases Substantiated for Abuse or Neglect, 2016*



Data source: KYSTATS Early Childhood Profiles 2016

ACF reports also provide information on child fatalities and child victims, wherein a fatality is defined as

> A child fatality is defined as the death of a child as a result of abuse and neglect, because either an injury resulting from the abuse and neglect was the cause of death, or abuse and neglect were contributing factors to the cause of death.
>
> Source: Findings from the National Child Abuse and Neglect Data System (NCANDS) – File Contents and Definitions for the Data Tables

A child victim is defined as:

> a child for whom the state determined at least one maltreatment was substantiated or indicated. This includes a child who died of child abuse and neglect.
>
> Source: Findings from the National Child Abuse and Neglect Data System (NCANDS) – File Contents and Definitions for the Data Tables

Exhibit 123 presents data for Kentucky suggesting a decrease in child fatalities but an increase in child victims, including an increase in first time victims.

Exhibit 123 *Child Fatalities and Victims, 2013 to 2017*

Kentucky Child Fatalities and Victims	Change

	2013	2014	2015	2016	2017	2013-2017
Number of child fatalities	23	15	16	15	10	-57%
Number of child victims	17,591	17,932	18,897	20,010	22,410	27%
Rate of child victims, per 1000	17.3	17.7	18.7	19.8	22.2	28%
First time victims	12,486	12,597	13,263	13,726	15,230	22%
First time victims, rate per 1000	12.3	12.4	13.1	13.6	15.1	23%

Data Source: Administration for Children and Families Child Maltreatment Report Tables 3-4, 3-5, and 4-2 (2017)

The ACF reports allow data to be disaggregated by state and the age of children involved in investigations. Exhibit 124 present the number of children ages birth through five while Exhibit 125 presents the rate (per 1000). Children less than 1 year old and 2 years old are reported to have the greatest increases between 2013 and 2017.

Exhibit 124 Child Victims Ages Birth through Five, 2013 to 2017

	Kentucky Victims by Age					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Less than 1 year	2780	2896	2712	2890	3090	11%
1 year old	1548	1513	1384	1440	1621	5%
2 years old	1450	1401	1375	1480	1614	11%
3 years old	1436	1397	1232	1344	1459	2%
4 years old	1395	1302	1151	1294	1380	-1%
5 years old	1364	1376	1211	1201	1368	<1%
Total	9973	9885	9065	9649	10532	6%

Data Source: Administration for Children and Families Child Maltreatment Report Table 3-6 (2017)

Exhibit 125 Child Victims, Ages Birth through Five, Rate per 1000 Children, 2013 to 2017

	Kentucky Victims by Age, Rate per 1000 Children					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Less than 1 year	51.1	52.6	48.8	52.7	56.6	11%
1 year old	28.1	27.2	25.0	26.0	29.3	4%
2 years old	26.3	25.4	24.5	26.9	29.0	10%
3 years old	26.0	25.4	22.3	24.1	26.2	1%
4 years old	25.4	23.6	20.9	23.7	24.9	-2%
5 years old	23.8	25.1	22.1	21.9	24.8	4%

Data Source: Administration for Children and Families Child Maltreatment Report Table 3-6 (2017)

When disaggregated by race, White, African-American and Multi-race children have the highest child victim rates, following Hispanics (Exhibit 126). The groups with the largest percent increases in rate, between 2013 and 2017, were Multi-race and Asian.

Exhibit 126 Child Victims, by Race, Rate per 1000 Children, 2013 to 2017

	Kentucky Victims by Race, Rate per 1000 Children					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
African-American	19.8	24.1	20.7	21.7	21.5	9%
American-Indian/ Alaska Native	1.9	7.0	5.7	4.7	6.2	226%
Asian	1.4	1.8	1.3	2.5	2.4	71%
Hispanic	11.1	14.5	12.6	13.6	14.2	28%
Multiple Race	14.0	22.5	23.9	24.6	27.0	93%
Pacific Islander	12.9	11.8	7.8	7.0	9.2	-29%
White	14.3	18.9	17.0	19.0	22.0	54%

Data Source: Administration for Children and Families Child Maltreatment Report Table 3-8 (2017)

Neglect is the primary reason for identification of child victims, accounting for 95.1% of cases in 2017 (Exhibit 127). This was followed by sexual abuse (3.8%) and medical neglect (2.2%).

Exhibit 127 Total Victims by Type of Abuse, 2013 to 2017

	Kentucky Victims by Type of Abuse, Percent					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Medical Neglect[76]	--	1.4%	2.4%	2.3%	2.2%	
Neglect[77]	99%	91.3%	92.2%	93.4%	95.1%	-4%
Physical Abuse[78]	10.1%	9.6%	8.3%	7.8%	6.8%	-33%
Psychological Mistreatment[79]	.3%	.4%	.4%	.2%	.2%	-33%
Sexual Abuse[80]	4.4%	4.2%	4.8%	3.9%	3.8%	-14%

Data Source: Administration for Children and Families Child Maltreatment Report Table 3-9 (2017)

Abuse or neglect is most prevalent among close family or friends, as shown in Exhibit 128. Parents appear to be the most common perpetrators by far, followed by individuals with multiple relationships or individuals who have family or closely connected relationships to the child.

[76] Medical Neglect (duplicate count): The number of maltreatment types (duplicate count) substantiated as medical neglect, which is defined as failure of the caregiver to provide for the appropriate health care of the child although financially able to do so, or offered financial or other resources to do so.

[77] Neglect (duplicate count): The number of maltreatment types (duplicate count) substantiated as neglect, which is defined as the failure by the caregiver to provide needed, age-appropriate care although financially able to do so or offered financial or other means to do so.

[78] Physical Abuse (duplicate count): The number of maltreatment types (duplicate count) substantiated as physical abuse, which is defined as physical acts that caused or could have caused physical injury to a child.

[79] Psychological Maltreatment (duplicate count): The number of maltreatment types (duplicate count) substantiated as psychological maltreatment, which is defined as acts or omissions—other than physical abuse or sexual abuse—that caused or could have caused—conduct, cognitive, affective, or other behavioral or mental disorders.

[80] Sexual Abuse (duplicate count): The number of maltreatment types (duplicate count) substantiated as sexual abuse, which is defined as the involvement of the child in sexual activity to provide sexual gratification or financial benefit to the perpetrator, including contacts for sexual purposes, molestation, statutory rape, prostitution, pornography, exposure, incest, or other sexually exploitative activities.

Exhibit 128 Kentucky Victims by Perpetrator, 2013 to 2017

	Kentucky Victims by Perpetrator, Number				Change
	2013	**2015**	**2016**	**2017**	**2013-2017**
Parent	20,665	10462	10338	12938	-37%
Child Daycare Providers	4	27	19	18	350%
Foster Parent	138	103	32	37	-73%
Friend and Neighbor	--	186	235	255	37% (2015-2017)
Legal Guardian	--	216	185	309	43% (2015-2017)
Other	1005	--	--	126	-87%
Other Relative	1867	786	678	847	-55%
Unmarried Partner of Parent	1661	727	626	756	-54%
Unknown	72	123	226	148	106%
Multiple Relationships[81]		558	633	1178	111% (2015-2017)

Data Source: Administration for Children and Families Child Maltreatment Report Table 5-5 (2017); incidence via group home or residential facility staff not shown (counts <5)

Substance/Opioid Abuse

One reason for the incidence of abuse or neglect may be substance abuse, including opioid abuse. The National Institute on Drug Abuse reports that, in 2017, Kentucky experienced 1,160 "opioid involved deaths" for a rate of 27.9 deaths per 100,000 persons (while the national rate is 14.6 deaths per 100,000 persons)[82]. Data within Kentucky (supplied by the REACH data warehouse; Exhibit 129) indicates that drug arrests have increased between 2013 and 2016. The highest increase was in the Bluegrass LWDA; there was a decrease in arrests in the TENCO LWDA.

Exhibit 129 Total Drug Arrests, 2013 to 2016

	Total Drug Arrests				Change
	2013	**2014**	**2015**	**2016**	**2013-2016**
Kentucky	55617	58335	65330	75710	36%
Bluegrass	8170	8953	11296	13501	65%
Cumberlands	4382	4951	5690	6969	59%
ECKEP	6091	7047	8321	9666	59%
Green River	4004	4189	4623	5832	46%
Kentuckiana Works	5046	5075	5266	6532	29%
Lincoln Trail	3809	4442	4856	5434	43%
Northern Kentucky	8308	8319	7851	8834	6%
South Central	5242	5371	6071	6607	26%
TENCO	2244	1918	2372	2144	-4%

[81] In the following scenarios, the perpetrator is counted once in the multiple relationships category: (a) The perpetrator is a parent to one victim and is an unmarried partner of parent to a second victim in the same report. Or (b) The perpetrator is a parent to one victim in one report and an unmarried partner of parent to a second victim in a second report.

[82] https://www.drugabuse.gov/opioid-summaries-by-state/kentucky-opioid-summary

West Kentucky	8321	8070	8984	10191	22%

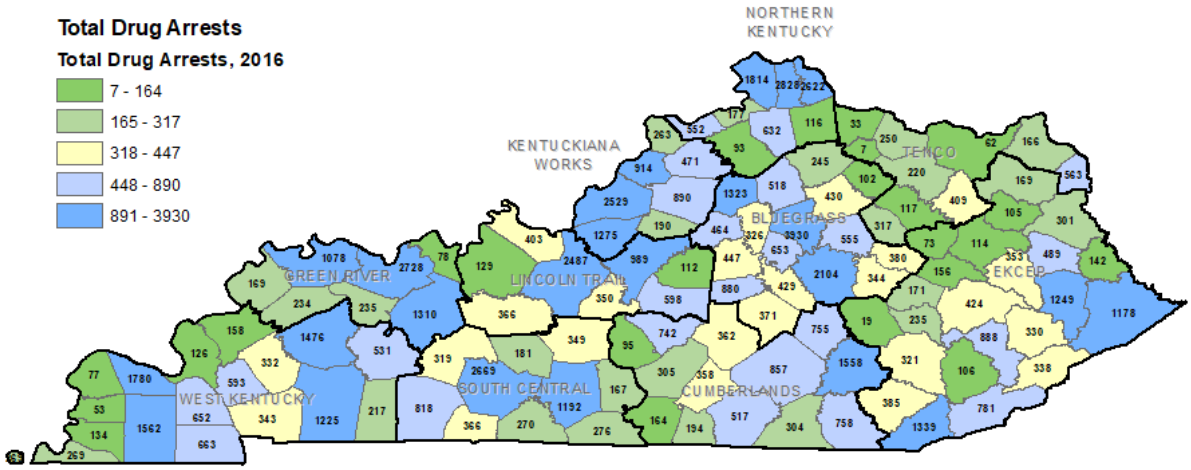
Data Source: Kentucky REACH Data Warehouse

County-level data on total drug arrests for 2016 is presented in Exhibit 130. Counties with the highest numbers of drug arrests are shaded in blue while counties with the lowest numbers of drug arrests are shaded in green.

Counties with Highest and Lowest Drug Arrests

Highest: Fayette, Kenton, and Daviess
Lowest: Robertson, Jackson, and Bracken

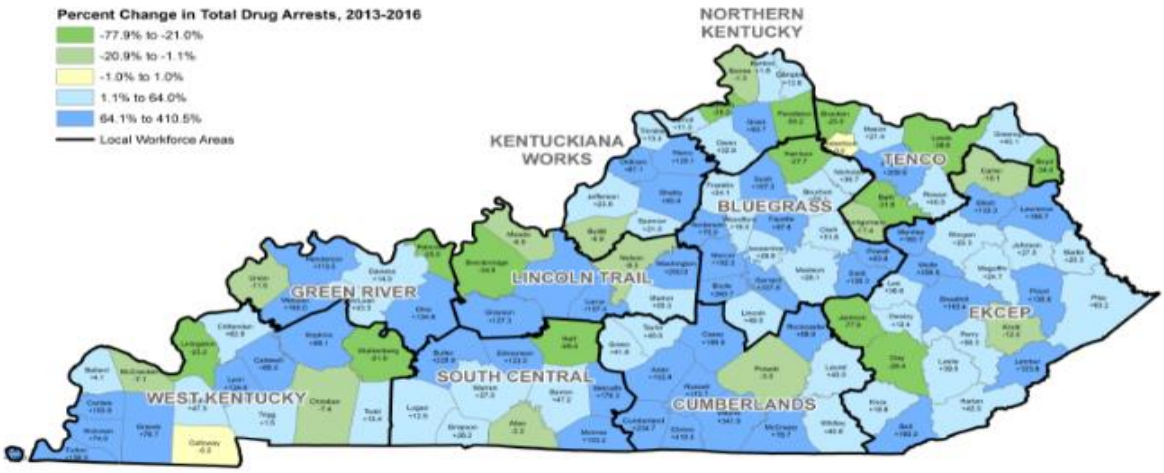
Exhibit 130 Total Drug Arrests, 2016



Data Source: Kentucky REACH Data Warehouse

There have been increases and decreases across the state in drug arrests between 2013 and 2016 (Exhibit 131). Counties with increases in drug arrests are shaded in blue while counties with decreases are shaded in green.

Exhibit 131 Change in Drug Arrests, 2013 to 2016



Data Source: Kentucky REACH Data Warehouse

Data from the Kentucky Injury Prevention and Research Center were extracted to gain further insights into substance abuse concerns within Kentucky. One such concern is Neonatal Abstinence Syndrome (NAS):

> Neonatal abstinence syndrome (also called NAS) is a group of conditions caused when a baby withdraws from certain drugs he's exposed to in the womb before birth. NAS is most often caused when a woman takes drugs called opioids during pregnancy.
>
> Source: https://www.marchofdimes.org/complications/neonatal-abstinence-syndrome-(nas).aspx

The National Institute on Drug Abuse reports that there were 1,115 NAS or NOWS (Neonatal Opioid Withdrawal Syndrome) cases in Kentucky in 2016, or 23.3 cases per 1000 hospital births. Further:

> the highest rates occurring in the eastern counties of Kentucky River (69.0 cases per 1,000 hospital births), Big Sandy (68.7 cases per 1,000 hospital births) and Cumberland Valley (62.9 cases per 1,000 hospital births).
>
> Source: https://www.drugabuse.gov/opioid-summaries-by-state/kentucky-opioid-summary

Exhibit 132 presents data, by LWDA, on NAS. Between 2013 and 2017, there was a statewide increase of over 50%. The increase was particularly acute in the Lincoln Trail LWDA (between 2014 and 2017); there was a slight decline from 2013 to 2017 in the ECKEP LWDA.

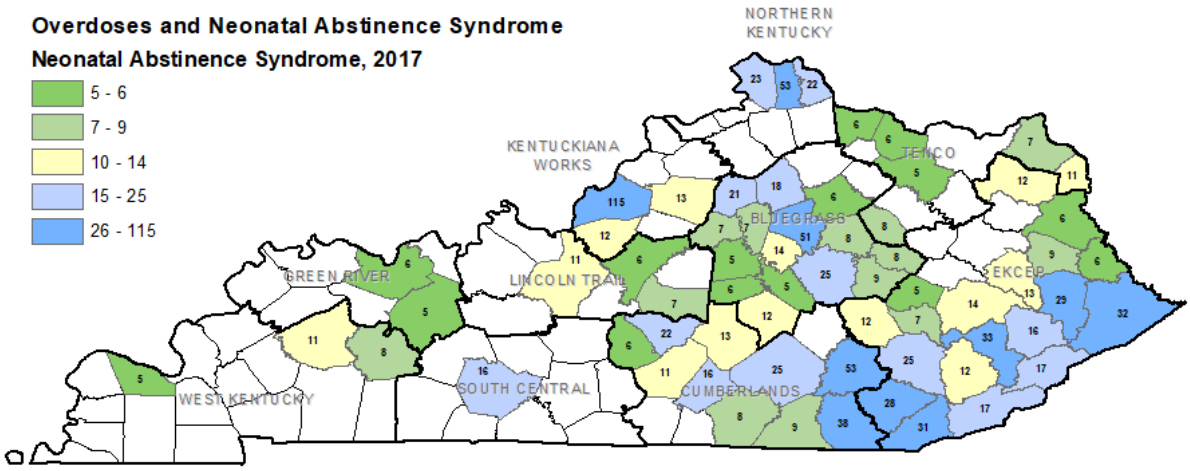
Exhibit 132 Incidence of Neonatal Abstinence Syndrome, 2013 to 2017

	Incidence of Neonatal Abstinence Syndrome					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Kentucky	756	1060	1092	1115	1181	56%
Bluegrass	154	221	226	210	202	31%
Cumberlands	100	164	188	205	201	101%
ECKEP	145	249	302	279	324	123%
Green River	13		6	11	11	-15%
Kentuckiana Works	124	126	104	148	140	13%
Lincoln Trail		6	5	13	24	300% (2014-2017)
Northern Kentucky	71	127	125	102	98	38%
South Central				5	16	220% (2016-2017)
TENCO	13	56	45	39	43	231%
West Kentucky	18	27	18	26	24	33%

Data Source: Kentucky Injury Prevention and Research Center Drug-related inpatient hospitalizations and emergency department visits; Kentucky total values include counties for which counts were suppressed

Exhibit 133 presents county-level data for NAS, by county, for 2017. Counties with no shading either had no reported cases or had too few cases to report (i.e., the data were suppressed). Counties shaded in blue had the highest numbers of cases while counties shaded in green had the fewest cases.

Exhibit 133 Incidence of Neonatal Abstinence Syndrome, by County, 2017



Data Source: Kentucky Injury Prevention and Research Center Drug-related inpatient hospitalizations and emergency department visits; Kentucky total values include counties for which counts were suppressed

Exhibit 134 presents an overview of the incidence of acute drug poisoning, for any substance, between 2014 and 2018. As can be seen, there was a 21% increase statewide in this time period—but it is important to note that overdoses appeared to peak in 2017, to be followed by a decline in 2018[83]. The TENCO LWDA experienced the greatest increase between 2014 and 2017; there was a decline in several counties during this time period, with the highest decline in the ECKEP LWDA.

Exhibit 134 Acute Drug Poisoning (Overdose; Any Substance), 2014 to 2018

	Acute Drug Poisoning (Overdose; Any Substance)					Change
	2014	**2015**	**2016**	**2017**	**2018**	**2014-2018**
Kentucky	13,934	16,428	18,841	19,975	16,795	21%
Bluegrass	2343	2954	3552	3732	3270	40%
Cumberlands	958	1139	1086	977	919	-4%
ECKEP	1752	1854	1956	1889	1587	-9%
Green River	631	688	747	861	605	-4%
Kentuckiana Works	3085	3912	5202	5244	4357	41%
Lincoln Trail	690	736	878	993	906	31%
Northern Kentucky	2095	2423	2574	3197	2421	16%
South Central	713	754	748	807	778	9%
TENCO	554	668	818	1003	820	48%
West Kentucky	1113	1300	1276	1269	1132	2%

[83] These data will continue to be monitored to determine if the 2018 decline continues into the future.

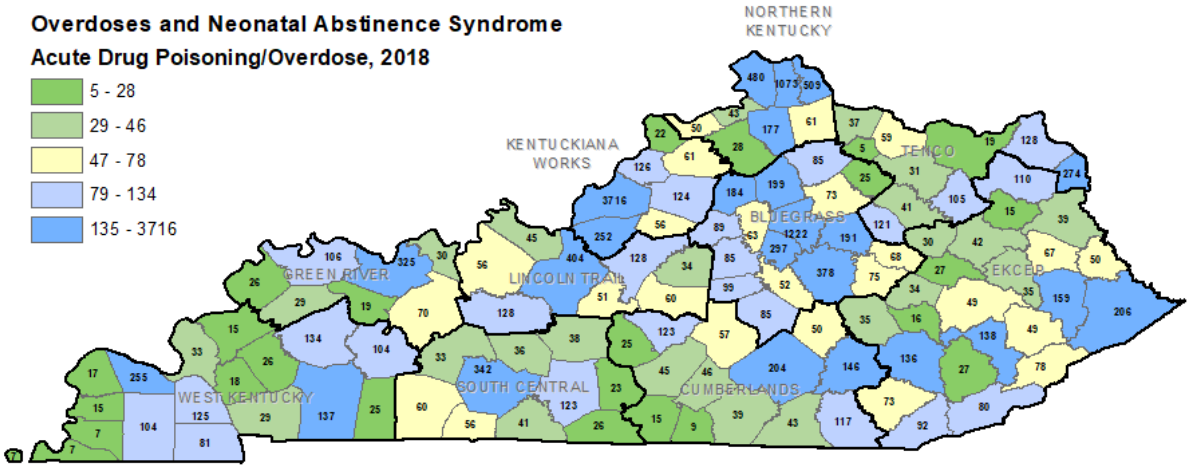
Data Source: Kentucky Injury Prevention and Research Center Drug-related inpatient hospitalizations and emergency department visits; Kentucky total values include counties for which counts were suppressed

Exhibit 135 presents county-level data on overdoses, from any substance, for 2018. Counties shaded in green had the fewest cases while counties shaded in blue had the highest number of cases.

Counties with Highest and Lowest Incidence of Overdose

Highest: Jefferson, Fayette, and Kenton
Lowest: Robertson, Fulton, and Hickman

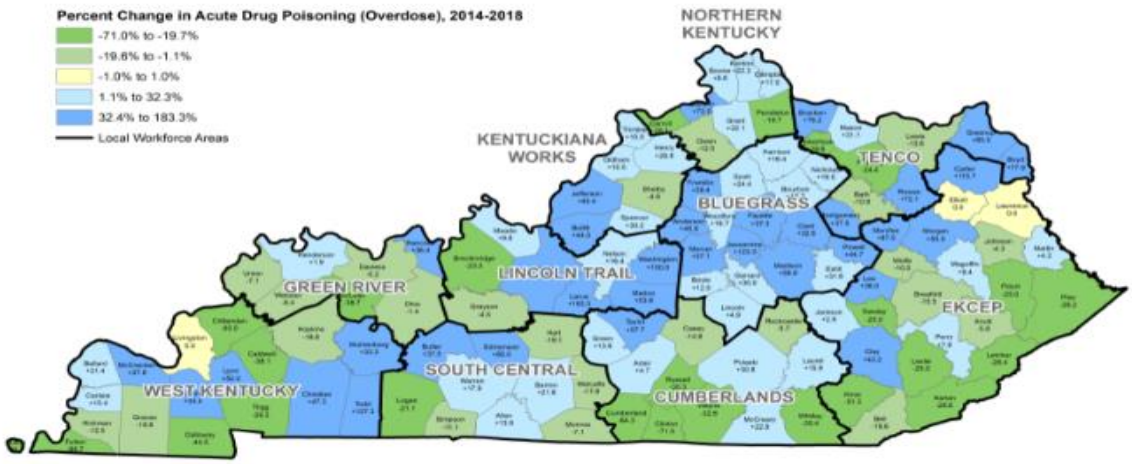
Exhibit 135 *Acute Drug Poisoning (Overdose; Any Substance), by County, 2018*



Data Source: Kentucky Injury Prevention and Research Center Drug-related inpatient hospitalizations and emergency department visits; Kentucky total values include counties for which counts were suppressed

Exhibit 136 presents the change in acute drug poisoning between 2014 and 2018. Counties with an increase in acute drug poisoning are shaded in blue, while counties with a decrease are shaded in green.

Exhibit 136 *Change in Acute Drug Poisoning, 2014 to 2018*



Data Source: Kentucky Injury Prevention and Research Center Drug-related inpatient hospitalizations and emergency department visits; Kentucky total values include counties for which counts were suppressed

Parents and community stakeholders who participated in the Preschool Development Planning Community Feedback Survey also reported on needs related to domestic or intimate partner violence and substance and opioid abuse, as follows.

Domestic or Intimate Partner Violence

- When given a range of options that reflected domestic or intimate partner violence services, 54.8% of respondents reported a need to **increase the availability of services or to make sure each community has services.**
- 54.7% of respondents reported a need to **make sure services or information are available in more than one language** while 54.4% of respondents reported a need to **make sure there is an easy website to learn about or find services.**
- 51.4% of respondents reported a need to **increase coordination across states agencies** providing these types of services.

Substance and Opioid Abuse

- When given a range of options that reflected substance abuse or opioid abuse services, 63.2% of respondents reported a need to **increase the availability of services or to make sure each community has services.**
- 60.6% of respondents also reported a need to (a) **increase coordination across states agencies** providing these types of services and (b) **make sure there is an easy website to learn about or find services.**
- Smaller percentages of respondents reported a need to (a) improve outreach and education about services (58.4%); (b) make sure services or information are available in more than one language (58.2%); (c) increase coordination across local agencies providing these types of services (57.3%), make it easier to find and use services (57.3%), or improve the quality of services (57.3%).
- Other needs in this domain included:
    - Increase the range of service options or types of services (54.1%), and
    - Improve affordability of services (48.2%).

It is striking that when survey participants were asked about the needs of **highly vulnerable children** (whose experiences may include exposure to violence or substance abuse among other traumatic experiences or environments), respondents reported the greatest level of needs in the state. For example, **78.9% of respondents reported the need to increase the availability of services for this population (or to make sure each community has services).** Further, 77.7% of respondents reported a need to **make it easier to find and use services**, while 75.9% of respondents reported a need to (a) **improve the quality of services** and (b) **increase the range of service options or types of services.** In addition:

- 75.8% reported the need to improve outreach and education about services,
- 75.2% reported the need to increase coordination across local agencies providing these types of services,
- 74.7% reported the need to make sure there is an easy website to learn more about or find services,

- 74.5% reported the need to increase coordination across state agencies providing these types of services,
- 74.1% reported the need to make sure services or information are available in more than one language, and
- 68% reported the need to improve the affordability of services.

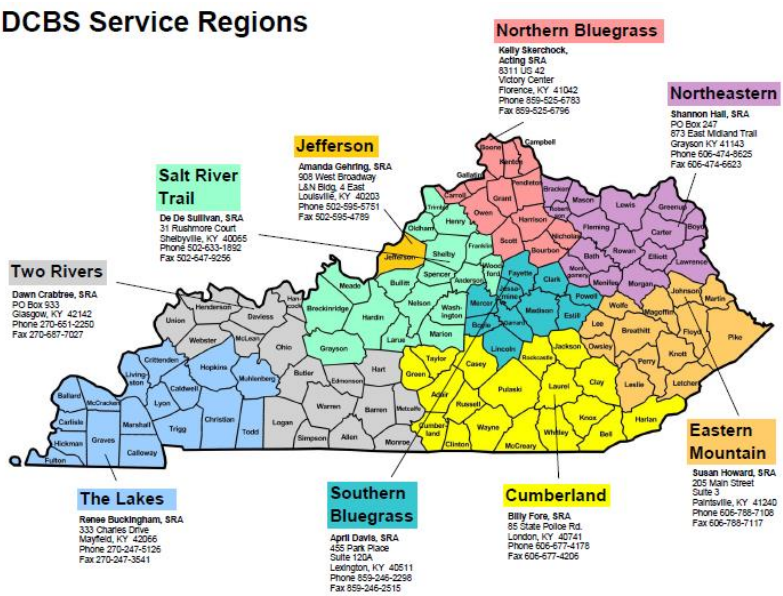
The needs of highly vulnerable children, and the distribution of this population across the state and in rural commnities, should continue to receive attention as Kentucky develops its strategic action plans and data systems. The data and survey findings presented in this section underscore the urgency of this issue, which speaks to the impact of trauma on children and their development.

Statewide Services that Respond to Children and Families in Need of Prevention and Protection Services

Prevention and Protection Services

The Cabinet for Health and Family Services' Department for Community Based Services Child Protection Branch administers prevention and protection efforts, with regional coordination of county-level services available for children and families (Exhibit 137). Individuals who are concerned that a child may be experiencing abuse, neglect, or dependency can call a toll-free anonymous hotline or their local Protection and Permanency office.

Exhibit 137 DCBS Service Regions



Prevent Child Abuse Kentucky

Prevent Child Abuse Kentucky (PCAKY; https://pcaky.org/) also provides outreach and educational materials for community members, including brochures, merchandise, tip sheets, posters, digital downloads, educational videos and webiners, and assessments. PCAKY maintains a social media presence, with updates on Facebook and Twitter. Online visitors can sign up to receive a newsletter.

Children in Out-Of-Home Care

The Kids Count database contains estimates for the number of children (ages birth through 17) experiencing out-of-home care, which includes circumstances in which children are:

> placed out of their home of origin assisting the cabinet in achieving safety, permanency, and well-being outcomes for children and families.
>
> Source: https://chfs.ky.gov/agencies/dcbs/dpp/oohc/Pages/default.aspx

As noted by Kentucky Youth Advocates, out-of-home care can be provided by foster care parents, but also kinship caregivers, or members of the child's extended family[84]. Overall, between 2013 and 2017, the state experienced an increase in out-of-home care of 25%. This increase was most pronounced in the Lincoln Trail LWDA, which experienced an increase of 50% (Exhibit 138).

Exhibit 138 Estimated Children in Out-of-Home Care, 2013 to 2016

	Estimated Number of Children in Out-of-Home Care					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013 to 2017**
Kentucky	12720	13231	13699	14574	15890	25%
Bluegrass	2653	2745	2889	3032	3105	17%
Cumberlands	841	885	957	967	1133	35%
ECKEP	1376	1610	1398	1368	1505	9%
Green River	535	537	542	599	634	19%
Kentuckiana Works	2041	2080	2123	2326	2463	21%
Lincoln Trail	839	939	1054	1138	1258	50%
Northern Kentucky	1498	1533	1659	1731	1845	23%
South Central	1100	1135	1205	1296	1445	31%
TENCO	828	792	789	930	1083	31%
West Kentucky	1009	975	1083	1187	1419	41%

Data Source: Kids Count Children in Out-of-Home Care; State and LWDA figures do not include counts for counties in which data were suppressed due to small sample size

Most children who are receiving out-of-home care are served by foster care, as shown in Exhibit 139. The need for foster care has risen rapidly in Kentucky, with KVC Kentucky reporting more than 10,000 children (of all ages) in the foster care system as of March 2019[85].

Exhibit 139 Percent of Children Receiving Out-of-Home Care, in Foster Care, 2013 to 2017

	Estimated Percent of Children in Out-of-Home Care in Foster Care					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013 to 2017**
Number of children in out-of-home care	12720	13240	13721	14592	15,891	24.9%
Percent in foster care	75%	74%	73%	71%	67%	-8%

[84] https://kyyouth.org/kentucky-kids-count/children-in-out-of-home-care/
[85] https://kentucky.kvc.org/2019/05/06/how-many-children-are-in-foster-care/

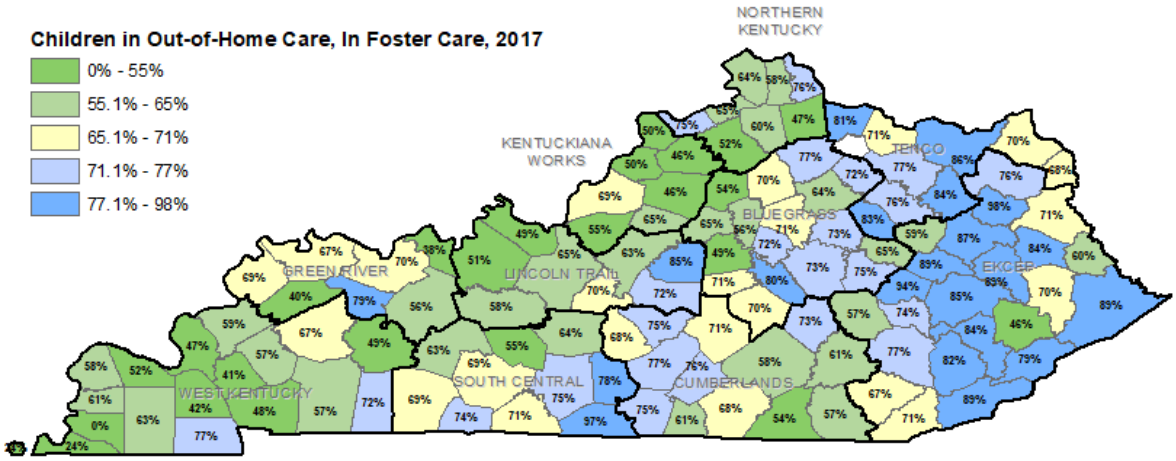
Data Source: Kids Count Percent of Children in Out-of-Home Care in Foster Homes

Exhibit 140 presents more detailed information on the use of foster care, showing the percent of out-of-home care children who are in foster care. Counties with the largest use of foster care are shaded in blue while counties with the lowest (or no) use of foster care are shaded in green.

Counties with Highest and Lowest Out-of-Home Foster Care Use

Highest: Elliot, Monroe, and Lee
Lowest: Hickman, Fulton, and Hancock

Exhibit 140 *Of children in out-of-home care, percent in foster care, 2017*



Data Source: Kids Count Percent of Children in Out-of-Home Care in Foster Homes

The ACF also compiles information on state foster care and adoptive families, highlights of which are presented in Exhibit 141. As is shown, from 2013 to 2017, there was a 11% increase in the number of children served in foster care, across the state.

Exhibit 141 *Overview of Foster Care Service Statistics, 2013 to 2017*

	Kentucky Foster Care Service Overview					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Numbers of Children Entering Foster Care	5,540	5,766	5,383	5,690	5,995	8%
Numbers of Children Served in Foster Care	12,173	12,631	12,546	13,016	13,501	11%
Numbers of Children in Foster Care on September 30th	7,162	7,506	7,538	7,812	8,089	13%
Numbers of Children Exiting Foster Care, by State	5,011	5,125	5,008	5,204	5,412	8%

Data Source: Administration for Children and Families Adoption and Foster Care Analysis and Reporting System (AFCARS)

Children receiving foster care services may exit services, only to re-enter. Exhibit 142 provides state-level estimates of the number and percent of children who re-entered services within 12 months. As is shown, the percent remained relatively stable from 2013 to 2017.

Exhibit 142 Foster Care: Percent Children Re-Entering Services within 12 Months, 2013 to 2016

	Estimated Number of Children Re-Entering Foster Care within 12 Months					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013 to 2017**
Kentucky	573	579	546	511	565	-1.4%
	10.2%	10.6%	10.2%	9.4%	9.2%	-1%

Data Source: Kids Count Children re-entering foster care within 12 months

The United States Census also provides information on participation in foster care, as shown in Exhibit 143, which presents the number of children under age 18 in households who are foster children or otherwise unrelated to the householder. This number has increased, statewide, from 2013 to 2017—but not uniformly across the state (note that the greatest increase in participation is in the West Kentucky LWDA while the greatest decrease is in Kentuckiana Works).

Exhibit 143 Children Under 18 in Household: Foster Child, 2013 to 2017

	Children Under 18 Relationship to Householder: Foster Child or Other Unrelated Child					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Kentucky	21848	23261	23823	24210	23690	8%
Bluegrass	3852	4424	4437	4693	4459	16%
Cumberlands	1798	1507	1729	1567	1629	-9%
ECKEP	2475	2767	2625	2248	2174	-12%
Green River	945	860	975	1186	1186	26%
Kentuckiana Works	5245	5171	4621	4784	4576	-13%
Lincoln Trail	1367	1405	1223	1403	1347	-1%
Northern Kentucky	1913	2258	2829	2642	2740	43%
South Central	1215	1325	1478	1585	1561	28%
TENCO	1296	1157	1295	1342	1280	-1%
West Kentucky	1742	2387	2611	2760	2738	57%

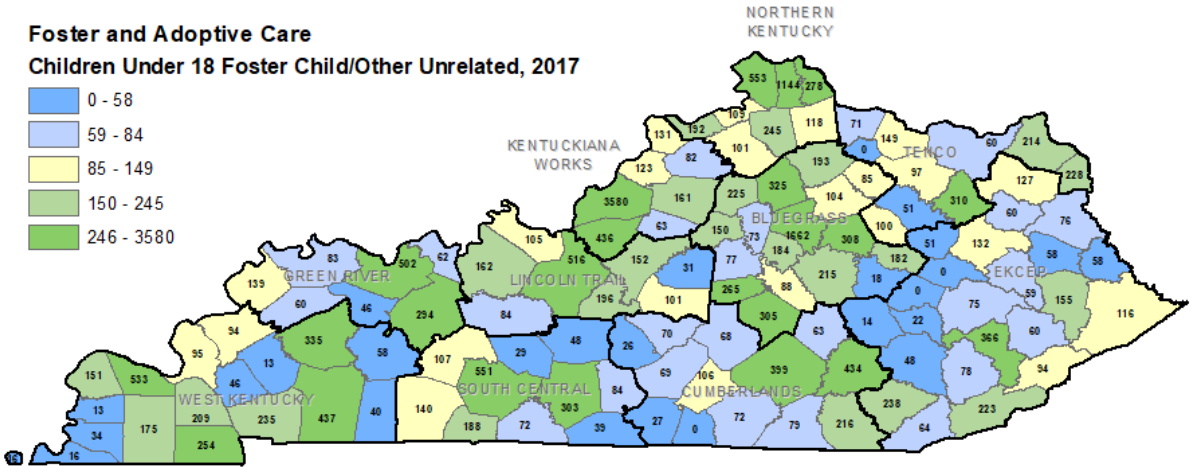
Data Source: United States Census American Community Survey Table B-09018, Five year estimates

County-level data for 2017 are presented in Exhibit 144, wherein counties with the highest participation numbers are shaded in green and counties with lowest participation are shaded in blue.

Counties with Highest and Lowest Foster Care Use per U.S. Census

Highest: Jefferson, Fayette, and Kenton
Lowest: Clinton, Lee, Robertson, and Wolfe

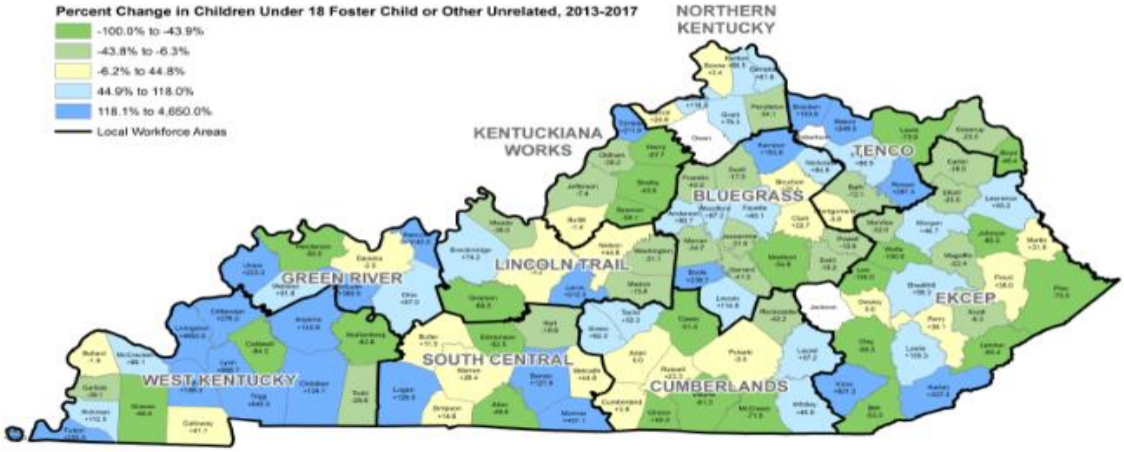
Exhibit 144 Children Under 18 Relationship to Householder: Foster Child or Other Unrelated Child, by County, 2017



Data Source: United States Census American Community Survey Table B-09018, Five year estimates

Exhibit 145 presents county-level changes in the number of children reported to be foster children or other unrelated children, from 2013 to 2017. Counties that experienced the greatest increase are shaded in blue while counties with the greatest decrease are shaded in green.

Exhibit 145 Change in Children in Foster Care, 2013 to 2017



Data Source: United States Census American Community Survey Table B-09018, Five year estimates; lack of shading indicates missing data

Adoptive Cases

According to records maintained by the ACF, there has been an increase in the numbers of children waiting for and being adopted, from 2013 to 2017 (Exhibit 146).

Exhibit 146 Overview of Adoption Service Statistics, 2013 to 2017

	Kentucky Adoption Statistics					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Numbers of Children Waiting for Adoption	2224	2420	2579	2612	2563	15%
Numbers of Children Waiting for Adoption Whose Parental Rights Have Been Terminated	1,179	1,243	1,439	1,460	1,463	24%
Numbers of Children Adopted	797	909	961	1,104	1,128	42%

Data Source: Administration for Children and Families Adoption and Foster Care Analysis and Reporting System (AFCARS)

Census data (from the American Community Survey) presented in Exhibit 147 presents another view on adoption, as it shows the number of children under 18 who are adopted children in households, from 2013 to 2017. The information presented in Exhibit 147 suggests a smaller increase in adoption over time, statewide. The information also suggests that increases in adoption are highest in the Green River LWDA, while there have been decreases in other LWDAs (with the highest decrease in the Cumberlands LWDA).

Exhibit 147 Children Under 18 in Household: Adopted Child, 2013 to 2017

	Children Under 18 Relationship to Householder: Adopted Child					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Kentucky	24908	24496	23838	24542	25226	1%
Bluegrass	4178	4101	3777	4116	4088	-2%
Cumberlands	2068	1893	1923	1956	1821	-12%
ECKEP	2956	2826	2683	2836	2806	-5%
Green River	902	1184	1115	1230	1318	46%
Kentuckiana Works	5284	5008	5413	5375	5584	6%
Lincoln Trail	1160	1257	1112	1183	1319	14%
Northern Kentucky	2621	2807	2717	2911	3121	19%
South Central	1778	1793	1829	1542	1580	-11%
TENCO	1255	1185	1238	1331	1171	-7%
West Kentucky	2706	2442	2031	2062	2418	-11%

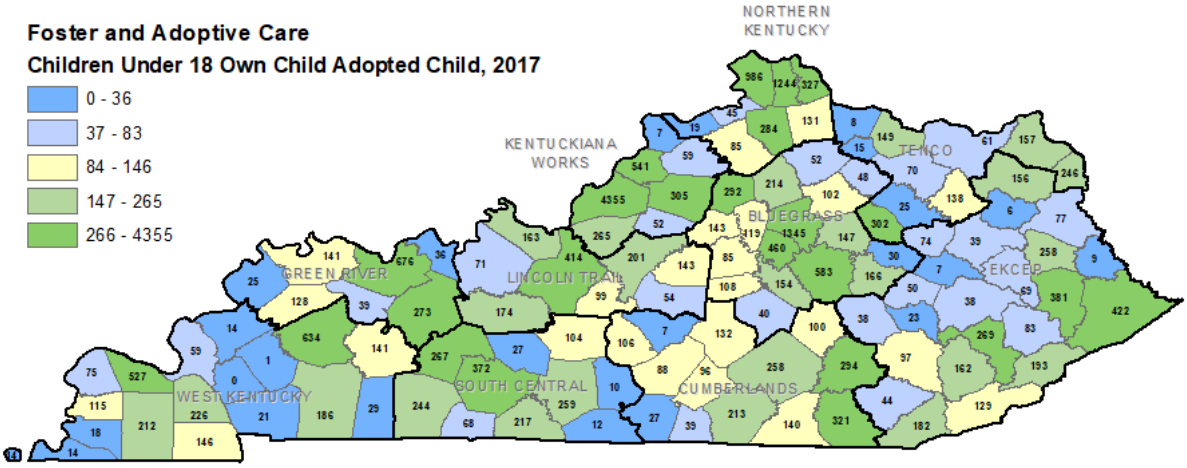
Data Source: United States Census American Community Survey Table B-09018, Five year estimates

County-level data on adoption from the American Community Survey are presented in Exhibit 148. Counties with the highest numbers of adopted children are shaded in green while counties with the lowest numbers (or no adoptive cases) are shaded in blue.

Counties with Highest and Lowest Incidence of Adoption per U.S. Census

Highest: Jefferson, Fayette, and Kenton
Lowest: Lyon, Caldwell, and Elliott

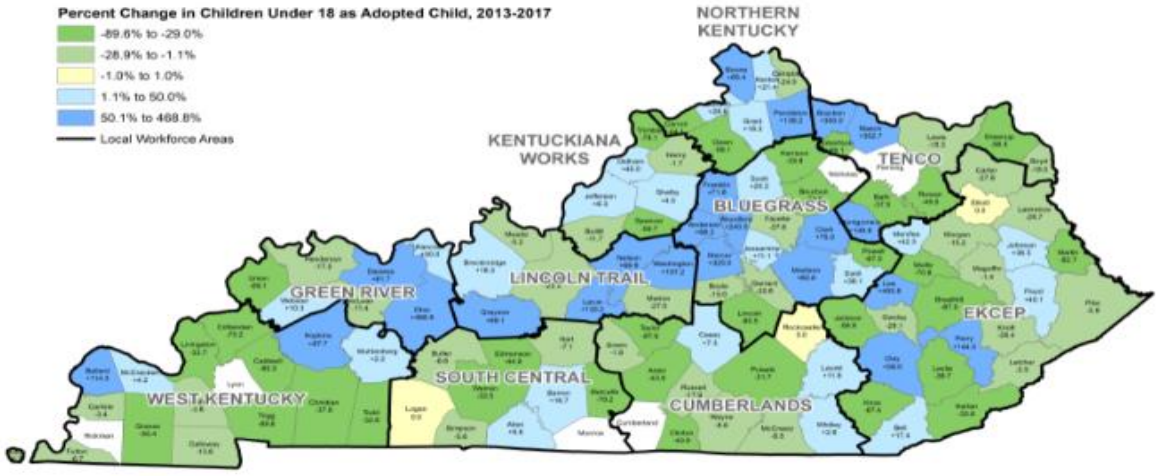
Exhibit 148 *Children Under 18 Relationship to Householder: Adopted Child, by County, 2017*



Data Source: United States Census American Community Survey Table B-09018, Five year estimates

There have been changes in estimated adopted children across the state, from 2013 to 2017 (Exhibit 149). Counties that experienced an increase are shaded in blue while counties that experienced a decrease are shaded in green.

Exhibit 149 *Change in Adopted Children, 2013 to 2017*



Data Source: United States Census American Community Survey Table B-09018, Five year estimates; lack of shading indicates missing data

Grandparent Care

The United States Census Bureau recently reported on the co-incidence of the opioid crisis and grandparent care[86]. Kentucky was identified as one of the top five states for the percentage of the population age 30 and over who are raising grandchildren (2.1% in Kentucky, compared to the national average of 1.4%). Additional data supplied by the Census Bureau identify three Kentucky Counties among the top ten counties, nationally, for opioid prescription rates (Owsley County, 251.6; Bell County, 249.7; and Whitley County, 239.6, compared to the national average of 66.5). Thus, it is prudent to examine the incidence of grandparent co-residence and caregiving responsibilities. Exhibit 150 presents data, from the American Community Survey, on the number of grandchildren (under the age of six) who live with a grandparent in the household. In these cases, the grandparent may or may not take on a caregiver role. As is shown, there was a slight increase, statewide, in this measure between 2013 and 2017. The largest increase was reported for the Bluegrass LWDA. The greatest decrease was noted in the Green River LWDA.

Exhibit 150 *Grandchildren under the age of six live with grandparent in household, 2013-2017*

	Grandchildren under the age of six live with grandparent in household					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Kentucky	37292	37312	37921	37950	37712	1%
Bluegrass	5012	5615	5699	6020	5745	15%
Cumberlands	3134	3221	3104	3284	3216	3%
ECKEP	5489	5497	5703	5424	5177	-6%
Green River	2202	2192	2155	2112	1751	-20%
Kentuckiana Works	7782	7213	8090	7686	8327	7%
Lincoln Trail	2178	2123	2333	2517	2289	5%
Northern Kentucky	3962	4094	3793	3786	4139	4%
South Central	1990	1755	1785	1867	1949	-2%
TENCO	2143	2029	1739	1610	1730	-19%
West Kentucky	3400	3573	3520	3644	3389	0%

Data Source: United States Census American Community Survey Table B-10001, Five year estimates

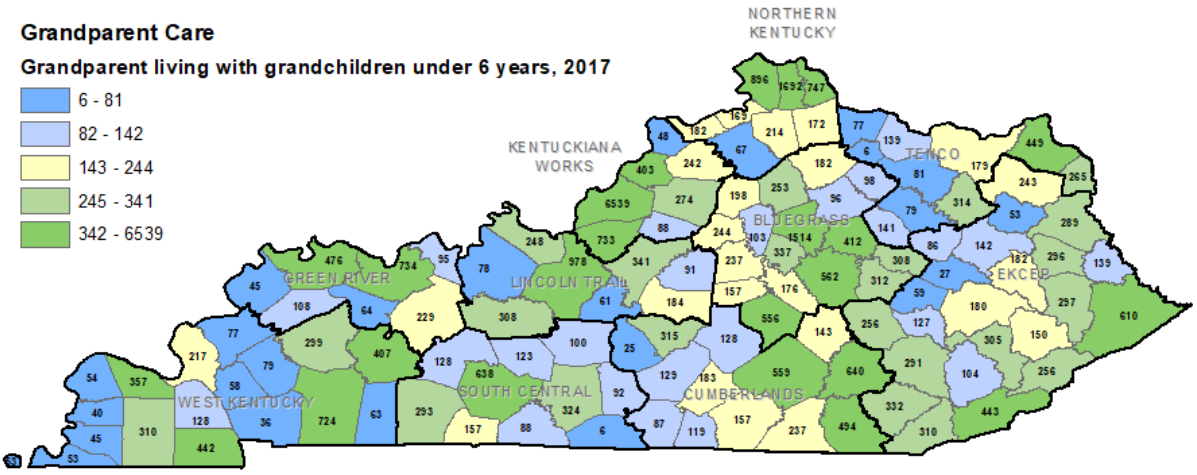
County-level data on the number of grandchildren living with grandparents in their household is presented in Exhibit 151. Counties with higher numbers of grandchildren living with grandparents are shaded in green; counties with lower numbers are shaded in blue.

Counties with Highest and Lowest Incidence of Grandparents Living with Grandchildren Under 6

Highest: Jefferson, Kenton, and Fayette
Lowest: Monroe, Robertson, and Greene

[86] https://www.census.gov/library/stories/2019/04/opioid-crisis-grandparents-raising-grandchildren.html?utm_campaign=20190422msacos1ccstors&utm_medium=email&utm_source=govdelivery; published April 22, 2019

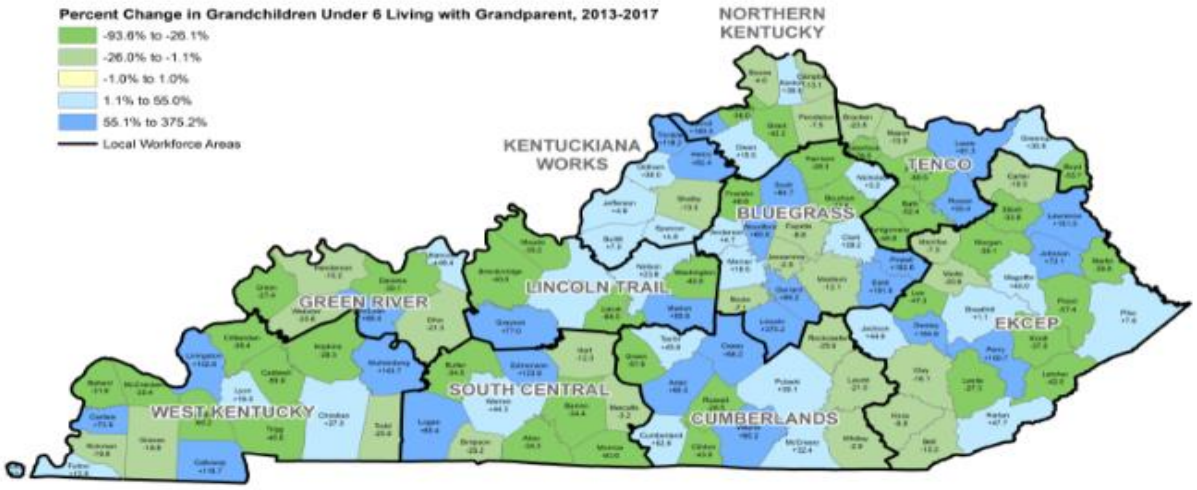
Exhibit 151 *Grandchildren under the age of six live with grandparent in household, by county, 2017*



Data Source: United States Census American Community Survey Table B-10001, Five year estimates

Exhibit 152 presents change in households in which grandparents are living with grandchildren under the age of 6, from 2013 to 2017. Counties that experienced an increase are shaded in blue while counties that experienced a decrease are shaded in green.

Exhibit 152 *Change in Grandparents Living in Households with Grandchildren Under 6 Years, 2013 to 2017*



Data Source: United States Census American Community Survey Table B-10001, Five year estimates

Another aspect of grandparent care is the number of grandchildren (under age 18) who are in households in which a grandparent is responsible for his or her grandchildren, as is shown in Exhibit 153. From 2013 to 2017, there was a five percent increase in this measure, statewide. The greatest increase was reported for the Bluegrass LWDA while the greatest decrease was reported for the Green River LWDA.

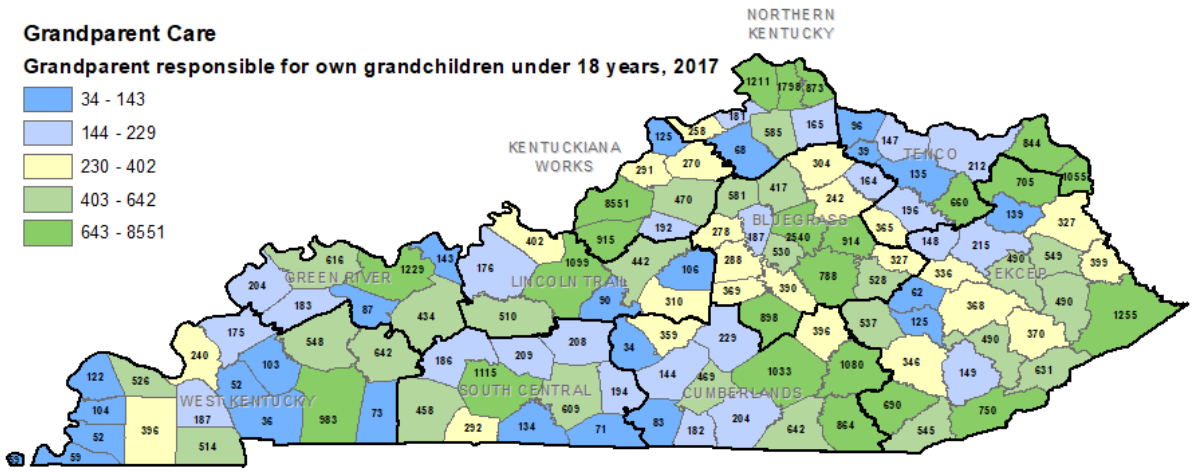
Exhibit 153 Grandchildren in household where grandparent is responsible for grandchildren, under the age of 18, 2013 to 2017

	Grandchildren in household where grandparent is responsible for grandchildren, under the age of 18					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Kentucky	56617	55197	57491	58830	59601	5%
Bluegrass	8361	8672	8964	9740	9745	17%
Cumberlands	5481	5195	5482	5655	5719	4%
ECKEP	10152	10077	10324	9961	10116	0%
Green River	3120	3011	2908	2730	2896	-7%
Kentuckiana Works	10742	9819	11140	10578	10814	1%
Lincoln Trail	2728	2849	2940	3291	3135	15%
Northern Kentucky	4698	4782	4866	5175	5139	9%
South Central	3142	2710	2968	3329	3476	11%
TENCO	3231	3284	2982	3143	3749	16%
West Kentucky	4962	4798	4917	5228	4812	-3%

Data Source: United States Census American Community Survey Table B-10002, Five year estimates

County-level data on this phenomenon are presented in Exhibit 154. Counties with higher numbers of grandparents who are responsible for grandchildren are shaded in green; counties with lower numbers are shaded in blue.

Exhibit 154 Grandchildren in household where grandparent is responsible for grandchildren, under the age of 18, by county, 2017



Data Source: United States Census American Community Survey Table B-10002, Five year estimates

Exhibit 155 presents county-level change in households in which a grandparent is responsible for grandchildren under the age of 18, from 2013 to 2017. Counties that experienced an increase are shaded in blue while counties that experienced a decrease are shaded in green.

Exhibit 155 Change in Households where Grandparent is Responsible for Grandchildren, 2013 to 2017

Data Source: United States Census American Community Survey Table B-10002, Five year estimates

Preschool Development Planning Community Feedback Survey participants provided feedback on **adoption and foster care services** in the fall of 2018. The most highly-ranked needs included (a) **the need to improve the quality of services (61.5%)**, followed by the need to (b) **increase coordination across local agencies** providing these types of services (60.7%) and (c) **make sure there is an easy website to learn about or find services** (60.7%). In addition, it is important to note that:

- 60% of respondents reported a need to increase coordination across state agencies providing these types of services,
- 59.2% reported the need to (a) increase the availability of services or make sure each community has this service and (b) make sure services or information are available in more than one language,
- 58.9% reported the need to improve outreach and education about services,
- 57.2% reported the need to make it easier to find and use services,
- 56.4% reported the need to increase the range of service options or types of services, and
- 53.5% reported the need to improve the affordability of services.

Statewide Services that Respond to Children in Out-of-Home Care

Out-of-Home Care Services

Services for children in Out-Of-Home Care are provided through the Out-Of-Home Care Branch of the Division of Protection and Permanency, which resides in the Department of Community Based Services of the Cabinet for Health and Family Services (https://chfs.ky.gov/agencies/dcbs/dpp/oohc/Pages/default.aspx). This branch

> is responsible for developing programs that support children's attainment of permanency and stability in their lives. Foster care, private child care placements, kinship care and interstate compact are all services within the branch that provide for a child's placement needs. Additionally, the Out of Home Care Branch develops standards of practice and services to support the child and their family while placed in out of home care.

Source: https://chfs.ky.gov/agencies/dcbs/dpp/oohc/Pages/default.aspx

In addition, KY FACES (Foster Adoptive Caregiver Exchange System; https://prdweb.chfs.ky.gov/kyfaces) provides additional resources to families, with information and support available via the agency's website.

Teen Parents and Single Parent Households

Births to Teen Mothers (Age 15-19)

The United States Department of Health and Human Services Office of Adolescent Health reports that Kentucky ranks fifth in the country with regard to 2016 teen birth rate (among women ages 15 through 19)[87]. This statistic also is reported by the Centers for Disease Control and Prevention, which also reported a teen birth rate of 29 (number of live births per 1,000 females aged 15-19, compared to the national rate of 18.8) in 2017[88]. Of these births, data from the Office of Adolescent Health suggest the rates are higher for women ages 18 or 19 (59.5 per 1000, compared to 37.5, nationally) than for women ages 15 through 17 (12 per 1000, compared to 8.8, nationally)[89]. Eighty-one percent of teen births were to non-Hispanic, white women, followed by 12 percent to Black or African-American women, six percent to Hispanic women, and one percent of Asian or Pacific Islanders.

Teen parents experience numerous stressors that can affect child welfare and development. The Urban Child Institute (2014) reported that

> adolescent parenting is one of the major risk factors associated with early childhood development. In addition to its other effects, teen parenting is likely to hinder a child's social and emotional wellbeing.
>
> When a baby is born to a teenage mother, he is likely to have more difficulty acquiring cognitive and language skills as well as social and emotional skills like self-control and self-confidence. These abilities are already developing in infancy, and they are essential for school readiness.
>
> Studies on early childhood development find that adolescent mothers (19 years of age and younger) are less likely than older mothers to engage in emotionally supportive and responsive parenting. They tend to have less knowledge about child development and effective parenting, and often misjudge their infant or toddler's ability to adapt and learn.
>
> Source: http://www.urbanchildinstitute.org/articles/editorials/how-adolescent-parenting-affects-children-families-and-communities

Estimates on teen births are available from the United States Census' American Community Survey and are shown in Exhibit 156. As can be seen, between 2013 and 2017, there was a statewide decrease in teen births, which is also seen in nine of the 10 LWDAs. The only exception to this trend

[87] https://www.hhs.gov/ash/oah/facts-and-stats/national-and-state-data-sheets/adolescent-reproductive-health/kentucky/index.html
[88] https://www.cdc.gov/nchs/pressroom/states/kentucky/kentucky.htm
[89] https://www.hhs.gov/ash/oah/facts-and-stats/national-and-state-data-sheets/adolescent-reproductive-health/kentucky/index.html

was Kentuckiana Works, in which there was a nine percent increase in teen births, between 2013 and 2017.

Exhibit 156 *Teen Births (Ages 15 to 19), by LWDA, 2013 to 2017*

	Of the women who gave birth within the past 12 months, the number who were aged 15-19					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Kentucky	4414	4067	3519	3333	3028	-31%
Bluegrass	776	671	491	375	400	-48%
Cumberlands	420	400	303	302	260	-38%
ECKEP	558	458	400	384	267	-52%
Green River	283	317	243	242	185	-35%
Kentuckiana Works	644	637	711	676	704	9%
Lincoln Trail	223	261	213	216	159	-29%
Northern Kentucky	497	502	289	375	301	-39%
South Central	317	175	251	188	238	-25%
TENCO	290	302	201	184	156	-46%
West Kentucky	406	344	417	391	358	-12%

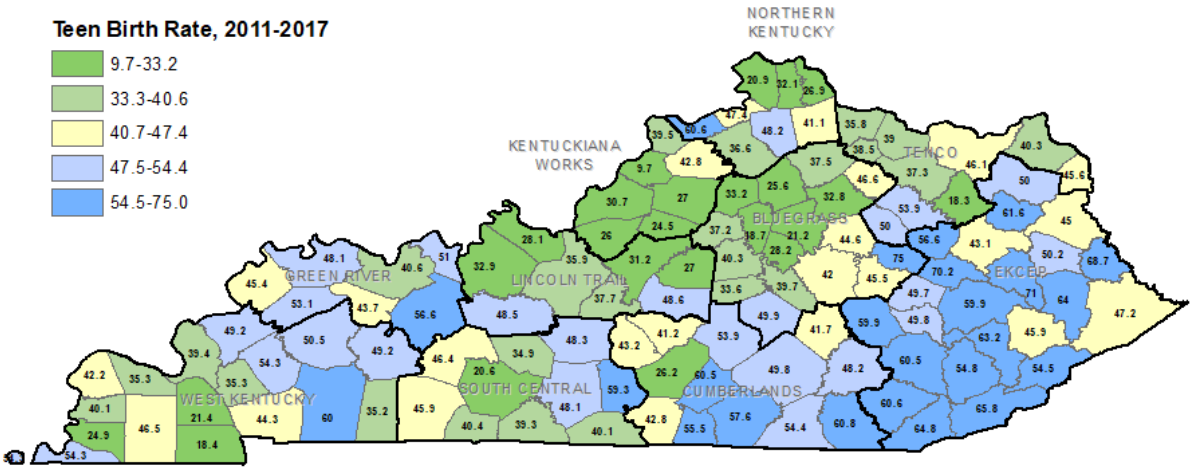
Data Source: United States Census American Community Survey Table S-1301, Five year estimates

Data on teen births also are available in the County Health Rankings report, accessed through the Kentucky State Data Center, which are seeded from the National Center for Health Statistics. County-level data from this source are presented in Exhibit 157, for the 2011-2017 estimates. Counties with higher teen birth rates are shaded in blue while counties with lower teen birth rates are shaded in green.

Counties with Highest and Lowest Teen Birth Rates

Highest: Powell, McCreary, and Wolfe
Lowest: Oldham, Rowan, and Calloway

Exhibit 157 *Teen Birth Rate, by County*



Data Source: Kentucky State Data Center, County Health Rankings, National Center for Health Statistics – Natality files, 2011-2017

Mothers Who are Not High School Graduates

Also of interest are births to women who are not high school graduates. As reported by the National Conference of State Legislatures

> Teen pregnancy is strongly linked to poverty, with low income level associated with higher teen birth rates. In addition, 63 percent of teen mothers receive public assistance within the first year of a child's birth. Fifty-two percent of mothers on welfare had their first child in their teens.
>
> Low educational attainment among teen mothers affects their economic opportunities and earnings in later years. Teen mothers are less likely to complete high school or college, and are therefore less likely to find well-paying jobs. This is evident in the fact that in 2016, college graduates earned 56 percent more, on average, than workers with a high school diploma. The economic consequences of dropping out of school often contribute to the perpetual cycle of economic hardship and poverty that can span generations.
>
> Source: http://www.ncsl.org/research/health/teen-pregnancy-prevention.aspx

Kentucky has a high school graduation rate of 89.7 percent[90], which may explain the data presented in Exhibit 158, showing that births to mothers who were not high school graduates has been dropping, statewide. The largest decreases have been experienced in the Lincoln Trail LWDA while the smallest decreases were in South Central LWDA.

Exhibit 158 Births to Mothers who were not High School Graduates, 2013 to 2017

	Of the women who gave birth within the past 12 months, the number who were not high school graduates					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013-2017**
Kentucky	8767	7989	7300	7080	6447	-26%
Bluegrass	1310	1143	1078	1170	1183	-10%
Cumberlands	653	746	686	570	467	-28%
ECKEP	1302	1019	872	936	779	-40%
Green River	339	324	254	338	293	-14%
Kentuckiana Works	2049	1800	1688	1524	1350	-34%
Lincoln Trail	544	523	421	393	267	-51%
Northern Kentucky	593	558	542	503	394	-34%
South Central	784	648	682	646	772	-2%
TENCO	451	503	355	363	325	-28%
West Kentucky	742	725	722	637	617	-17%

Data Source: United States Census American Community Survey Table S-1301, Five year estimates

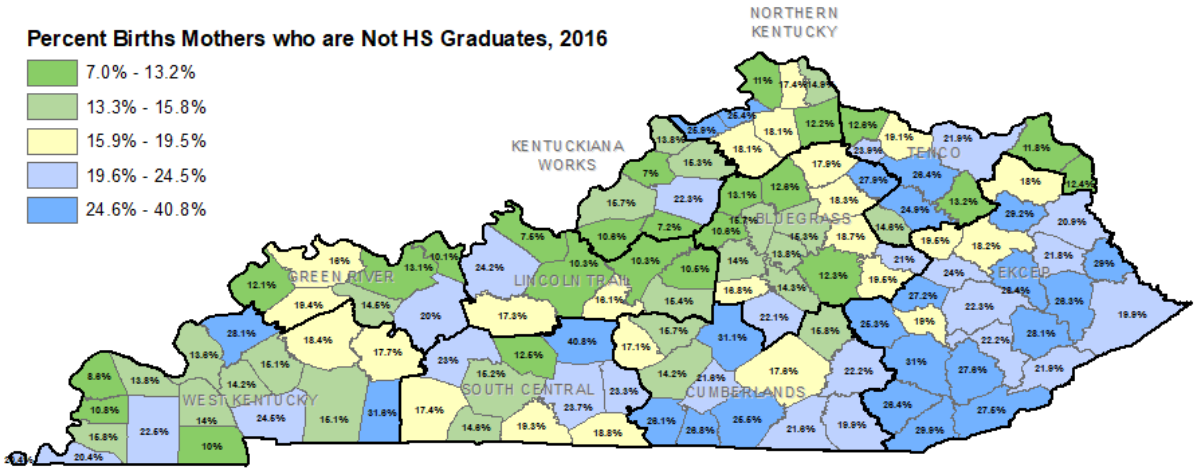
[90] https://education.ky.gov/comm/edfacts/Pages/default.aspx

Some counties, however, still struggle with relatively high percentages of births to mothers who are not high school graduates. County-level data are presented in Exhibit 159, as reported in KYSTATS' Early Childhood Profile from 2016. Counties with higher percentages of births to mothers who were not high school graduates are shaded in blue while counties with lower percentages are shaded in green.

Counties with Highest and Lowest Percentages of Births to Mothers who are not High School Graduates

Highest: Hart, Todd, and Casey
Lowest: Oldham, Spencer, and Meade

Exhibit 159 *Births to Mothers who are not High School Graduates, 2016*



Data Source: KYSTATS, Early Childhood Profile, 2016

Household Types

Kentucky also tracks the percentages of children living in different types of households, as household structure can affect overall family resiliency. Exhibit 160 presents information on the percent of children living in single parent households, as reported in the County Health Rankings accessed via the Kentucky State Data Center (and seeded from the American Community Survey, five year estimates). Most households in the state continue to be married family households, followed by non-family households. According to data collected through the American Community Survey, approximately 13 percent of households are led by women, with no husband present.

Exhibit 160 Estimated Percent Households, by Type, 2012 and 2017

	Household Types														
	2008-2012 ACS Estimates					2013-2017 ACS Estimates					Change				
	Total Households	Married-couple family household	Male householder, no wife	Female householder, no husband	Nonfamily household	Total Households	Married-couple family household	Male householder, no wife	Female householder, no husband	Nonfamily household	Total Households	Married-couple family household	Male householder, no wife	Female householder, no husband	Nonfamily household
Kentucky	1,691,716	50.0%	4.4%	12.7%	32.9%	1,724,514	49.5%	4.9%	12.8%	34.7%	32,798	-0.4%	0.5%	0.1%	1.8%
Bluegrass	307,480	47.3%	4.4%	12.5%	35.8%	317,023	47.1%	4.4%	12.3%	36.2%	9,543	-0.2%	0.0%	-0.2%	0.4%
Cumberlands	124,520	52.4%	4.7%	12.2%	30.7%	123,837	50.3%	5.4%	12.3%	32.0%	-683	-2.2%	0.7%	0.1%	1.3%
ECKEP	176,800	51.6%	4.8%	13.0%	30.5%	177,944	49.1%	5.4%	14.0%	31.6%	1,144	-2.5%	0.5%	1.0%	1.0%
Green River	82,325	52.1%	4.1%	12.2%	31.6%	85,128	51.0%	5.0%	11.6%	32.4%	2,803	-1.1%	0.9%	-0.6%	0.7%
Kentuckiana Works	382,114	46.2%	4.4%	14.3%	35.1%	392,121	44.6%	4.9%	13.4%	37.1%	10,007	-1.6%	0.5%	-0.9%	2.0%
Lincoln Trail	100,292	55.3%	4.5%	12.1%	28.1%	103,563	52.6%	4.9%	11.3%	31.2%	3,271	-2.6%	0.4%	-0.8%	3.1%
Northern Kentucky	166,128	51.3%	4.8%	12.0%	32.0%	169,680	50.9%	5.3%	12.3%	31.5%	3,552	-0.4%	0.5%	0.4%	-0.5%
South Central	111,421	50.4%	4.4%	11.9%	33.3%	114,352	50.7%	4.6%	11.8%	32.9%	2,931	0.2%	0.2%	-0.1%	-0.4%
TENCO	77,858	51.6%	4.8%	12.3%	31.3%	79,342	51.3%	5.1%	12.4%	31.1%	1,484	-0.3%	0.3%	0.2%	-0.2%
West Kentucky	162,778	53.3%	3.8%	11.5%	31.4%	161,524	50.1%	3.7%	11.7%	34.5%	-1,254	-3.2%	-0.1%	0.2%	3.1%

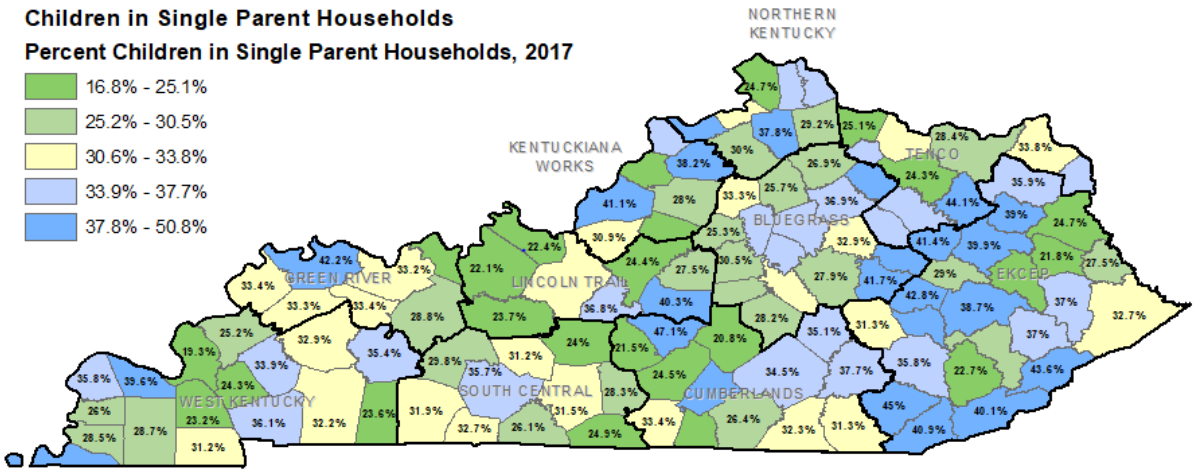
Data Source: US Census Bureau, American Community Survey (ACS), 2008-2012 and 2013-2017 5-Year Estimates, Table S1101

The counties with the highest percentages of children living in single parent households are shown in Exhibit 161. Counties with higher percentages of children in single parent households are shaded in blue while counties with lower percentages are shaded in green.

Counties with Highest and Lowest Percentages of Single Parent Households

Highest: Fulton, Owsley, and Taylor
Lowest: Oldham, Livingstone, and Casey

Exhibit 161 *Percent Children Living in Single-Parent Households, by County, 2017*



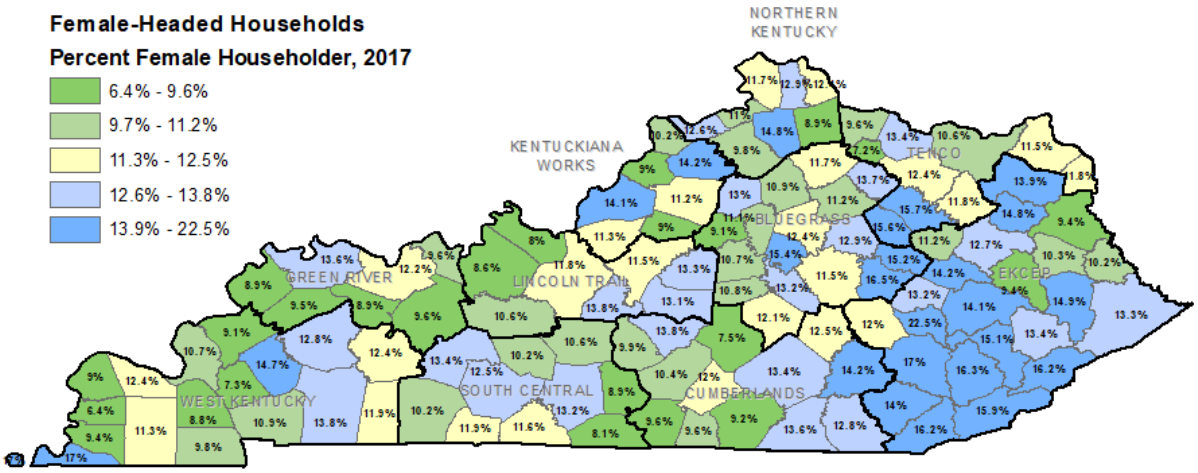
Data Source: Kentucky State Data Center County Health Rankings; American Community Survey 2013-2017 Five year estimates, Percent of children that live in a household headed by a single parent

For the most current period reported, the counties with the highest percentages of households led by women are shown in Exhibit 162. Counties with higher percentages of female-headed households are shaded in blue while counties with lower percentages are shaded in green.

Counties with Highest and Lowest Percentages of Households Led by Women

Highest: Owsley, Fulton, and Clay
Lowest: Carlisle, Robertson, and Lyon

Exhibit 162 *Percent female-headed households, by county, 2017*



Data Source: US Census Bureau, American Community Survey (ACS), 2013-2017 5-Year Estimates, Table S1101

Preschool Development Planning Community Feedback Survey respondents reported on the need for **parent education and family support**. As regards **parent education**, highly-ranked needs included (a) making sure services or information are available in more than one language (59.6%); (b) make sure there is an easy website to learn about or find services (58.4%); and (c) improving outreach and education about services (54.1%).

There were similar responses with regard to **family support** services, with 57.3% of respondents reporting the need to (a) make sure there is an easy website to learn about or find services and (b) make sure services or information are available in more than one language. In addition, 52.7% of respondents reporting the need to improve outreach and education about services, while 51.2% reported the need to increase coordination across local agencies providing these types of services (and 50.1% reported the need to improve coordination across state agencies).

Statewide Services that Respond to Parent Education and Support

Kentucky Strengthening Families

Kentucky provided training to early childhood educators, community stakeholders and others in the Strengthening Families framework through its Race to the Top Early Learning Challenge grant. Kentucky Strengthening Families (KYSF) focuses on protective factors that can help ensure child health and well-being. Kentucky's targeted protective factors[91], developed from the National Center on the Study of Social Policy, with added Kentucky-specific clarifications, include:

1. **Parental Resilience**: Families bounce back,
2. **Social Connections**: Families have friends they can count on,
3. **Knowledge of Child Development**: Families learn how their children grow and develop,
4. **Concrete Support in Times of Need**: Families get assistance to meet basic needs,

[91] https://chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/kysf.aspx

5. **Social and Emotional Competence of Children**: Families teach children how to have healthy relationships, and
6. **Nurturing and Attachment**: Families ensure children feel loved and safe.

The Cabinet for Health and Family Services reports that, as of 2018, 4724 trainings, with 16,622 participants, have been completed across the state. Specific to early childhood, 2,362 trainings, with 8,311 participants, were completed. Strengthening Families trainings are provided through the Early Childhood Development Branch of the Division of Maternal and Child Health, which is housed within the Department of Public Health of the Cabinet for Health and Family Services.

Health Access Nurturing Development Services (HANDS)

The HANDS program also is offered through the Early Childhood Development Branch of the Division of Maternal and Child Health, which is housed within the Department of Public Health of the Cabinet for Health and Family Services. The program "is a voluntary home visitation program for any new or expectant parents.[92]" Specifically:

> Families begin by meeting with a HANDS parent visitor who will discuss any questions or concerns about pregnancy or a baby's first years. Based on the discussion, all families will receive information and learn about resources available in the community for new parents. Some families will receive further support through home visitation.
>
> Any parent expecting a new baby and residing in Kentucky is eligible. Families must be enrolled during pregnancy or before a child is 90 days old.
>
> Source: https://chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/hands.aspx

The HANDS program receives funding through the federal Maternal, Infant, and Early Childhood Home Visiting Program that expanded home visitation to families with more than one baby. Exhibit 163 presents data from the Cabinet for Health and Family Services, suggesting that service participation has declined over time.

Exhibit 163 Unduplicated Count of Families Served by HANDS, 2014 to 2018

	Unduplicated Count of Families Served by HANDS					Change
	2014	**2015**	**2016**	**2017**	**2018**	**2014-2018**
Kentucky	10037	10019	10416	9625	8778	-13%
Bluegrass	1919	2008	1668	1521	1417	-26%
Cumberlands	637	675	1449	1336	1247	96%
ECKEP	2508	2530	2019	1930	1808	-28%
Green River	589	597	459	444	377	-36%
Kentuckiana Works	444	431	844	754	721	62%
Lincoln Trail	858	826	610	592	553	-36%
Northern Kentucky	985	889	1043	873	725	-26%
South Central	343	352	342	303	280	-18%

[92] https://chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/hands.aspx

TENCO	895	842	752	716	637	-29%
West Kentucky	804	814	1224	1148	1007	25%

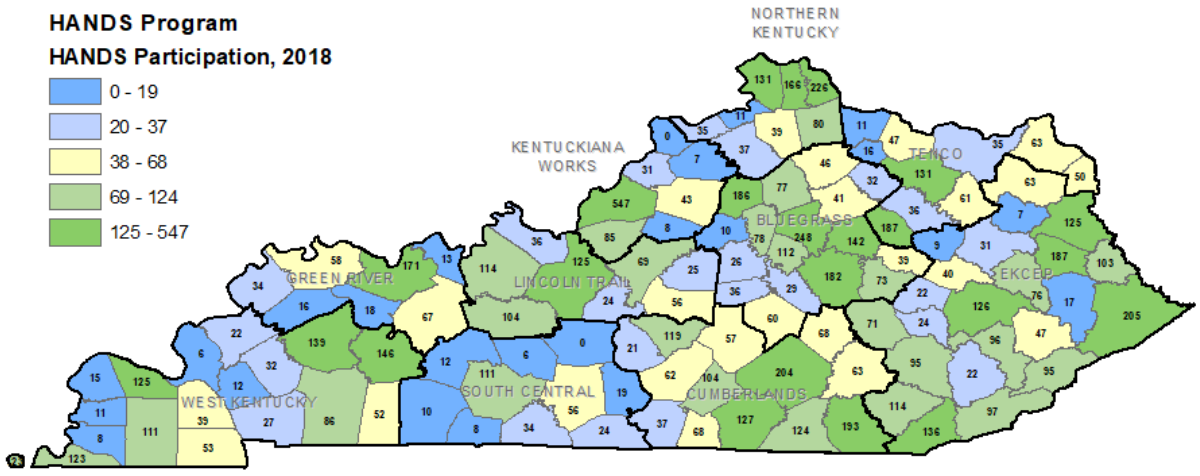
Data Source: HANDS program, Cabinet for Health and Family Services 2014 to 2018; Kentucky total contains counts for counties in which data were suppressed due to small sample size

County-level data for 2018 on HANDS participation are shown in Exhibit 164. Counties with higher numbers of participants are shaded in green while counties with lower numbers of participants (or no participants) are shaded in blue.

Counties with Highest and Lowest HANDS Participation

Highest: Jefferson, Fayette, and Campbell
Lowest: Hart, Trimble, Edmonson, and Livingston

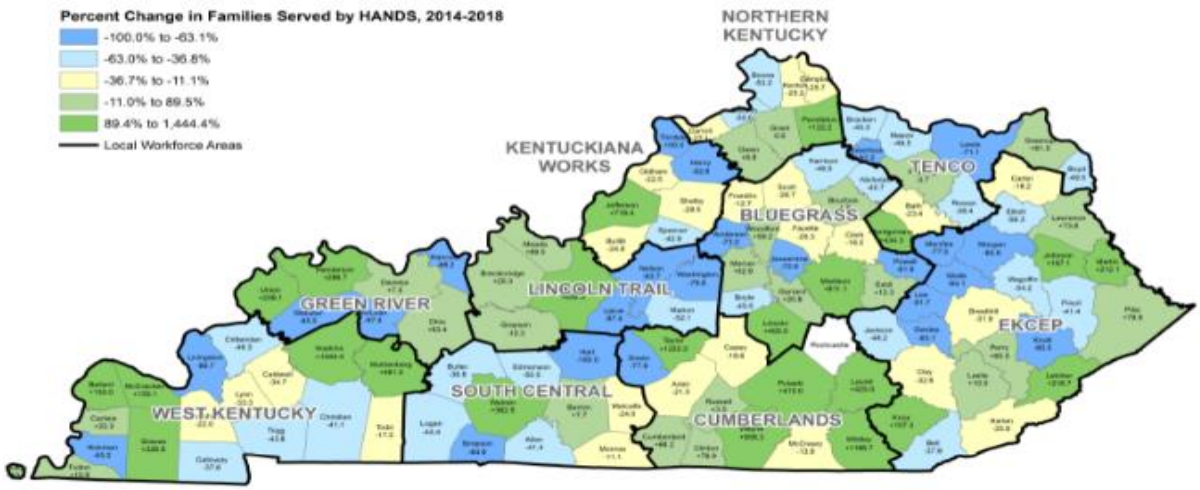
Exhibit 164 *Unduplicated Count of Families Served by HANDS, by County, 2018*



Data Source: HANDS program, Cabinet for Health and Family Services 2018

Exhibit 165 presents change in HANDS participation from 2014 to 2018. Counties that experienced the greatest increase (or smallest decrease) are shaded in green while counties with the greatest decrease are shaded in blue. Of note, there were no reported participants in Rockcastle County in 2014 and 68 in 2018.

Exhibit 165 Change in HANDS Participation, 2014 to 2018



Data Source: HANDS program, Cabinet for Health and Family Services 2018

Perinatal Period and Maternal Depression

The Centers for Disease Control and Prevention reports that, in 2017, Kentucky's infant mortality rate was 6.5 (per 1000 live births, compared to the national rate of 5.8)[93]. Further, Kentucky ranked 9th in the nation with regard to preterm birth rate (11.1, compared to the national rate of 9.9) and was tied for 15th in the nation with regard to low birthweight (8.8, compared to the national rate of 8.3)[94]. The March of Dimes, in its 2018 Premature Birth Report Card[95], assigned Kentucky a grade of "D, " reflecting a preterm birth rate of 11.1 percent and a disparity ratio of 1.28 (reflecting data that show the preterm birth rate among African-American women was 27% higher than the rate for all other women). Not surprisingly, there are racial disparities in the infant mortality rate. The Kaiser Family Foundation's State Health Facts[96] indicates that, in 2016, the infant mortality rate among non-Hispanic Whites was 6.2 and for African-Americans was 12.4.

Infant Mortality

The Kentucky State Data Center, using Kentucky Vital Statistics data, reports that in the period 2012 to 2016, the state's infant mortality rate was 7 (per 1000 live births).

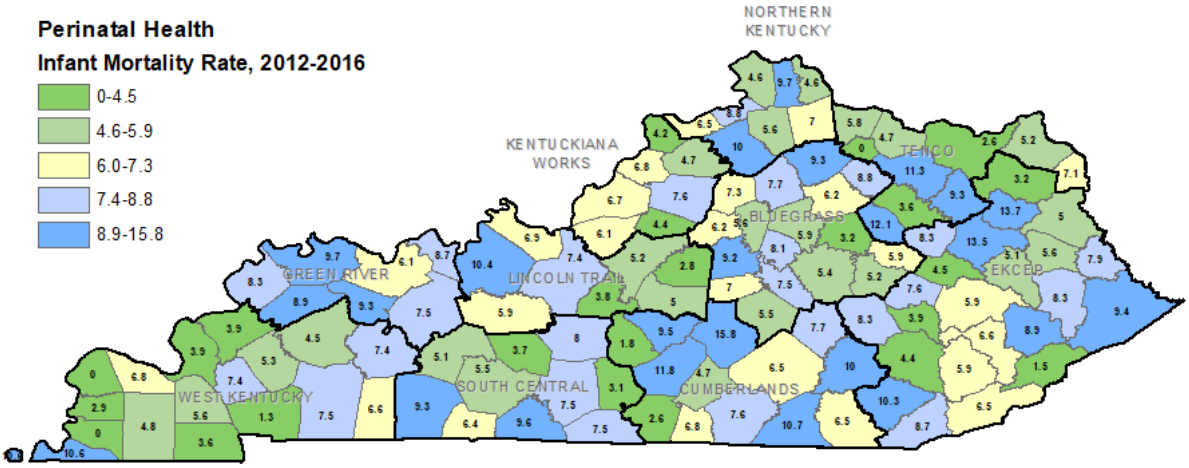
[93] https://www.cdc.gov/nchs/pressroom/states/kentucky/kentucky.htm
[94] Ibid
[95] https://www.marchofdimes.org/mission/prematurity-reportcard-tv.aspx
[96] https://www.kff.org/other/state-indicator/infant-mortality-rate-by-race-ethnicity/?currentTimeframe=0&sortModel=%7B%22colId%22:%22Location%22,%22sort%22:%22asc%22%7D

County-level data are presented in Exhibit 166. Counties shaded in green have lower infant mortality rates and counties shaded in blue have higher rates.

Counties with Highest and Lowest Infant Mortality Rates (2012-2016)

Highest: Casey, Elliott, and Morgan
Lowest: Ballard, Hickman, and Robertson

Exhibit 166 *Infant Mortality Rate, 2012-2016*



Data Source: Kentucky State Data Center - Vital Statistics, 2012-2016; Deaths at any time from birth up to, but not including, one year of age.

Adequate Prenatal Care

The March of Dimes reports that, in 2016, 78.8 percent of women in Kentucky who were pregnant received adequate or better prenatal care (defined as "*pregnancy-related care beginning in the first four months of pregnancy with the appropriate number of visits for the infant's gestational age*."[97]) The Kentucky State Data Center, using Kentucky Vital Statistics data, reports that in the period 2012 to 2016, an average of 66% of women received adequate prenatal care (defined as the of pregnant women who received prenatal care during the first trimester of pregnancy and had 10 or more prenatal visits.)

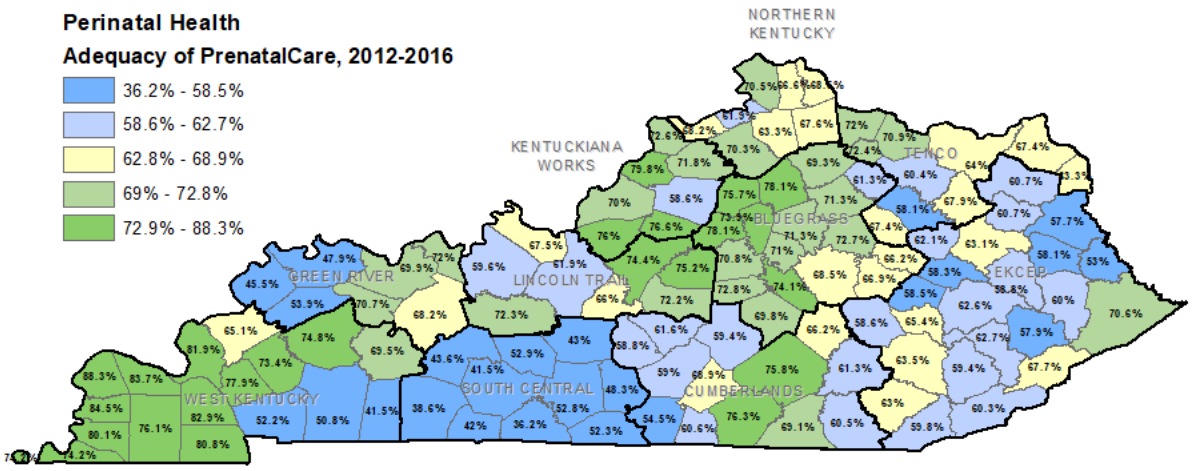
Data for each county are presented in Exhibit 167; counties shaded in green have higher percentages of women who received adequate prenatal care while counties shaded in blue have lower percentages.

Counties with Highest and Lowest Percentages of Adequate Prenatal Care

Highest: Ballard, Carlisle, and McCracken
Lowest: Allen, Logan, and Warren

[97] https://www.marchofdimes.org/peristats/ViewSubtopic.aspx?reg=21&top=5&stop=29&lev=1&slev=4&obj=1

Exhibit 167 *Percent Pregnant Women Who Received Adequate Prenatal Care, 2012-2016*



Data Source: Kentucky State Data Center - Vital Statistics, 2012-2016; Percentage of pregnant women who received prenatal care during the first trimester of pregnancy and had 10 or more prenatal visits.

Pre-Term Births

Preterm births are births that occur prior to 37 weeks of gestation. Statewide, there was a decrease in the number of preterm births, from 2014 to 2019. However, some LWDAs experienced increases in this measure—Northern Kentucky LWDA, for example (Exhibit 168).

Exhibit 168 *Number of Pre-Term Births, by LWDA, 2014 to 2019*

	Number of Pre-Term Births					Change
	2014	**2015**	**2016**	**2017**	**2019**	**2014-2019**
Kentucky	6262	5959	6078	6116	6094	-3%
Bluegrass	1186	1066	1048	1038	1083	-9%
Cumberlands	413	413	426	433	426	3%
ECKEP	791	818	797	773	702	-11%
Green River	384	316	316	324	361	-6%
Kentuckiana Works	1326	1331	1291	1272	1284	-3%
Lincoln Trail	368	371	367	370	351	-5%
Northern Kentucky	402	411	549	602	586	46%
South Central	426	381	402	408	395	-7%
TENCO	277	306	317	320	300	8%
West Kentucky	689	546	566	576	606	-12%

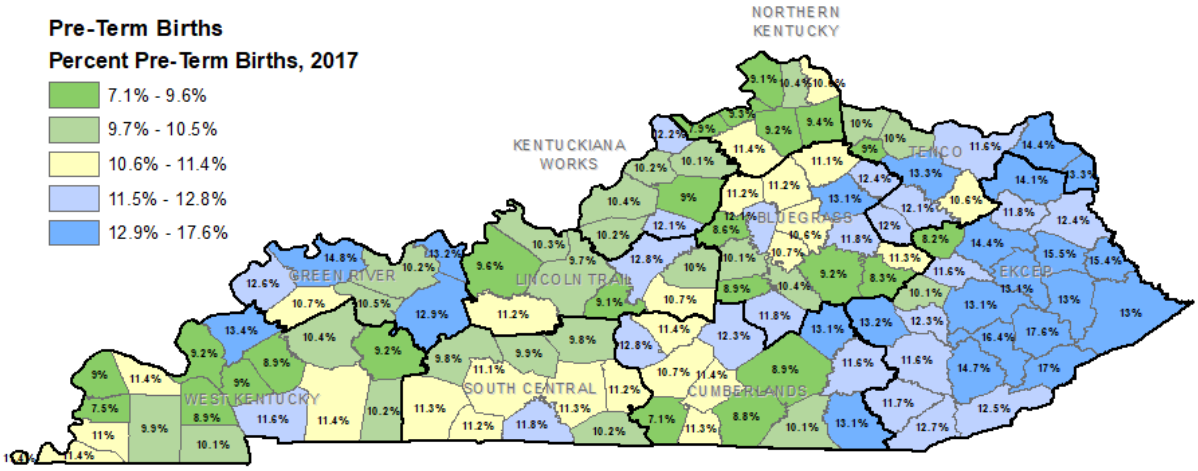
Data Source: KYSTATS Early Childhood Profiles, 2014 through 2019

County-level data on preterm births in 2017 is presented in Exhibit 169. Counties with higher percentages of pre-term births are shaded in blue while counties with lower percentages are shaded in green.

Counties with Highest and Lowest Percentages of Pre-Term Births

Highest: Knott, Letcher, and Perry
Lowest: Cumberland, Carlisle, and Carroll

Exhibit 169 *Percent Pre-Term Births, by County, 2017*



Data Source: KYSTATS Early Childhood Profiles, 2017

Low Birthweight

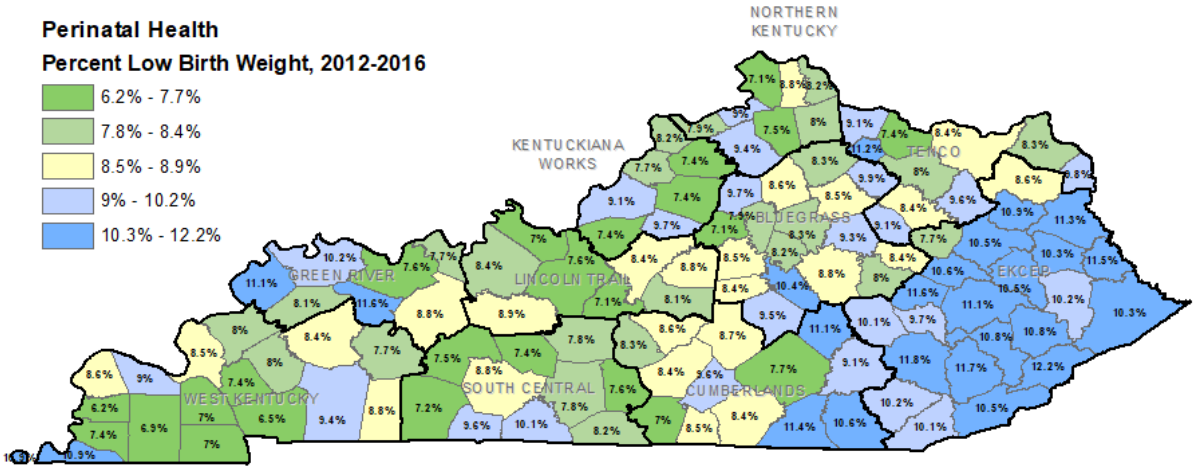
In Kentucky, in the time period 2012 to 2016, an estimated 8.8% of babies were born at low birthweight, which is to say the babies weighed less than 2500 grams at birth.

For this time period, counties with the highest percentages of babies born at low birthweight are shown in Exhibit 170. Counties with higher percentages of low birth weight births are shaded in blue while counties with lower percentages are shaded in green.

Counties with Highest and Lowest Percentages of Babies Born at Low Birthweight

Highest: Letcher, Clay, and Leslie
Lowest: Carlisle, Trigg, and Graves

Exhibit 170 *Percent of Live Births with Low Birthweight, 2012-2016*



Data Source: Kentucky State Data Center - Vital Statistics, 2012-2016; Percent of live births

Breastfeeding

The Centers for Disease Control and Prevention tracks breastfeeding, nationally, and issues a Breastfeeding Report Card on progress[98]. According to this report card, Kentucky's current rate of children who have ever breastfed is 73.9 percent, which is lower than the national rate of 83.2 percent. The percent of children breastfeeding at 6 months is 48.6 (compared to the national percent of 57.6); the percent who are breastfeeding at 12 months is 28.2 (compared to the national percentage of 35.9). The percent of infants exclusively breastfeeding through three months is 39.8 (compared to 46.9 percent, nationally). While the increase in breastfeeding practices shown in Exhibit 171 is encouraging, the current statistics indicate that Kentucky may have additional improvements that can be made.

Exhibit 171 *Breastfeeding Practices*

	Kentucky Breastfeeding Practices			Change
	2014	2016	2018	2014 to 2018
Percent infants ever breastfed	61.3%	66.9%	73.9%	12.6%
Percent breastfeeding at 6 months	31.5%	35.3%	48.6%	17.1%
Percent breastfeeding at 12 months	22.8%	21.6%	28.2%	5.4%
Percent infants exclusively breastfeeding through 3 months	28.9%	35%	39.8%	10.9%
Percent infants exclusively breastfeeding through 6 months	14.2%	19%	21.1%	6.9%
Percent of breastfed infants receiving formula before 2 days of age	10.3%	13.3%	19.8%	9.5%

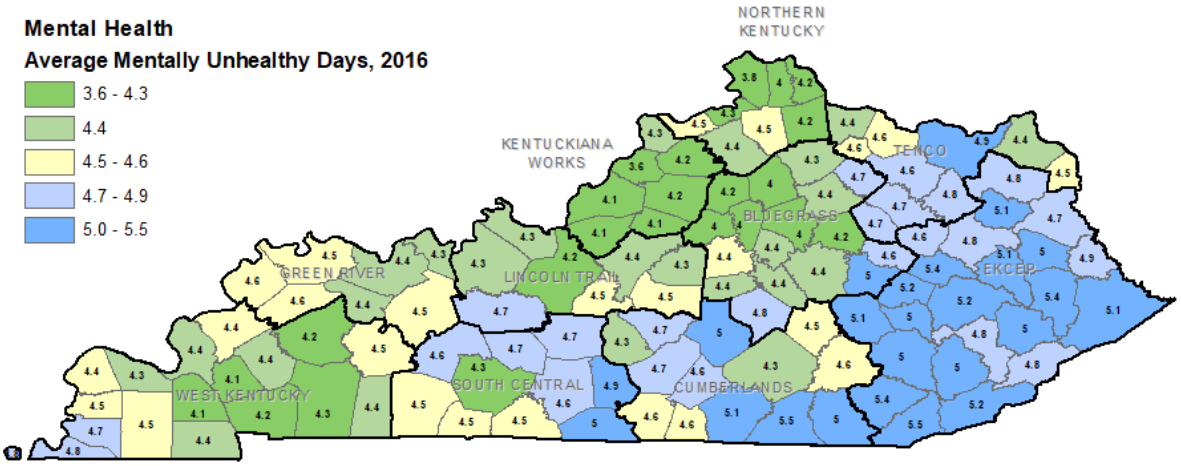
Data Source; Centers for Disease Control and Prevention Breastfeeding Report Card

[98] https://www.cdc.gov/breastfeeding/data/reportcard.htm

Mental Health

Additional, county-level, information on mental health is available from the County Health Ranking, which were accessed via the Kentucky State Data Center. The rankings for 2019 contain data from the Behavioral Risk Factor Surveillance System of 2016. One measure of interest is the average number of mentally unhealthy days reported by participants (the Kentucky average was 4.8 days; Exhibit 172). Counties with higher averages for mentally unhealthy days are shaded in blue while counties with lower averages are shaded in green.

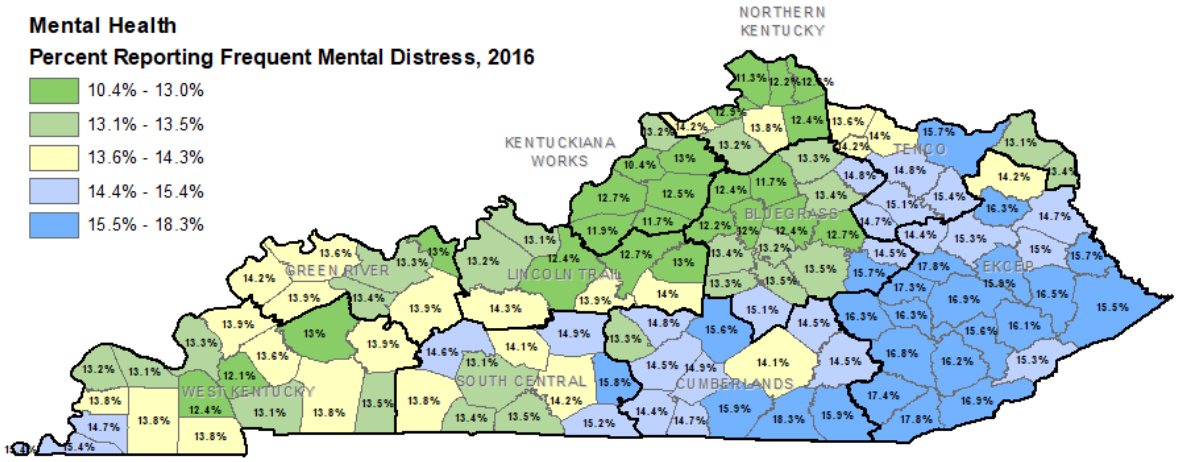
Exhibit 172 *Average Number Mentally Unhealthy Days, 2016*



Data Source: Kentucky State Data Center; County Health Rankings; Behavioral Risk Factor Surveillance System; 2016; Average number of mentally unhealthy days reported in past 30 days (age-adjusted)

The second measure of interest was the percentage of adults who reported 14 or more days with poor mental health, in the past month. The Kentucky average for this measure was 15%. County-level data are presented in Exhibit 173. Counties with higher percentages of respondents reporting 14 or more days with poor mental health are shaded in blue while counties with lower percentages are shaded in green.

Exhibit 173 *Percent Adults Reporting 14 or More Days with Poor Mental Health, per Month, 2016*



Data Source: Kentucky State Data Center; County Health Rankings; Behavioral Risk Factor Surveillance System; 2016; Percentage of adults reporting 14 or more days of poor mental health per month.

The National Survey of Children's Health provides state-level information on child mental health. Specifically, in 2016-2017, 25% of Kentucky's children ages 2 to 17 were reported (by a parent, reporting what a doctor told them) to have autism, developmental delays, depression or anxiety, ADD/ADHD, or behavioral/conduct problems.[99]

Preschool Development Planning Community Feedback Survey respondents also reported on needs related to **mental health care**. For example, when asked about needs related to the **mental health services for children**, the highest-ranking response targeted the **need to make sure there is an easy website to learn about or find services** (59.8% of responses). A relatively high proportion of respondents (58.1%) also reported on the **need to increase the availability of services or to make sure each community has this service**. More than 50% of respondents identified the following needs:

- Improve outreach and education about services (55.3% of respondents),
- Make it easier to find and use services (52.8%),
- Increase coordination across local agencies providing these types of services (52.7%),
- Improve quality of services (52.6%),
- Increase coordination across state agencies providing these types of services (52.5%),
- Increase the range of service options or types of services (51.9%), and
- Make sure services or information are available in more than one language (50.7%).

Overall, survey respondents did not rank needs for **mental health services for adults** as highly as they ranked needs in this domain for children. The most highly-ranked need was **to increase the availability of services or make sure each community has this service**, which was identified by 55.6 percent of respondents. This was followed by the need to make sure there is an easy website to learn about or find services, which was identified by 54.9 percent of respondents.

Statewide Services that Respond to Perinatal and Mental Heath Needs

Public Prenatal Services

Public prenatal services are provided through the Public Health Prenatal Program (within the Cabinet for Health and Family Services), which

> assures access to basic prenatal services through the LHD [local health department] directly or by referral for those women who meet the following eligibility guidelines: income at or below 185 percent federal poverty level who are uninsured (no private insurance, no Medicaid, no Medicare).
>
> Source: https://chfs.ky.gov/agencies/dph/dmch/cfhib/Pages/prenatal.aspx

Another service provided through Public Health is Text4Baby, which is described as

[99] Cited in Kids Count: https://datacenter.kidscount.org/data/tables/9699-children-who-have-one-or-more-emotional-behavioral-or-developmental-conditions?loc=19&loct=2#detailed/2/19/false/1603/any/18942,18943

This is a free mobile health service that provides health information through SMS text messages to pregnant women and new mothers during pregnancy and their babies' first year of life through their cell phones.

Source: https://chfs.ky.gov/agencies/dph/dmch/cfhib/Pages/prenatal.aspx

Additional services include the Birth Surveillance Registry and the Newborn Screening Program. The Birth Surveillance Registry is "*a state-mandated surveillance system designed to provide information on the incidence, prevalence, trends and possible causes of stillbirths, birth defects and disabling conditions.*[100]" The Newborn Screening Program provides information to parents and health care providers on common screenings for newborns[101].

Maternal Depression

The CDC estimates that as many as 11.5% of mother experience post-partum depression[102]. Applying this estimate to the estimated 54,000 live births in Kentucky[103], suggests that over 6,000 women across Kentucky each year suffer from this condition.

The Moving Beyond Depression (MBD) program is offered in conjunction with home visitation programs in Kentucky. The program is offered through the Cabinet for Health and Family Services, in conjunction with the HANDS program. According to the Cabinet for Health and Family Services, between 2014 and 2018, 700 mothers were served with almost 8000 sessions (n=7987) across the state. Additional details on MBD services are provided in Exhibit 174 and illustrate variation in service participation across the state.

Exhibit 174 Mothers Served in Moving Beyond Depression, 2014 to 2018

	2014		2015		2016		2017		2018	
County/District	**#M Served**	**# Sessions**	**#M Served**	**# Sessions**	**#M Served**	**# Sessions**	**#M Served**	**# Sessions**	**#M Served**	**# Sessions**
Cumberland River District	6	75	*	37	6	68	7	116		
Gateway District	11	142	*	50			7	115		
Independent District	116	1,340	98	1341	85	836	80	800	33	186
Kentucky River District	17	233	18	387	10	177	12	146	7	63
Lake Cumberland District	36	261	31	498	44	473	32	379	17	116
Bell	15	108	13	135	8	75	9	73		
Boyd	7	53					7	61		
Breathitt			8	101	11	108	15	125		
Clark	6	111	8	68	6	20				

[100] https://chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/kbsr.aspx
[101] https://chfs.ky.gov/agencies/dph/dmch/cfhib/Pages/newbornscreening.aspx
[102] https://www.cdc.gov/mmwr/volumes/66/wr/mm6606a1.htm?s_cid=mm6606a1_w
[103] Kentucky State Data Center estimates for 2016

Estill			6	91						
Floyd					7	62	6	69		
Greenup	8	61								
Harlan			11	213						
Hopkins	11	105	6	90						
Knox	13	246	11	190	10	89	9	60		
Madison									8	49
Montgomery	9	137	7	82			10	128		
Perry			11	253						
Pulaski	6	37			7	74	8	69		
Powell					10	137				
Rowan	6	97								
Russell	6	73								
Taylor			8	123	8	78				
Wayne	10	37	6	142	10	154				
Whitley	11	151					6	86		
TOTALS	**186**	**2051**	**161**	**2368**	**150**	**1598**	**138**	**1556**	**65**	**414**

Data Source: Moving Beyond Depression program, Cabinet for Health and Family Services 2014 to 2018; Kentucky total contains counts for counties in which data were suppressed due to small sample size

Postpartum Support International also provides Kentucky-based services, as described on its website https://www.postpartum.net/locations/kentucky/. As noted on the program's website

> …groups offer support at no charge for women who are at risk of or are experiencing distress such as isolation, depression, anxiety, fearful thoughts, insomnia, trauma, and other difficulties during pregnancy or postpartum. Support groups provide a safe and caring place for connection and recovery.
>
> Source: https://www.postpartum.net/locations/kentucky

Three program coordinators are identified for Kentucky: Western, Eastern, and the cluster of Henderson, Ohio, Webster, Davies Counties.

Early Childhood Mental Health Services

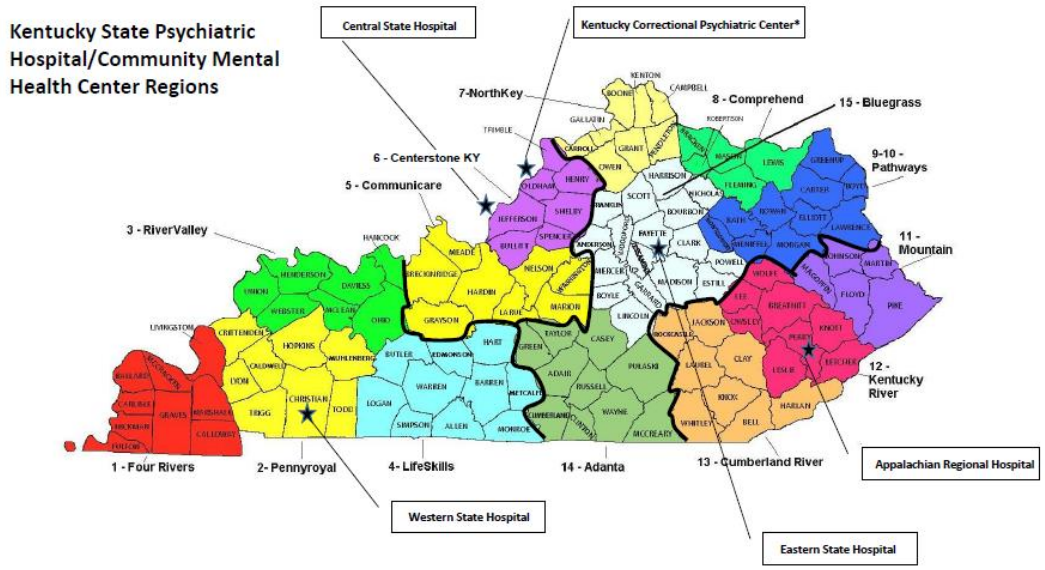
The Early Childhood Development Branch of the Division of Maternal and Child Health, within the Department of Public Health of the Cabinet for Health and Family Services provides an Early Childhood Mental Health Program. The program is described as being

> co-administered by the Children's Behavioral Health and Recovery Services Branch within the Department for Behavioral Health, Developmental and Intellectual Disabilities (DBHDID) and the Early Childhood Promotion Branch within the Department for Public Health (DPH) through a Memorandum of Agreement.
>
> In turn, DBHDID contracts with the 14 Regional Community Mental Health Centers (CMHCs) for program implementation. In addition, the program maintains contracts with the University of Kentucky for Early Childhood Mental Health (ECMH) training and consultation, and with Eastern Kentucky University for staffing and resources related to the ECMHP.

Source: http://dbhdid.ky.gov/dbh/ecmh.aspx

Exhibit 175 shows the state's Community Mental Health Centers and sites.

Exhibit 175 Kentucky's Community Mental Health Center Regions



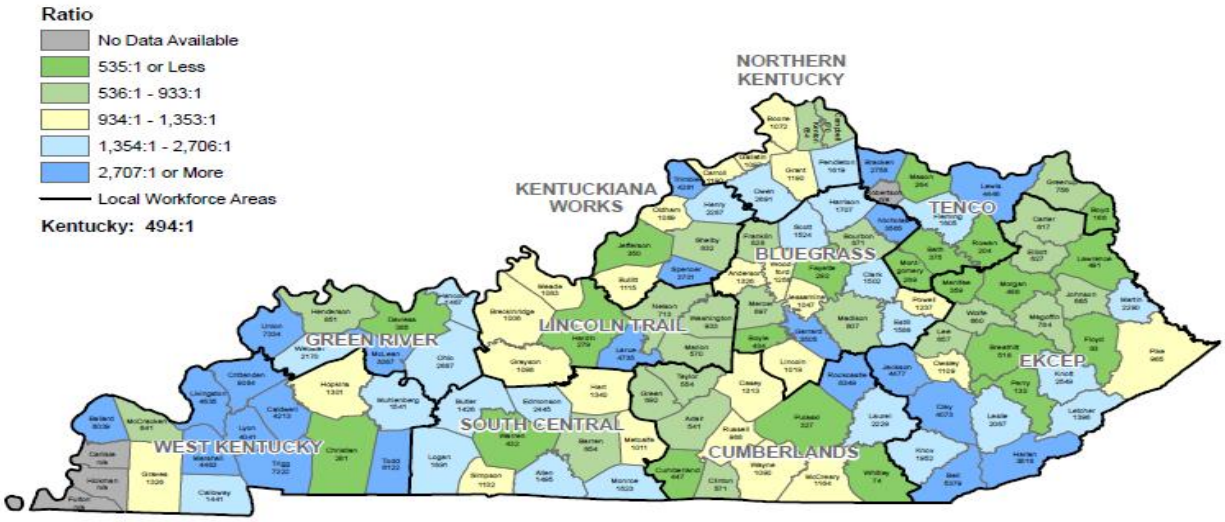
The Early Childhood Mental Health Program's goals are to provide

- Program and child-level consultation on social, emotional and behavioral issues to programs that serve children from birth through age 5.
- Training on working with young children with social, emotional and behavioral needs and their families, to child-serving agencies and others.
- Evaluation, assessment, and therapeutic services for children from birth through age 5 and their families.

Source: http://dbhdid.ky.gov/dbh/ecmh.aspx

Despite the availability of these types of services, there still are concerns about the accessibility of mental health care. For example, Exhibit 176 presents data extracted from the County Health Rankings, displaying the ratio of the overall population to mental health providers. Counties shaded in blue have higher ratios—meaning there are a greater number of residents to each mental health provider. Of interest, a number of the counties in which there appear to be relatively high mental health needs have a relatively low ratio of population to providers, which is a positive indicator.

Exhibit 176 Ratio of Population to Mental Health Providers, 2016



Family Resource and Youth Service Centers

There are two, statewide, types of resource centers designed to serve families and youth: Family Resource Centers and Youth Service Centers. Family Resource Centers are of particular interest in that they:

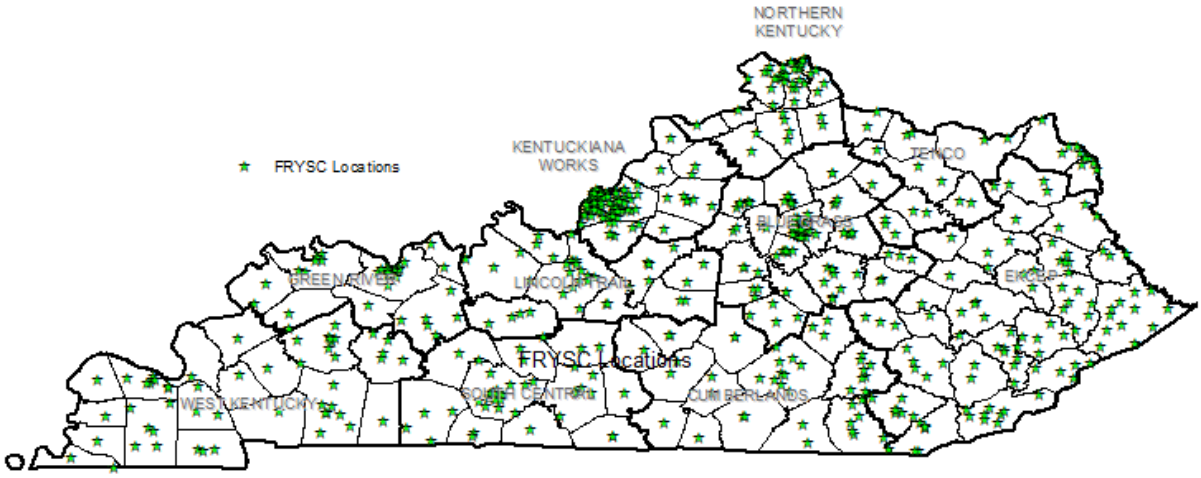
- Serve children prior to and through elementary school and
- Coordinate a variety of services, including (a) preschool child care, (b) after school care; (c) families-in-training; (d) family literacy services; and € health services and referrals[104].

Combined, Family Resource and Youth Service Centers (FRYSCs) are found statewide and are organized into regions, as can be seen in Exhibit 177. There are 442 Family Resource Centers and 116 combined Family Resource and Youth Service Centers (Exhibit 178).

[104] https://www.fryscky.org/facts-and-figures/

Exhibit 177 Family Resource and Youth Service Center Regions

Exhibit 178 Family Resource Youth Service Center Locations



Note: 38 sites could not be geolocated for placement in the map

Two Generation Approach

The National Center for Children in Poverty (NCCP) has generated a "two-generation" profile that helps illustrate the importance of providing services for both children and their parents (Exhibit 179)[105]. According to the NCCP, Kentucky's strengths in the two-generation approach include:

[105] http://www.nccp.org/profiles/KY_profile_16.html

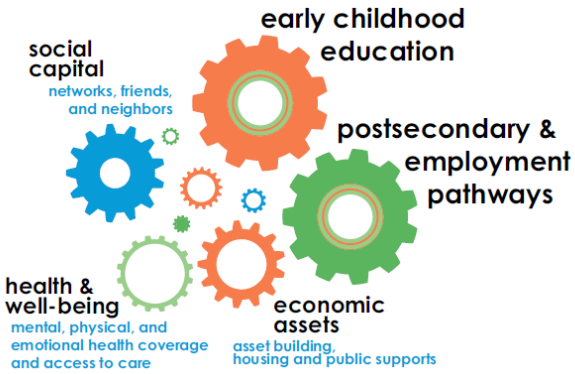
Health and Development
• Sets the income eligibility limit for public health insurance (Medicaid/CHIP) at or above 200% of the federal poverty level (FPL) [2018] • Provides lawfully residing immigrant children with Medicaid/CHIP coverage without 5-year waiting period [2018] • Provides temporary coverage to pregnant women under Medicaid until eligibility can be formally determined [2018] • Has adopted Medicaid expansion as part of the Affordable Care Act [2018] • Has an online dual-benefit form to apply for Medicaid and SNAP [2018] • Medicaid pays for maternal depression screening during pediatric/family medicine visits under the child's Medicaid [2018] • EPSDT screening periodicity schedule meets recommendations of American Academy of Pediatrics [FY 2016]: 4 screenings for children 1-2 years and 3 screenings for children 3-5 years

Early Care and Education	**Parenting and Economic Supports**
• Provides families with at least 12 months of continuous eligibility for child care subsidies [FY 2017] • Funds a pre-kindergarten program and/or supplements Head Start [2017] • Has early learning standards or developmental guidelines for infants and toddlers [2017] • Requires that infants and toddlers in child care centers be assigned a consistent primary caregiver [2016] • Has implemented a statewide Quality Rating Improvement System (QRIS) [2017]	• Exempts single parents on TANF from work requirements until the youngest child reaches age 1 [FY 2017] • Exempts single-parent families of three below the federal poverty level from personal income tax [2016]

The approach discussed by the NCCP echoes that described in the Two Generation Playbook, produced by the Aspen Institute[106]. As noted in the Playbook, the core components in the two-generation approach are shown in Exhibit 180. Moving forward, long-term and sustainable changes in Kentucky may best be achieved by attending to these components, which address family and child needs.

[106] https://ascend.aspeninstitute.org/resources/two-generation-playbook/

Exhibit 180 Core Components of the Two-Generation Playbook



Source: ascend.aspeninstitute.org

As can be seen in this and prior sections, Kentucky has a number of resources for addressing the combined needs of children and families. It is important to note that Kentucky has an opportunity to further align these combined resources, to ensure the optimal, leveraged, use of funds. In addition, Kentucky has the opportunity to align these different services and resources within one, Prenatal-Third Grade, framework, which can guide the collective work of the system. This includes the contributions of different service partners to an Early Childhood Integrated Data System (ECIDS) and consideration of how well different system elements work together (e.g., state-to-local coordination and feedback loops, use of referral paths, coordinated and shared case management, etc.)

Gaps in Data or Research Regarding Programs and Supports

The prior section presented data on myriad needs among children and families (with additional data presented on engagement in services that respond to poverty in Section 2). Less data, however, is readily and systematically available on comprehensive cross-service use by children and families. Further, as noted elsewhere in this report, the current report summarizes "surface" data on numbers of children and families potentially in need of services and the availability or use of different services. Datasets do not currently allow a deeper exploration of the unduplicated use of multiple services across children and families, at the county or community level. These limitations hinder the state's ability to effectively study the extent to which vulnerable children and families can access, engagement with, and benefit from the range of services for which they might be eligible.

Kentucky's approach to its data and research analysis is to return to its system model--noting that the model is expanding to reflect a prenatal-to-Third Grade scope. With this model in mind, Kentucky can consider the availability and quality of data for different system elements. As noted earlier in this report, the Kentucky Center for Statistics (KYSTATS) is a primary partner in collecting and integrating early childhood data. KYSTATS currently collects multiple variables that are relevant for early childhood; these are presented to the county-level in the publicly accessible Early Childhood Profiles. KYSTATS also has compiled a list of the next set of variables to integrate into its Early Childhood Integrated Data System, or ECIDS. These include:

- Children served through the Individuals with Disabilities in Education Act, Part B (housed within the Kentucky Department of Education),
- Vital Statistics, including
    - Birth records,
    - Births to teen mothers, and
    - Births to mothers who are not High School graduates,
- TWIST—Kentucky's foster care system,
- Adoption records,
- Benefind records, including
    - KCHIP participation,
    - SNAP participation,
    - KTAP participation, and
    - Medicaid participation,
- WIC participation,
- Referrals to child protective services,
- Children substantiated as victims of child abuse or neglect (noting cases linked to alcohol and substance abuse),
- Victims of child abuse,
- Children of incarcerated parents, and
- Children waiting for or not served in programs.

As the above-listed variables show, Kentucky has a high interest in tracking the incidence of children with high numbers of Adverse Childhood Experiences. Kentucky also plans to use these variables to track children served across programs (e.g., children receiving a solitary service and children receiving multiple services). Finally, Kentucky hopes to track the unduplicated number of children waiting to receive services or not receiving any statewide, system, service.

There is a recognized need for data on attendance in early care and education programs, and the impact of attendance on transitions. Of particular interest are (a) attendance rate and (b) chronic absenteeism and the ability to disaggregate data by:

- Age,
- Grade,
- Race/ethnicity,
- Program type, and
- Location.

Finally, there also is a stated need for data on the prevalence of screenings, flags, referrals, and diagnoses for special health, learning, or developmental disabilities. Committee members have noted that existing data capture the prevalence of participation—but don't necessarily capture the full range of concerns in this arena.

Unique Identifier

Kentucky's approach to the next phase of data system development involves rethinking how unique identifiers are implemented. KYSTATS currently generates a unique identifier for children,

working with files received from participating agencies. Moving forward, KYSTATS is investigating methods for generating a state system identifier, which can provide more accurate and precise data on the unduplicated numbers of children served, waiting to be served, or not served across multiple programs. With a state system identifier in place and with additional data elements for integration, Kentucky can extend its analysis of system impact. This means that Kentucky can ask questions such as:

(1) How many children are served by one or more than one state-supported program (including early care and education programs)? What was the portal of entry into services?
(2) How many children are waiting to be served? In what locations and for what services?
(3) What is the relation of program services to child developmental status at kindergarten entry?

Maximizing Parental Choice

Kentucky has a keen interest in ensuring parents have access to the early care and education programming they most desire, need, can access, and can afford. Kentucky currently can map and analyze the availability of care by type and by quality rating. As noted earlier, there are additional data needs to better understand this domain:

- Availability of child care placements by location, star rating, and age,
- Regular updated data on enrollment and waiting lists for enrollment in private child care, by location, star rating, and age, and
- Regularly updated data on drivers for quality, including comprehensive data on early care and education professional education and credentialing.

We can add the need to understand demand for care, by location, day of the week, and employment shift to this list. Further, it will be helpful to be able to disaggregate data by family income and parent educational status (i.e., if the parent is enrolled in school or not), so as to better understand the needs of working families throughout the state.

Parental choice is not limited to early care and education programming. Kentucky also has an opportunity to expand parent knowledge, awareness, and use of existing system services that more fully address or respond to vulnerabilities. As Kentucky continues to build its comprehensive data system (or, ECIDS), it will be possible to analyze child participation in multiple services. This will provide a more comprehensive assessment of the extent to which a child's (possibly multiple or varied) vulnerabilities are receiving adequate attention.

Opportunities to Collaborate Across Programs and Maximize Parent Choice: Synthesis

The data and information presented in this section are "systems-oriented," which is to say the data represent different aspects of Kentucky's Prenatal-to-Third Grade system. This section (and its related appendices) present data that summarize child and family needs in a number of domains and inform the following questions:

1. **What do you know about the service use of families with children (both children and family members) in the ECCE system?**
2. **What are the most important gaps in data or research about the programs and supports available to families and children?**

3. **What are the most important gaps in data or research related to maximizing parental choice?**

As the information in this section (and, information in Section 2) document, vulnerability is not just a reflection of poverty; it can be expressed in many ways. The need for basic supports such as food and housing are of concern, as are the emotional and mental toll of poverty on parents and families. Further, as will be shown in the next section, vulnerabilities also can be expressed through developmental needs, which are present in children regardless of socioeconomic status. Vulnerability can reflect internal family stability and health—abuse and neglect also can occur across all income strata. Kentucky provides a number of supports for families and children, with services available from the prenatal period into school entry. A statewide review of service participation indicates that some regions have increased their use of some services, while others have decreased use. Further, changes in federal or state policy can affect service availability and eligibility.

Many of these themes also were noted by community focus group members, who reported on several priorities for services, including many of the populations examined in this report:

- Families in rural communities,
- Families with special needs children,
- Grandparents raising grandchildren,
- Immigrants and refugee populations in Bowling Green, Louisville, Lexington, and
- Working poor.

Further, community members expressed concern over the presence and impact of drugs on families and communities, and the need for parents to be able to connect with other parents. Focus group members expressed concerns over information gaps and the absence of a system to help parents connect. Participants noted that some state services are working well and could be priorities for expanded funding. These included First Steps (discussed in the next section), HANDS, and instances in which employers help provide transportation for employees. Transportation was cited by focus group members as a particular need and challenge for accessing services, especially in areas with no transportation system or a system that does not provide good access to major employers.

Finally, there is a need to ensure data from a comprehensive range of services and programs are included in Kentucky's Early Childhood Integrated Data System (ECIDS). KYSTATS is developing a data plan for system data that are high priority.

Section 6. Quality and Availability of Programs and Supports

Programs and Supports to Identify and Connect Children who are Developmentally Delayed

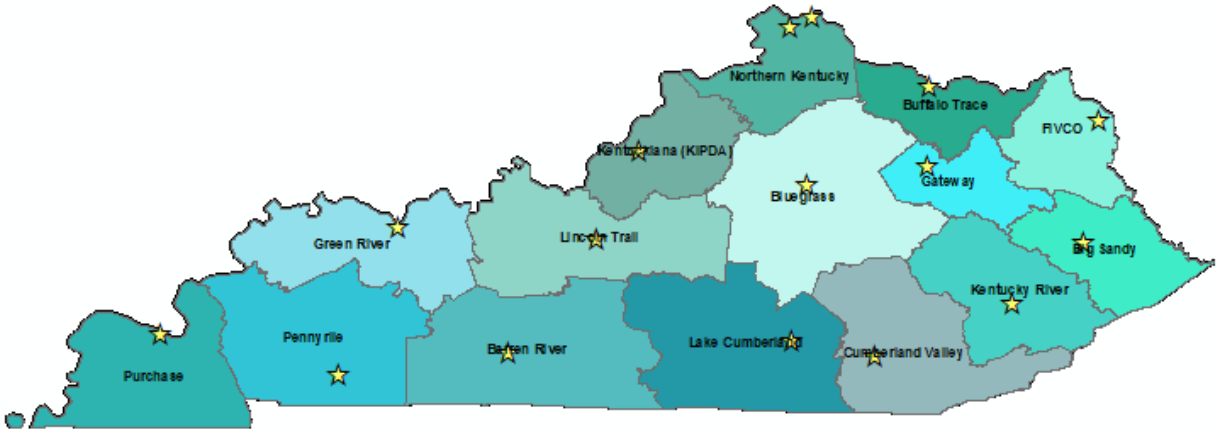
Kentucky receives support from the United States Office of Special Education Programs (OSEP) to identify and serve children with special learning and developmental needs. Children ages birth up to age three are served by the Cabinet for Health and Family Services (CHFS) Department for Public Health (DPH) **First Steps** program, the state's Individuals with Disabilities in Education Act (IDEA) Part C administrative agency. Children ages three and older are served by the Kentucky Department of Education, the state's IDEA Part B administrator and Head Start.

Infants and Toddlers

Families with infants and toddlers that may be eligible for OSEP IDEA Part C services are identified through community education and service agencies, such as early care and education programs or HANDS (described in Section 5) and local Point on Entry offices (Exhibit 174). Once screened and qualified for services, children receive an Individualized Family Services Plan (IFSP); services are provided locally by community-based agencies or service providers. Of note[107]:

- First Steps is available in all Kentucky counties.
- Services are available to any child and family who meet developmental eligibility criteria, regardless of income. Participating families are assessed for their ability to contribute to the cost of services.
- A family's participation in First Steps services is always voluntary.
- The point of entry office (POE; Exhibit 181) is responsible for receiving all referrals to the First Steps program, determining eligibility through evaluations and assessments and coordinating the development of the individualized family service plan. POEs are also responsible for local Child Find activities, local public awareness activities, and administrative monitoring and analysis of POE and district performance.

Exhibit 181 *Kentucky IDEA Part C Point of Entry Regions and Central Offices*



[107] https://chfs.ky.gov/agencies/dph/dmch/ecdb/Pages/firststeps.aspx

As shown in Exhibit 182, there has been an increase in the numbers of Infants and Toddlers served by Part C. Similar figures are presented in Exhibit 183, which presents data on the families served by the First Steps program.

Exhibit 182 Children Served through Individuals with Disabilities in Education Act, Part C

	Estimated Population of Children Ages Birth through Two, Participating in Part C Services				Change
	2014	2015	2016	2017	2014-2017
Kentucky	4423	4498	4837	5098	15%
Birth	326	316	364	339	4%
Age 1	1317	1320	1416	1511	15%
Age 2	2780	2862	3057	3248	17%

Data Source: Office of Special Education Annual Child Count and Settings Reports

Exhibit 183 Families Served by Kentucky's First Steps Program

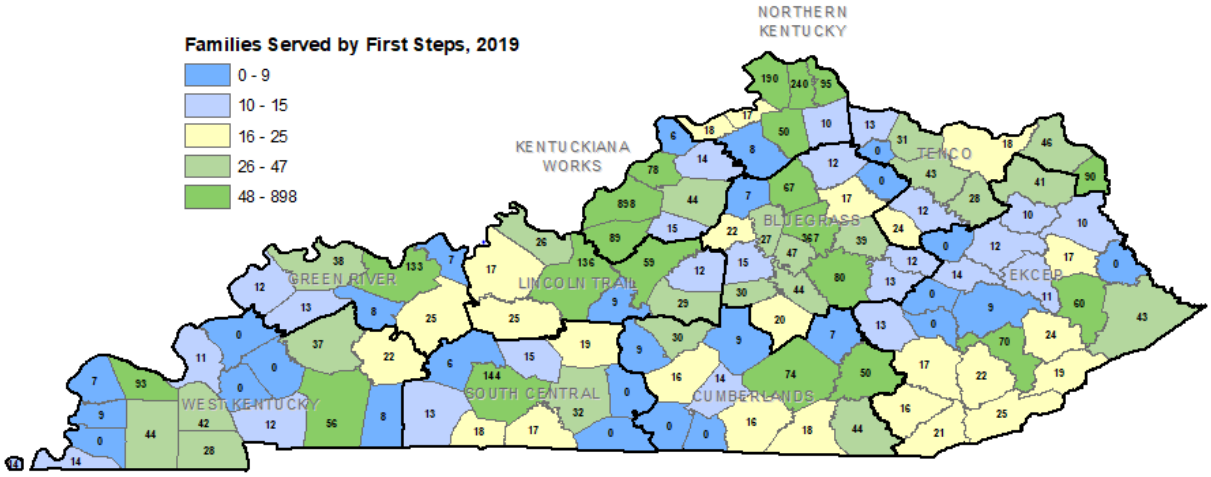
	Families Served by the First Steps Program						Change
	2014	2015	2016	2017	2018	2019	2014-2019
Kentucky	4480	4196	4322	3992	4796	4833	8%
Bluegrass	666	671	728	625	799	819	23%
Cumberlands	320	300	266	294	307	287	-10%
ECKEP	491	436	468	353	525	454	-8%
Green River	213	197	211	194	217	236	11%
Kentuckiana Works	1098	1018	974	948	1068	1144	4%
Lincoln Trail	257	263	298	289	334	313	22%
Northern Kentucky	585	538	555	559	617	628	7%
South Central	301	267	250	258	257	264	-12%
TENCO	227	223	253	213	291	305	34%
West Kentucky	322	283	319	259	381	383	19%

Data Source: KYSTATS Early Childhood Profiles 2014 to 2019

Counties with Highest First Steps Participation:
Jefferson, Fayette, and Kenton

Not surprisingly, counties with relatively higher populations of young children also experienced greater participation in First Steps in 2019 (Exhibit 184). Counties with higher numbers of participants are shaded in green while counties with lower numbers of participant (or no participants) are shaded in blue.

Exhibit 184 *Participation in First Steps, 2019*



Data Source: KYSTATS Early Childhood Profiles 2014 to 2019

Exhibit 185 presents information from federal reports on the demographic characteristics of Part C participants, showing increases across all groups.

Exhibit 185 *Children Served through Individuals with Disabilities in Education Act, Part C, by Type of Delay or Disability*

	Estimated Population of Children Ages Birth through Two, Participating in Part C Services				Change
	2014	2015	2016	2017	2014-2017
Hispanic/Latino	262	257	303	331	26%
American Indian or Alaska Native	8	--	6	8	--
Asian	64	52	73	80	25%
Black or African American	331	331	329	406	23%
Native Hawaiian or Other Pacific Islander	6	--	9	15	150%
White	3530	3582	3850	3999	13%
Two or More Races	222	267	267	259	17%
Male	2836	2901	3055	3276	16%
Female	1587	1597	1782	1822	15%

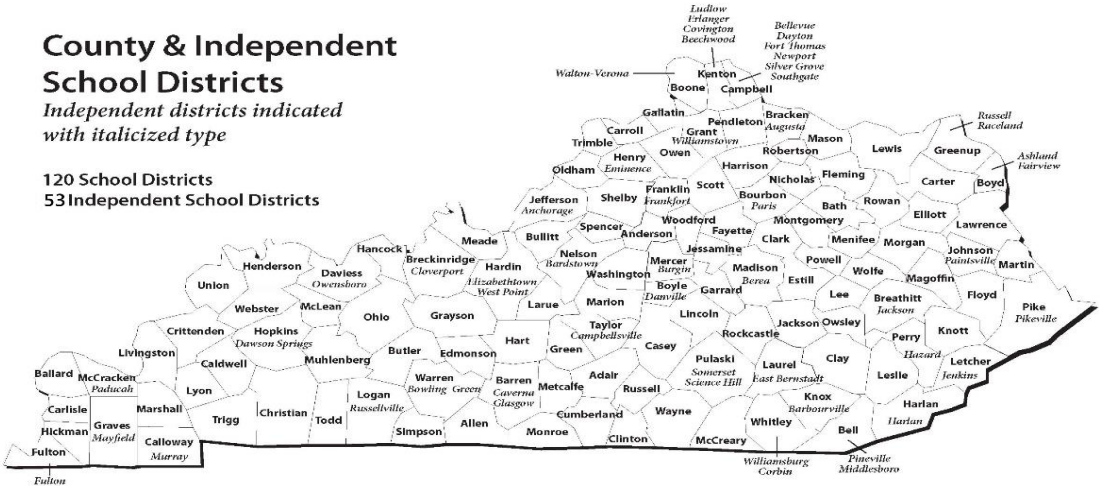
Data Source: Office of Special Education Annual Child Count and Settings Reports

Children ages Three through Five

The Kentucky Department of Education (KDE) provides Part B services through Local Education Authorities (LEAs), or the 173 school districts (Exhibit 186). The KDE provides guidance to LEAs and parents; examples of guidance and information documents for parents can be found at https://education.ky.gov/specialed/excep/forms/Pages/Guidance-Documents.aspx.

Children are connected to services either by transitioning from Part C services, which involves communication between First Steps and the Kentucky Department of Education or through Child Find activities that identify children three years of age or older, who have not yet been identified, screened, and found eligible for services.

Exhibit 186 *Kentucky County and Independent School Districts*



Source: Kentucky Educator Placement Services

Of particular interest, the Kentucky Department of Education closely connects its early childhood and exceptional children's divisions in its Division of IDEA Implementation and Preschool. Additionally, the department's Early Childhood Regional Training Centers facilitate the intersection of support for early intervention with preschool programming. Further, Kentucky uses a Response to Intervention approach in implementing its Child Find activities, as noted in its Child Find/Kentucky System of Intervention Preschool Toolkit[108]. This toolkit cited the following regulations related to Child Find:

> Section 3. Referral System.
>
> (1) An LEA shall have a referral system that explains how referrals from district or non-district sources will be accepted and acted upon in a timely manner.
>
> (2) The referral system shall be conducted in such a manner as to prevent inappropriate over identification or disproportionate representation by race and ethnicity of children in special education by ensuring that each child has been provided appropriate instruction and intervention services prior to referral.
>
> (3) The LEA shall ensure that: (a) Prior to, or as a part of the referral process, the child is provided appropriate, relevant research-based instruction and intervention services in regular education settings, with the instruction provided by qualified personnel; and (b) Data-based documentation of repeated assessments of achievement or measures of behavior is collected and evaluated at reasonable intervals, reflecting systematic

[108] http://www.floyd.kyschools.us/UserFiles/Servers/Server_743910/File/Kentucky%20System%20of%20Interventions%20Preschool%20Toolkitpdf.pdf.pdf

assessment of student progress during instruction, the results of which were provided to the child's parents.

(4) If the child has not made adequate progress after an appropriate period of time during which the conditions in subsection (3) of this section have been implemented, a referral for an evaluation to determine if the child needs special education and related services shall be considered.

Source: Child Find/Kentucky System of Intervention Preschool Toolkit

The toolkit also provides two process maps to guide the transitioning of children from Part C/First Steps services or Head Start, into Part B services, shown in Exhibits 187 and 188. First Steps and Head Starts are primary but not the exclusive sources of referrals into Part B services.

Exhibit 187 *Process for Transitioning a Student from Part C to Part B Services*

Child Find Process for Children Transitioning from First Steps

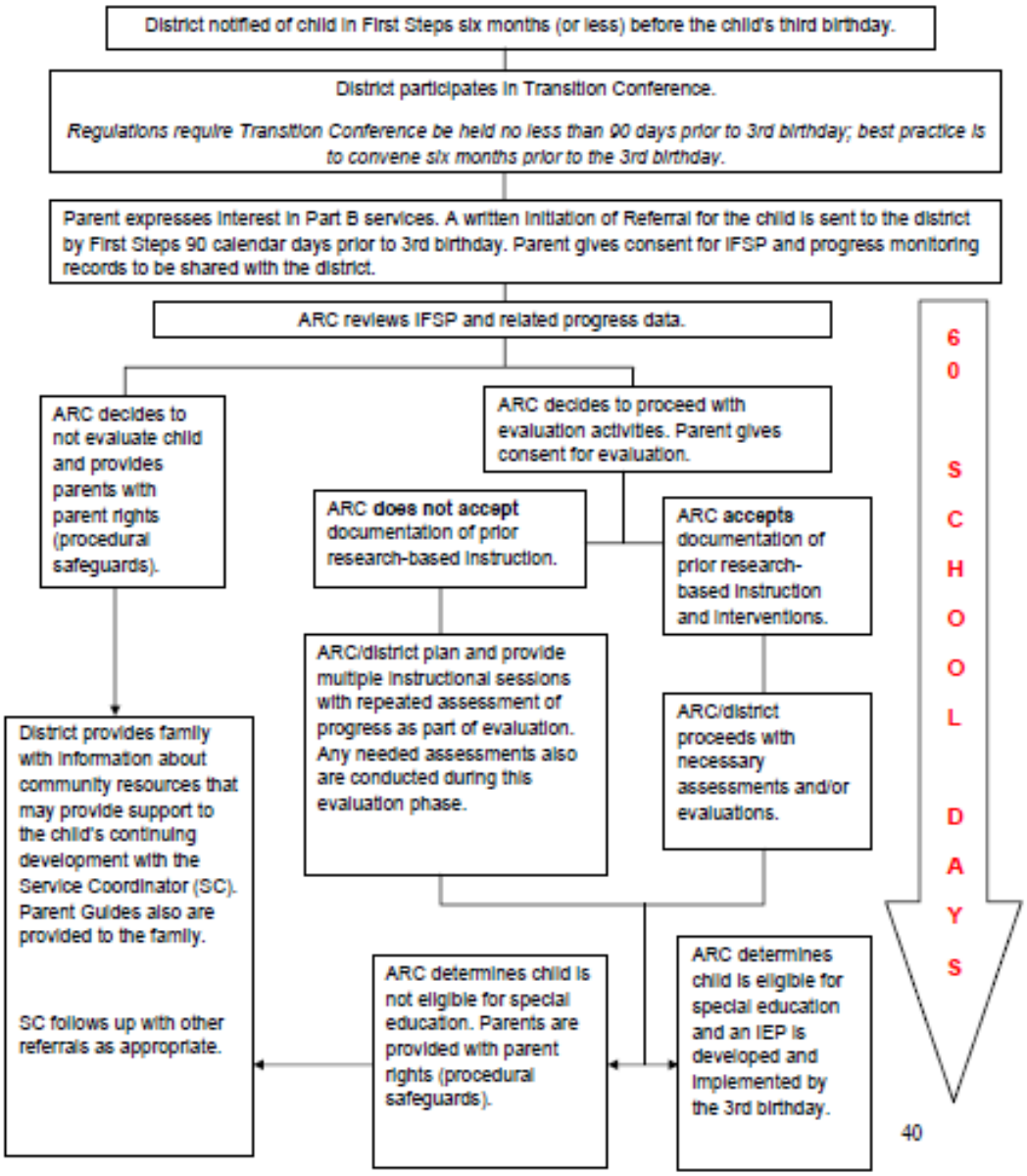
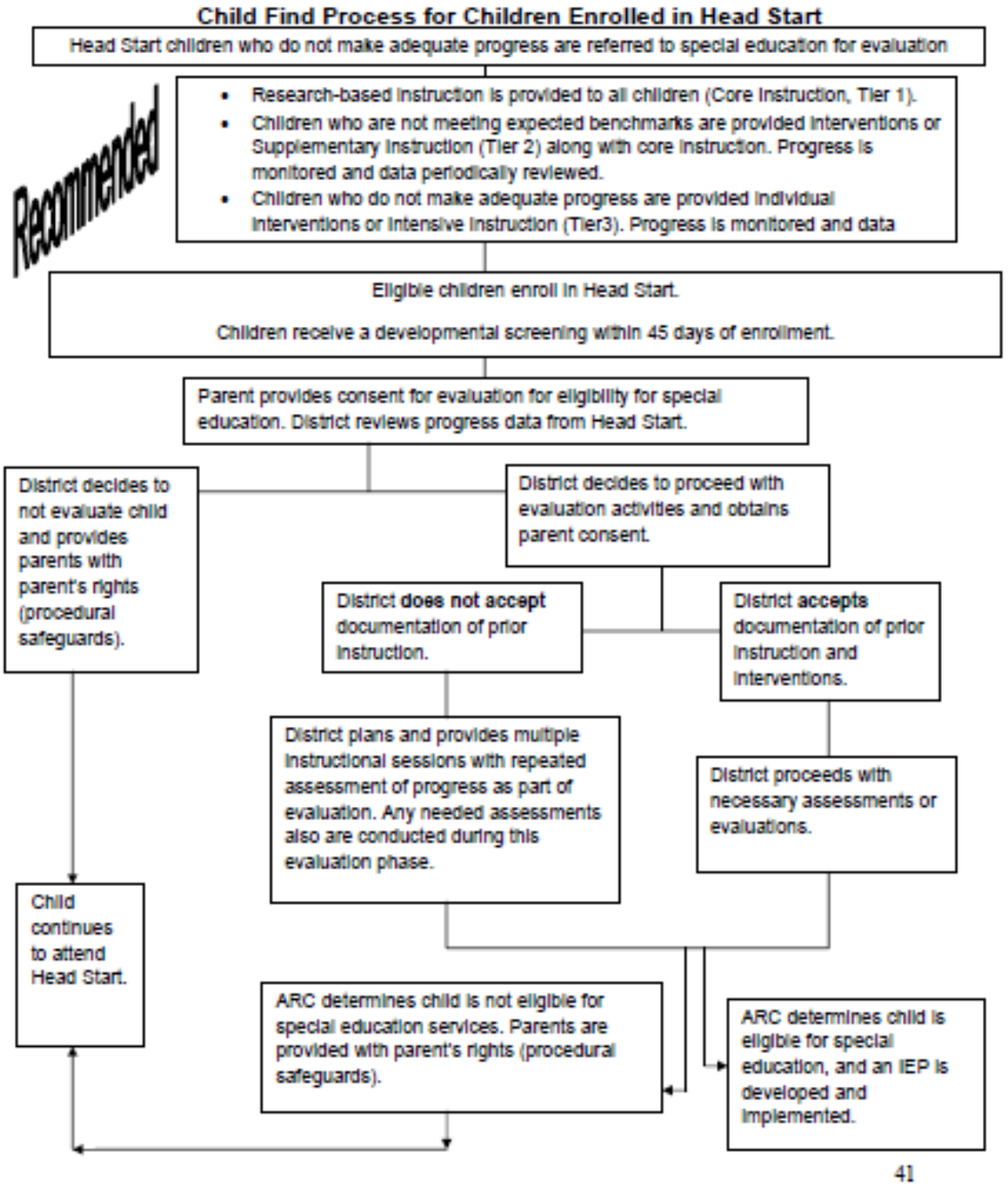


Exhibit 188 *Process for Transitioning a Student from Head Start to Part B Services*



Exhibits 189 and 190 presents the Child Find processes for children who are or are not considered income-eligible.

Exhibit 189 Child Find Process for Income-Eligible 4 Year Old Children

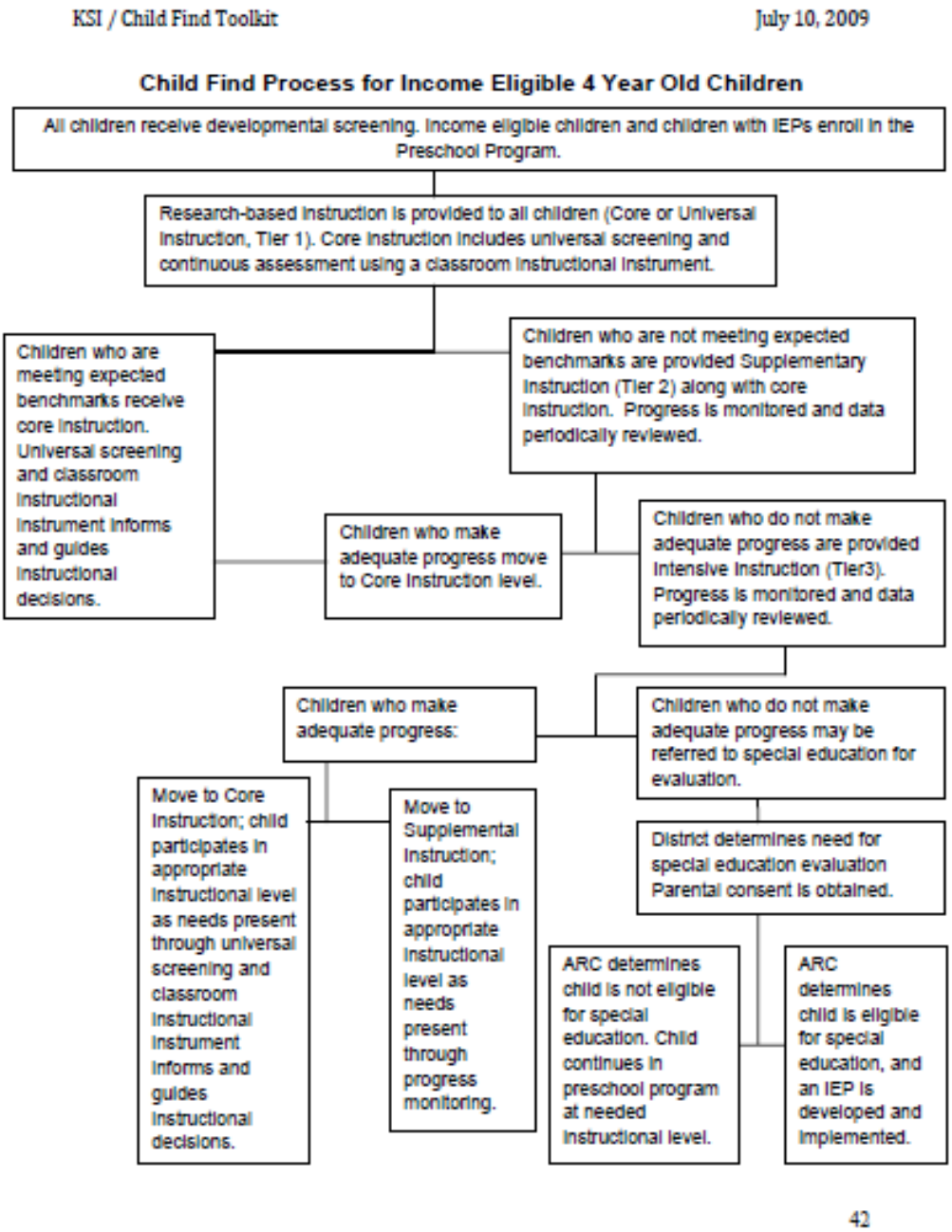
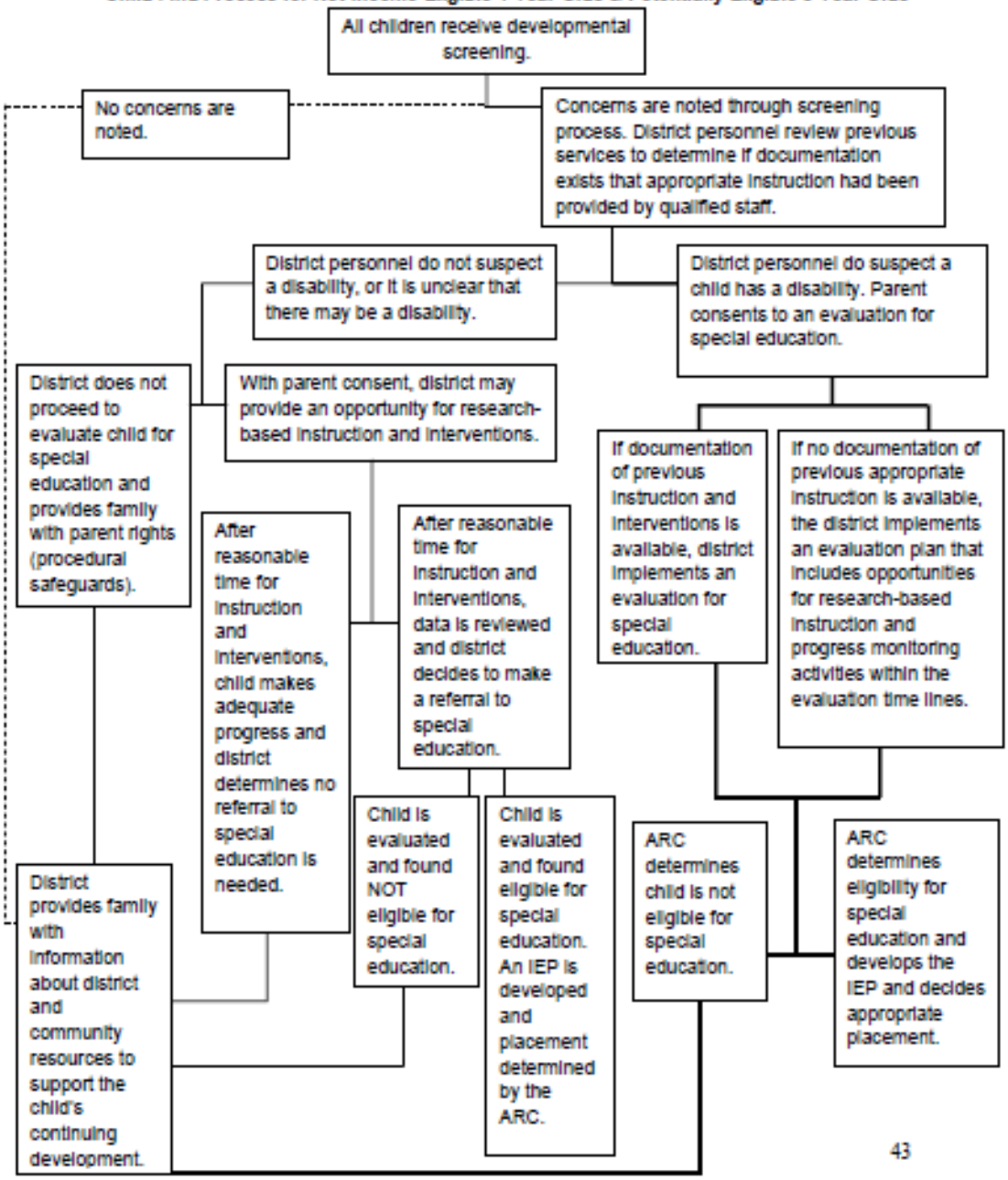


Exhibit 190 *Child Find Process for Not-Income-Eligible 4 Year Olds and Potentially Eligible 3 Year Olds*

Child Find Process for Not-Income-Eligible 4-Year-Olds & Potentially Eligible 3-Year-Olds



Exhibits 191 through 193 provide information on numbers of children served, with a focus on children ages 3 through 5. As can be seen, the numbers of children participating in services has increased over time (Exhibit 191). Representation of different demographic groups and categories of developmental or learning needs are showing in Exhibits 192 and 193.

Exhibit 191 Children Served through Individuals with Disabilities in Education Act, Part B

	Estimated Population of Children Ages Three through Five, Participating in Part B Services				Change
	2014	2015	2016	2017	2014-2017
Kentucky	16994	17044	17626	18070	6%
Age 3	3557	3697	3737	3839	8%
Age 4	6003	5948	6304	6342	6%
Age 5	7434	7399	7585	7889	6%

Data Source: Office of Special Education Annual Child Care Educational Environment Reports

Exhibit 192 Children Served through Individuals with Disabilities in Education Act, Part B, by Race/Ethnicity

	Estimated Population of Children Ages Three through Five, Participating in Part B Services				Change
	2014	2015	2016	2017	2014-2017
American Indian or Alaska Native	19	20	19	14	-26%
Asian	155	155	167	171	10%
Black or African American	1422	1358	1370	1409	-1%
Hispanic/Latino	853	899	975	1047	23%
Native Hawaiian or Other Pacific Islander	11	8	7	17	55%
Two or More Races	627	669	701	740	18%
White	13907	13935	14387	14672	6%
Female	5854	5992	6169	6421	10%
Male	11140	11052	11457	11649	5%
LEP Yes	202	187	194	164	-19%
LEP No	16792	16857	17432	17906	7%

Data Source: Office of Special Education Annual Child Care Educational Environment Reports

Exhibit 193 Children Served through Individuals with Disabilities in Education Act, Part B, by Type of Delay or Disability

	Estimated Population of Children Ages Three through Five, Participating in Part B Services, by Type				Change
	2014	2014-2017	2016	2017	2014-2017
Autism	651	767	879	941	45%
Deaf-blindness	2	2	2	2	--
Developmental delay	6847	6990	7122	7333	7%
Emotional disturbance	6	8	7	7	17%
Hearing impairment	95	90	105	99	4%
Intellectual disability	76	69	57	67	-12%
Multiple disabilities	121	97	113	112	-7%
Orthopedic impairment	97	97	96	94	-3%

Other health impairment	152	148	189	191	26%
Specific learning disability	1	1	0	0	100%
Speech or language impairment	8864	8692	8968	9131	3%
Traumatic brain injury	13	11	4	8	-38%
Visual impairment	69	72	84	85	23%

Data Source: Office of Special Education Annual Child Care Educational Environment Reports

Children with Disabilities Served in Preschool or Head Start Programs

Children who have been identified with special learning or developmental needs often are served in the network of public preschool or Head Start programs (noting that some elementary schools also provide Head Start programs). Exhibit 194 provides information on the numbers of children with disabilities served in these programs, by LWDA. Between 2014 and 2019, there have been increases, statewide, in the number of children with disabilities served in public preschools and, for the most part, in Head Start programs (Exhibit 195). As regards public preschools, the greatest increases have occurred in the TENCO LWDA. For Head Start, the greatest increases have occurred in the Bluegrass LWDA.

Exhibit 194 Children with Disabilities Served in Preschool

	Children with Disabilities Served in Preschool						Change
	2014	2015	2016	2017	2018	2019	2014 to 2019
Kentucky	9661	9650	9495	10008	10552	11452	19%
Bluegrass	1541	1601	1568	1639	1755	1903	23%
Cumberlands	859	859	887	948	1021	1044	22%
ECKEP	890	917	971	906	911	984	11%
Green River	554	636	603	610	610	652	18%
Kentuckiana Works	1317	1281	1145	1273	1224	1370	4%
Lincoln Trail	686	744	745	781	873	947	38%
Northern Kentucky	1239	1113	1040	1096	1211	1266	2%
South Central	982	979	957	1054	1123	1255	28%
TENCO	478	486	459	537	595	692	45%
West Kentucky	1116	1079	1120	1164	1231	1339	20%

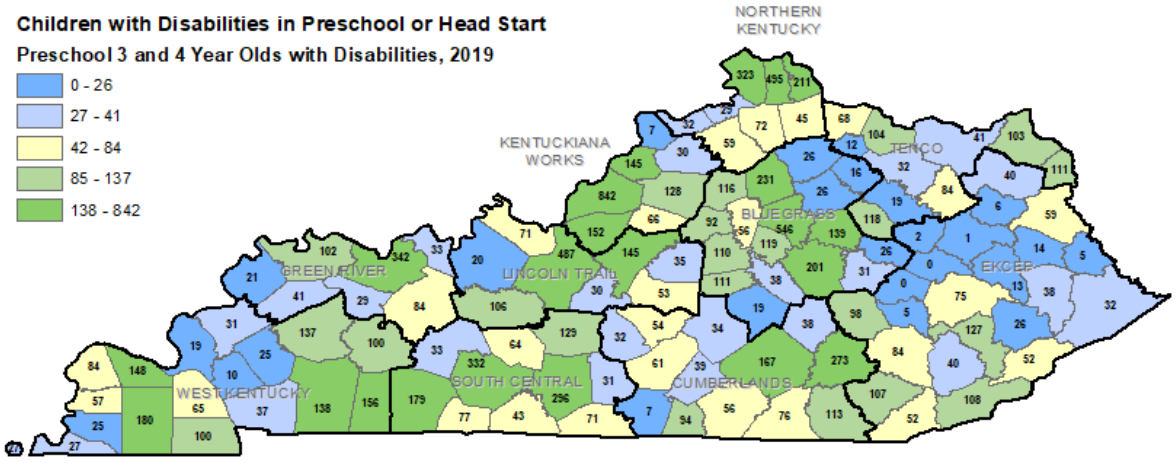
Data Source: KYSTATS Early Childhood Profiles, 2014 to 2019

County-level information on children with disabilities served in preschool programs in 2019 is provided in Exhibit 195. Counties shaded in green have higher enrollments while counties shaded in blue have lower enrollments.

Counties with Highest and Lowest Participation in Preschool Programs by Children with Disabilities

Highest: Jefferson, Fayette, and Kenton
Lowest: Lee, Wolfe, and Morgan

Exhibit 195 *Children with Disabilities Served in Public Preschool, by County, 2019*



Data Source: KYSTATS Early Childhood Profiles, 2014 to 2019

From 2014 to 2019 there has been an 34% increase in Head Start participation by children with disabilities, statewide (Exhibit 196). The greatest increases were experienced in the Lincoln Trail LWDA while Kentuckiana Works experienced a decrease.

Exhibit 196 *Children with Disabilities Served in Head Start*

	Children with Disabilities Served in Head Start					Change
	2014	2015	2016	2017	2019	2014-2019
Kentucky	1719	1592	1696	1571	2307	34%
Bluegrass	222	191	179	205	362	63%
Cumberlands	136	119	162	90	223	64%
ECKEP	581	568	524	548	596	3%
Green River	89	106	87	88	104	17%
Kentuckiana Works	220	156	240	202	187	-15%
Lincoln Trail	54	54	89	71	176	226%
Northern Kentucky	56	51	64	67	77	38%
South Central	73	73	82	56	81	11%
TENCO	148	145	137	90	229	55%
West Kentucky	140	129	132	154	272	94%

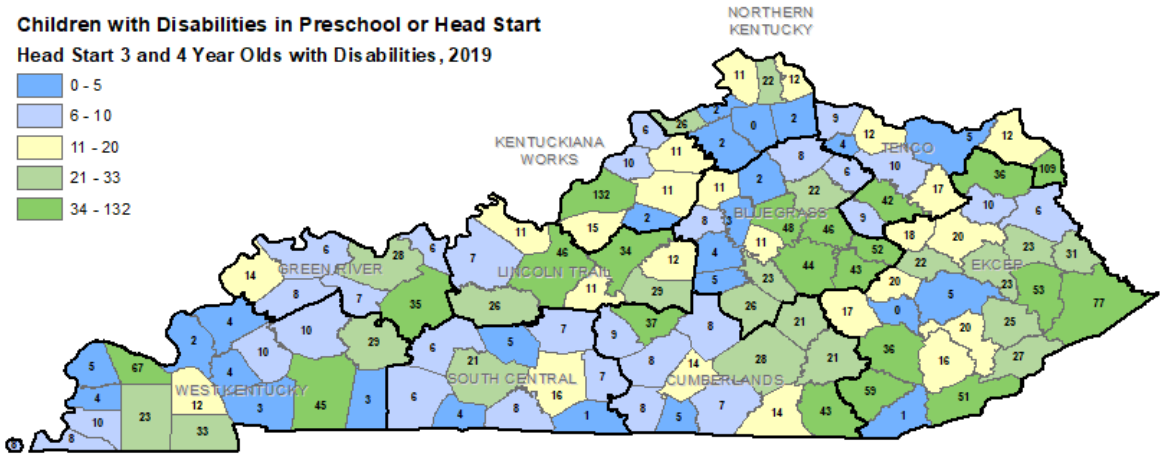
Data Source: KYSTATS Early Childhood Profiles, 2014 to 2019

County-level information on children with disabilities served in Head Start programs in 2019 is provided in Exhibit 197. Counties shaded in green have higher enrollments while counties shaded in blue have lower enrollments.

Counties with Highest and Lowest Participation in Head Start Programs by Children with Disabilities

Highest: Jefferson, Boyd, and Pike
Lowest: Grant, Owsley, Bell, and Monroe

Exhibit 197 *Children with Disabilities Served in Head Start, by County, 2019*



Data Source: KYSTATS Early Childhood Profiles, 2014 to 2019

An examination of county-level data suggests that counties are distributing services for children with disabilities between Head Start and preschool programs. Note for example that counties with higher enrollment of children with disabilities in public preschool tend to have lower enrollment in Head Start, and vice versa. This may reflect the most effective use of resources at the county-level as well as policies such as **full utilization**[109], which require the coordination and leveraging of existing funds so as to avoid duplication of services.

Participation in Supplemental Security Income (SSI)

Supplement Security Income (SSI) is administered through Social Security offices; the prevalence of SSI benefits provide additional insights into the existence of qualifying disabilities across the state (i.e., children who are blind or otherwise disabled). Exhibit 198 presents data on the numbers of children who received SSI benefits, from 2013 to 2016, by LWDA. In the time period specified, there was a statewide decrease in participating children, with the Bluegrass and West Kentucky LWDAs experiencing the greatest decrease and TENCO LWDA experiencing no significant change.

Exhibit 198 *Children who Received SSI Benefits, 2013 to 2016*

	Number of Children Receiving SSI Benefits					Change
	2013	**2014**	**2015**	**2016**	**2017**	**2013 to 2017**
Kentucky	28875	27928	26772	25840	25298	-12%
Bluegrass	4460	3856	3719	3616	3661	-18%
Cumberlands	2327	2408	2339	2273	2239	-4%
ECKEP	5047	4870	4752	4723	4569	-9%

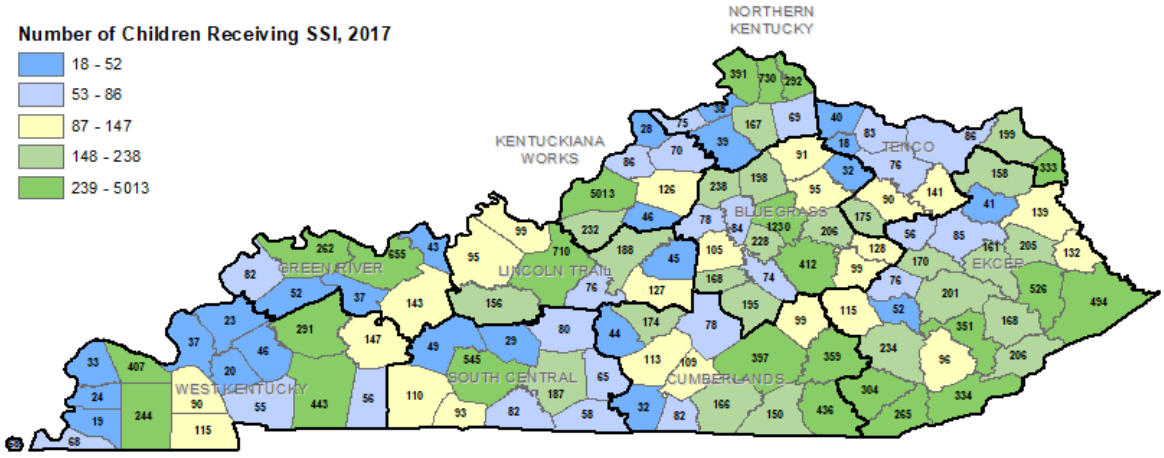
[109] https://education.ky.gov/curriculum/conpro/prim-pre/Pages/Head-Start-Full-Utilization.aspx

Green River	1475	1489	1390	1324	1274	-14%
Kentuckiana Works	6631	6611	6228	5858	5601	-16%
Lincoln Trail	1684	1625	1587	1546	1496	-11%
Northern Kentucky	2006	1970	1939	1845	1801	-10%
South Central	1422	1437	1343	1306	1298	-9%
TENCO	1247	1252	1234	1224	1241	0%
West Kentucky	2576	2410	2241	2125	2118	-18%

Data Source: Kids Count Children receiving SSI

Exhibit 199 presents county-level data on the number of children receiving SSI benefits, in 2016. Counties shaded in green had higher participation while counties shaded in blue had lower participation.

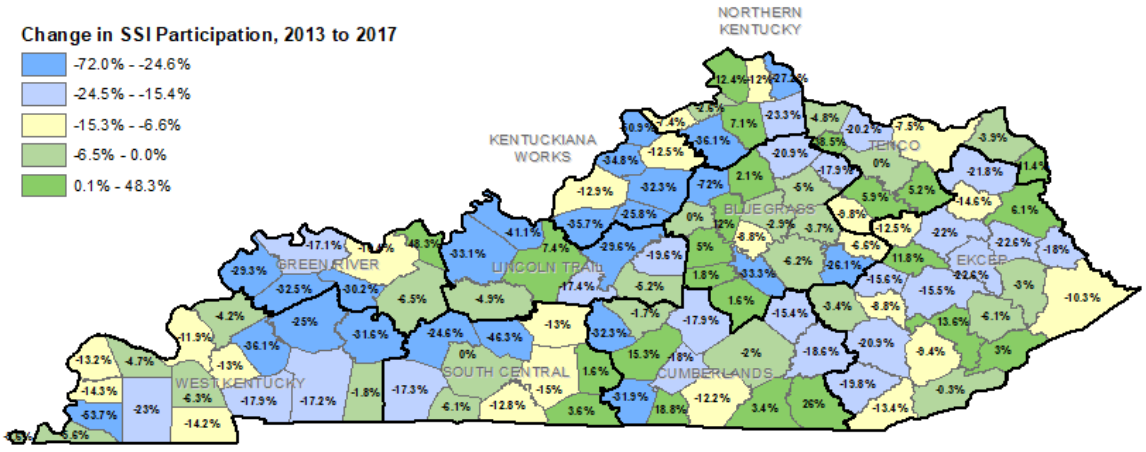
Exhibit 199 Children Receiving SSI Benefits by County, 2017



Data source: Kids Count Children receiving SSI

Exhibit 200 presents county-level information on increases and decreases in SSI participation from 2013 to 2017. Counties that experienced an increase (or, the smallest decrease) are shaded in green while counties that experienced the greatest decrease are shaded in blue.

Exhibit 200 Change in Children Receiving SSI Benefits, 2013 to 2017



Data source: Kids Count Children receiving SSI

Assessing the Quality of Inclusion Classrooms

SpeciaLink Early Childhood Inclusion Quality Scale

The quality of inclusion classrooms recently was addressed in the state's Race to the Top Early Learning Challenge grant validation study. The study team used the SpeciaLink Early Childhood Inclusion Quality Scale (or, SpeciaLink) to assess the quality of study classrooms in which children with special learning or developmental needs were participating. The SpeciaLink is comprised of two sub-scales: Practices and Principles. The Practices sub-scale contains items that target how well teachers, parents, and other professionals work together to support children with learning or developmental needs, and includes the following indicators:

1. Physical environment and special needs
2. Equipment and materials
3. Director and inclusion
4. Staff support
5. Staff training
6. Therapies: physiotherapy (PT); occupational therapy (OT); speech & language (S&L); behavioral consultation
7. Individual program plans (IPPs)
8. Parents of children with special needs
9. Involvement of typical children
10. Board of directors and other similar units
11. Preparing for transition to school

The Principles sub-scale contains items that focus on values and beliefs regarding inclusion, and includes the following indicators:

1. Zero reject
2. Naturally occurring proportions
3. Same hours of attendance available to all children
4. Full participation
5. Maximum feasible parent participation
6. Pro-active strategies and advocacy for high quality, inclusive child care

Each item within each sub-scale is scored on a seven-point scale, using data collected via observation and interviews at participating sites that also had inclusion classrooms. The SpeciaLink was completed in 219 classrooms in 130 sites (41 private (licensed or certified) child care, 48 public preschool, 41 Head Start) for the validation study. Findings are presented in Exhibit 201, disaggregated by type of site. As can be seen, public preschool and Head Start programs earned the highest ratings, which is understandable given the investments each of these programs has made in enrolling and serving children with special learning or developmental needs. These data suggest that additional training or assistance to private child care sites may better equip those programs to provide inclusion classrooms.

Exhibit 201 Overall SpeciaLink Ratings in Observed Classrooms by Type of Program

	Overall	Average Practices	Average Principles
Overall	*4.80*	*4.64*	*5.11*
Private Child Care	3.44	3.21	3.89
Public Preschool	5.53	5.46	5.67
Head Start	5.35	5.17	5.73

Focus group participants also commented on the needs and challenges of children with special learning or developmental needs. There was concern, for example, that children with hearing impairments were not being identified and served, specific to their needs, and that there is insufficient data to fully capture child needs in this domain. Overall, there are concerns about awareness and support for learning differences and disabilities, with insufficient information for parents about how to access appropriate therapy or services (e.g., speech therapy, occupational therapy, physical therapy). Professionals providing services to children may benefit from additional training on how to work with children with special needs. There also is a need to keep parents better information about child experiences in early care and education programs—and whether or not early interventions might be needed.

Additional information is available from Kentucky's Preschool Development Planning Community Feedback Survey. One item on the survey targeted **services for children with special learning or developmental needs**. Prominent among the findings, **74.4% respondents reported the need to improve outreach and education about services**, **74.2% reported the need to increase the availability of services or make sure each community has this service**, and **73.5% reported the need to increase coordination across local agencies providing these types of services**. Further:

- 72.8% reported the need to increase coordination across state agencies providing these types of services,
- 72.6% reported the need to (a) make it easier to find and to use services and (b) make sure there is an easy website to learn about or find services.
- 72% reported the need to make sure services or information are available in more than one language.

Slightly less urgent (but still noted by more than 50% of respondents) were the following needs:

- Increase the range of service options or types of services (71.4% of respondents),
- Improve quality of services (69.8%), and
- Improve affordability of services (68.1%).

Early intervention services are available for eligible children through the Individuals with Disabilities in Education Act, so this last finding merits further consideration. While Part B and Part C services are available in each school district and county, respectively, these survey findings provide insights into challenges some families may be experiencing in finding and participating in services. It should be noted that both First Steps and the KDE make information about services available on their website. Further, the KDE has produced brochures and informational materials for parents. Additional materials may be available at the county or local levels as well.

Data Strengths and Needs

As the data in the prior section show, there is a need to develop better data and understanding of:

- The effectiveness of Child Find activities in individual communities, counties, and districts. Further, it will be helpful to identify and incorporate into the early childhood data system the proportion of the birth to five population that is screened, found eligible, and enters services—at the county level or district level. This information will help communities assess and enhance Child Find activities.

- The ability of early care and education professionals in private (licensed or certified) child care facilities to identify children who may benefit from screening. The validation study's assessment of inclusion policies and practices helped shed light on the ability to provide quality inclusion services but is also is important to question the extent to which educators are proficient in pre-screening and referring children for Child Find activities.
- The extent to which children and families for whom English is a second language are effectively participating in Child Find activities. Existing data indicate the percent of children who are Hispanic. However, it is unclear what proportion of children are in families that are not proficient in English. County-level data on this phenomenon will help counties and districts better engage children and families with limited English proficiency.

Programs or Supports to Ensure Early Care and Education Settings Help Connect Children and Families to Support Services

To advance to level 3 or higher in Kentucky All STARS, participating sites have to earn points in Family and Community Engagement (see Appendix A). Sites can do this by implementing family engagement strategies that contribute to or enhance child development or by sharing community resources with families, among other strategies. The Kentucky Department of Education provided data on how often participating preschool programs rely on family engagement criteria to advance in or achieve a high star rating; the Division of Child Care also may be developing the capacity to systematically collect and analyze similar data. To wit, Kentucky All STARS allows participating sites to accrue "points" towards a higher star rating within the domain of Family and Community Engagement as follows:

2 points	Program or site administrator and 75% of staff complete professional development learning activities related to strengthening family engagement.
2 points	Implement family engagement activities that promote children's development and learning: • Implement at least one family engagement activity per year that promotes children's development and learning. • Implement at least three family engagement activities per year that promotes children's development and learning.
2 points	Two-way communication with families.
2 points	Implements transition supports for children and families.
1 point	Share community resources with families.
1 point	Builds partnerships with community agencies.

To achieve a 3-, 4-, or 5-star rating, sites must accrue at least 2 points in Family and Community Engagement, and then at least 7-, 17-, or 27-points (respectively) across the four Kentucky All STARS domains (Appendix A). Exhibit 202 presents an overview of how 4- and 5- star public preschool programs accrue their points from the Family and Community Engagement domain. The numbers and percentages presented in Exhibit 202 indicate the number of sites that received credit for each indicator, in order to achieve their rating. As can be seen, the less popular means of achieving points in this domain was professional development learning opportunities related to strengthening family

engagement. The more popular means of achieving points included communications and activities with families.

Exhibit 202 Public Preschool Family and Community Engagement Kentucky All STARS Points

	4 stars (n=12)	5 stars (n=423)
Program or site administrator and 75% of staff complete professional development learning activities related to strengthening family engagement.	8% (1)	43% (183)
Implement family engagement activities that promote children's development and learning: • Implement at least one family engagement activity per year that promotes children's development and learning. • Implement at least three family engagement activities per year that promotes children's development and learning.	50% (6)	87% (366)
Two-way communication with families.	100% (12)	99% (420)
Implements transition supports for children and families.	100% (12)	100% (423)
Share community resources with families.	100% (12)	100% (421)
Builds partnerships with community agencies.	100% (12)	100% (423)
Average points (out of 10 in this domain)	4.6	5.3

The nature and quality of family engagement also was assessed in the state's recent Race to the Top Early Learning Challenge grant validation study. **Excerpts of this aspect of the study are presented below.**

Assessing Supports for Family Engagement

The Family Provider Teacher Relationship Quality Scale (FPTRQ) was developed to assess the strength and quality of parent-teacher engagement and relationships. The conceptual model consists of four constructs believed to facilitate effective relationships between provider/teacher and families: 1) Attitudes, 2) Knowledge, 3) Practices, and 4) Environmental Features. Each construct is measured using various subscales. The teacher/provider and parent measures use 10 subscales to address the first three constructs and the director measure addresses the fourth. Three versions of the FPTRQ were used in the current study: Director, Teacher, and Parent.

Director Responses

The Director's version of the FPTRQ does not include subscales. Instead, the measure groups elements of Environmental Features as follows:

- **Environment and Policy Checklist** captures concepts such as the welcoming nature of the site, the availability of culturally diverse information, and site strategies for providing parenting information. Seventeen items from the assessment are incorporated into this subscale, and the total possible range of scores is 0 to 17.
- **Communication Systems** addresses strategies for communicating with families. There are nine items in this subscale, and the total possible range of scores is 0 to 9.

- **Information about Resources** captures the nature of information made available to families. There are 12 items in this subscale, and the total possible range of scores is 0 to 12.
- **Referrals** contains five items that address whether or not programs provide referrals for services such as health screenings or developmental assessments.

The mean scores identified during the instrument's development provide some guidance for interpreting the scores. To wit, the Environment and Policy Checklist mean score, representing center-based directors, was 13.2, with a range of responses from 6 to 17 (Kim et al., 2014). (No mean scores were reported for Communications Systems, Information about Resources, or Referrals). Thus, scores at or above 13.2 in the current study suggest family engagement and communication practices at or above "typical."

The mean Environment and Policy checklist score for the current study was 12.6, suggesting that, on average, participating directors were performing at a fairly "typical" level, compared to the general sample of directors. The mean Communication Systems score was 7.4—no sample-based mean score was available, but it is worth noting that the total range for this subscale is 0 to 9 points. Thus, directors in the current study reported behaviors at the high end of the scale.

The mean score for Information about Resources was 4.4. While no mean sample score was available for comparison, this subscale has a range of 0 to 12 points. **Thus, a mean score of 4.4 suggests that directors are, on average, not making a full or comprehensive bank of resources available for parents' information needs.** Finally, the mean score on Referrals was 2.5, which is at the mid-point of the 5-point scale.

Exhibit 203 presents average ratings for participating sites, as provided by 307 directors who completed the questionnaire for the 311 study sites. Overall and by environmental feature, scores were highest for Head Start sites.

Exhibit 203 FPTRQ Scale Scores for Directors in Participating Sites

	Environment & Policy Checklist	Communication Systems	Information about Resources	Referrals
Overall	*12.6*	*7.4*	*4.4*	*2.5*
Private Child Care	11.6	7.2	3.2	2.0
Public Preschool	14.1	7.9	5.3	3.7
Head Start	16.3	8.1	9.0	3.9

One item that bears mentioning, again, is the frequency with which early care and education professionals reported using referrals for **highly vulnerable children and families**. As reported in a prior section (Section 4) as many as 35% of RTT-ELC validation study participants reported using referrals (such as to Family Resource and Youth Services Centers) for working with children with high ACES.

Teacher Responses

The teacher version of the FPTRQ contains three constructs: Knowledge, Practices, and Attitudes. Knowledge contains one element consisting of 12 items, which probes a teacher's family-specific knowledge. The Knowledge construct has a possible score range of 12 to 48. In the current study, the mean Knowledge score was 31.7. It is worth noting that the mean score for center-based programs reported in the FPTRQ's User's Guide is 33.3.

The Practices construct focuses on teacher interactions with families, with a possible range in scores of 23 to 92. This construct consists of three subscales: Collaboration (15 items), Responsiveness (4 items), and Communication (4 items). The mean Practices score was 72.6 (while the mean sample-score reported in the User's Guide is 77.6), again suggesting a lower, on average, level of practice by teachers participating in the current study.

The Attitudes construct focuses on teacher beliefs and values and contains three subscales: Commitment (4 items), Openness to Change (8 items), and Respect (4 items). The possible range in score for Attitudes is 16 to 64. The mean Attitudes subscale score was 54.1 which is only slightly lower than the mean sample-score reported in the User's Guide of 54.4.

Exhibit 204 presents mean scores disaggregated by type of site for 960 lead and 98 co-lead or assistant teachers participating in the current study. As shown, teachers in Head Start programs tended to score higher on the constructs comprising the FPTRQ.

Exhibit 204 FPTRQ Scale Scores for Teachers in Participating Sites

	Knowledge	Practices	Attitudes
Overall	*31.7*	*72.6*	*54.1*
Private Child Care	31.2	71.5	53.8
Public Preschool	33.0	74.4	54.6
Head Start	33.5	77.7	55.6

Parent Responses

The Parent version of the FPTRQ contains three constructs: Knowledge, Practices, and Attitudes. Knowledge addresses a parent's comfort level with sharing family-specific knowledge with a site. There are 15 items comprising the Knowledge construct, and total score ranges from 15 to 60. Practices addresses four subscales: Collaboration, Responsiveness, Communication, and Family-Focused Concern. There are 33 items comprising the Practices construct, and the total range of scores is 33 to 132. Attitudes addresses three subscales: Commitment, Understanding Context, and Respect. There are 18 items within the Attitudes construct, and the total range of scores is 18 to 72.

As with the teacher and director measures, mean scores for the sample used in developing the instrument are available to help interpret the findings. Exhibit 205 presents the scores for 2,780 parents returning surveys for the current study. As shown, the mean parent score for Knowledge was 53.6 (compared to a mean sample score of 52.6, cited in the User's Manual). The mean score for Practices was 106.3 (compared to a mean score of 109.4 cited in the User's Manual), and the mean

score for Attitudes was 65.2 (compared to a mean score of 67.7 cited in the User's Manual). Thus, parents for sites participating in the study tended to report slightly lower responses overall for Practices and Attitudes than the sample used to develop the tool, and Head Start programs had higher scores for Practices.

Exhibit 205 FPTRQ Scale Scores for Parents in Participating Sites

	Knowledge	Practices	Attitudes
Overall	*53.6*	*106.3*	*65.2*
Private Child Care	53.8	104.6	65.3
Public Preschool	53.3	105.8	65.0
Head Start	53.2	112.5	65.0

Data Needs

Data from the FPTRQ suggest that, despite family engagement being an option for advancing in Kentucky All STARS, early care and education professionals may benefit from additional technical assistance and training on specific strategies. In particular, information from directors suggests that sites may be able to improve the content or quality of community information made available to parents. It is worth remembering, as was discussed in an earlier section, that the most common strategy used by professionals for working with vulnerable children and families was to generate referrals to community resources and programs. This finding is complemented by findings from the FPTRQ, which suggest the use of referrals—which is highest among Head Start sites and lowest among private child care sites (Head Start sites also ranked highest among the three models with regard to the provision of information about community resources). Thus, it appears that Head Start programs are best able, at present, to collect and distribute information and referrals to participating children and families. Moving forward, it will be helpful to know more about the barriers and challenges experienced by private sites and public schools as to these types of supports.

Programs or Supports to Support Children who are Non-English Speaking

The Kentucky Department of Education and services provided through the Cabinet for Health and Family Services are expected to make accommodations for clients for whom English is not the primary language (including individuals who use American Sign Language). The Kentucky Department of Education, for example, posts information regarding its obligations for the English Learner population at https://education.ky.gov/federal/progs/eng/Pages/English-Learner-and-Immigrant-Resources.aspx. Similarly, the Cabinet for Health and Family Services reports:

> Spoken language interpretive services are necessary when language barriers create communication challenges between Cabinet staff and clients. It is federally mandated that communication with individuals with Limited English Proficiency (LEP) is as effective as communication with others. Free and consistent language interpretation services for persons with Limited English Proficiency is part of the Cabinet's ongoing commitment to quality service and response to the needs of a diverse client population.
>
> Source: http://manuals.sp.chfs.ky.gov/chapter1/00/Pages/16LimitedEnglishProficiency(LEP).aspx

Another concern that should be noted is the population of children considered to be migrant, which can include young children (who then may be served in programs such as Migrant Head Start or the school system's Migrant Education Program). As explained in the Kentucky Department of Education's Comprehensive Needs Assessment and Service Delivery Plan for the Kentucky Migrant Education Program (2019)[110],

> a migratory child in Kentucky is "a child who is, or whose parent or spouse is, a migratory agricultural worker, including a migratory dairy worker, or a migratory fisher, and who, in the preceding 36 months, in order to obtain, or accompany such parent or spouse, in order to obtain, temporary or seasonal employment in agricultural or fishing work, moved from one school district to another" ESSA Sec. 1309(2)).
>
> Source: Comprehensive Needs Assessment and Service Delivery Plan for the Kentucky Migrant Education Program, 2019

The KDE's plan incorporates provisions for young children (ages 3 or 4). For example, the KDE recognizes challenges related to school readiness for the migrant population, including:

- Migrant preschool children in rural districts have unequal access to educational services due to lack of access to routine medical care, including immunizations,
- Parents do not have the knowledge or resources to help students prepare for kindergarten at home,
- Language barriers keep parents and students from full access to school, community resources, and educational programs, and
- Pre-K children are unable to attend needed summer programs due to a lack of transportation.

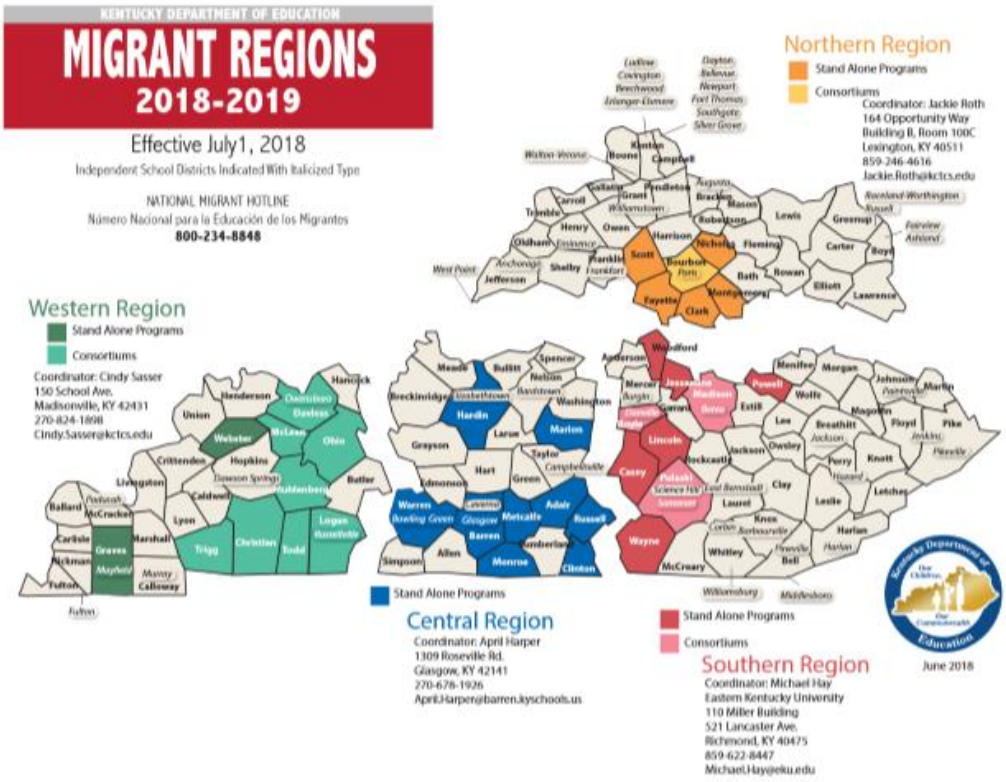
The plan also establishes the following school readiness goal for migrant preschoolers:

> By Spring 2022, the percent of migrant preschool age children either enrolled in preschool or receiving 10 or more in home service contacts who demonstrate kindergarten readiness on KSCREEN (Brigance) will increase to 60%.
>
> Source: Comprehensive Needs Assessment and Service Delivery Plan for the Kentucky Migrant Education Program, 2019

Further details regarding the needs and plans for this population are contained within the KDE plan. Kentucky Department of Education migrant education services are provided by region, as shown in Exhibit 206.

[110] https://**education.ky.gov**/federal/progs/tic/Documents/KY MEP Service Delivery Plan.pdf

Exhibit 206 Kentucky Department of Education Migrant Regions for 2018-2019



Data source: Comprehensive Needs Assessment and Service Delivery Plan for the Kentucky Migrant Education Program, 2019

Other services are available for the migrant population through Head Start or Early Head Start programs. The Administration for Children and Families lists nine migrant or seasonal programs (Exhibit 207):

The Prep Academy at Madison County (co-located with Richmond Migrant Head Start)
Migrant and Seasonal Head Start Center
Richmond, KY

Richmond Migrant Head Start: CAC (co-located with The Prep Academy at Madison County)
Migrant and Seasonal Head Start Center
2323 Lexington Rd

The Prep Academy at Winburn (co-located with Winburn Center)
Migrant and Seasonal Head Start Center
Lexington, KY

Winburn Center: CAC (co-located with The Prep Academy at Winburn)
Migrant and Seasonal Head Start Center
Lexington, KY

Bourbon County MHS Center
Migrant and Seasonal Head Start Center
Paris, KY

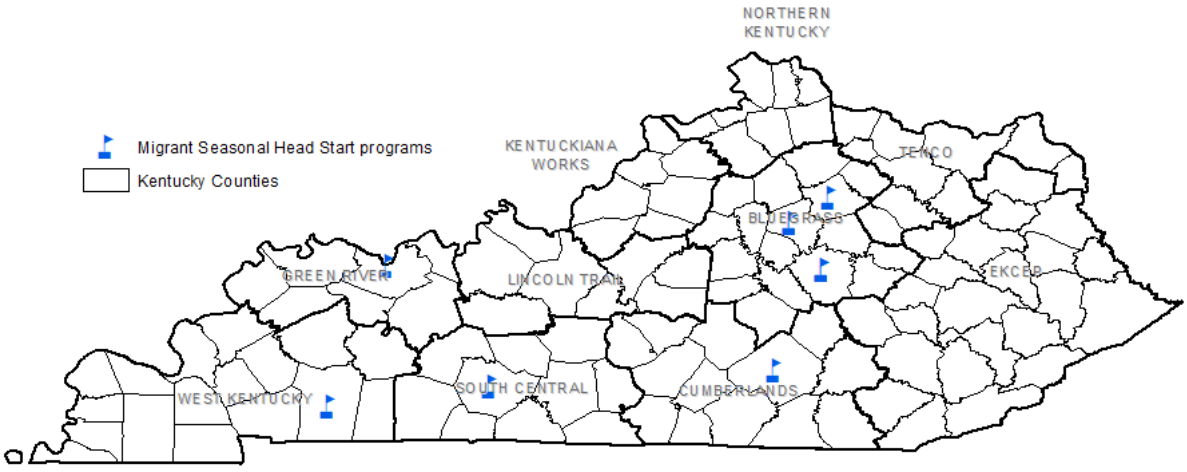
Pulaski County: Lake Cumberland
Migrant and Seasonal Head Start Center
Somerset, KY

Warren County Head Start: Southern
Migrant and Seasonal Head Start Center
Bowling Green, KY

Killian Migrant Center: Audubon
Migrant and Seasonal Head Start Center
Owensboro, KY

Christian County: Audubon
Migrant and Seasonal Head Start Center
Hopkinsville, KY

Exhibit 207 *Migrant or Seasonal Head Start Programs*



Data source: Administration for Children and Families, Office of Head Start

While services for preschools and older are mandated by the United States Education Department, there are questions regarding other systems supports for the migrant population, including prenatal and other services and especially services for migrant infants and toddlers. This is an area in which the state may benefit from additional data. Community members who participated in Preschool Development Grant focus groups (February 2019) noted several concerns regarding services for immigrant, migrant, or limited English proficiency families:

- Parents for whom English is a Second Language (ESL) may experience significant information gaps, in learning about and accessing services for which their children or families may be eligible.
- Refugee, immigrant, and ESL (specifically, Spanish-speaking) families may not be connecting to available early care and education services. In some cases, the lack of connection may reflect cultural barriers or preferences regarding early childhood or family services. In other cases, low adult or family literacy also may be a concern or confounding factor in lack of system engagement.
- There is a need to distribute information in multiple languages, as is noted throughout this report. If there are instances of low adult literacy, it may not be sufficient to provide information solely in written form.

Further, data from the American Community Survey indicate that 20% of Kentucky's children under age 18 in immigrant families are living in linguistically isolated households (compared to less than one percent of children in native-born families).[111] This raises concerns about the ability to communicate with immigrant parents with young children, in a variety of settings including child or health care.

Quality and Availability of Programs and Supports: Synthesis

This section addressed the following questions:

1. **What programs and supports do you have available to identify children who are developmentally delayed and connect them to services?**
2. **What programs and supports do you have available to support children who are non-English speaking or reflect different cultures that connect them to services?**
3. **What programs or supports do you have available that help ensure that early care and education settings are helping vulnerable or underserved children access needed support services such as health care, food assistance, housing support, and economic assistance?**
4. **What programs or supports do you have available that help ensure that early care and education settings are able to connect families in crisis to needed programs or services (e.g., family violence programs, emergency economic assistance, mental health care, substance abuse treatment)?**

In asking and responding to these questions, Kentucky is further assessing vulnerable children and families, and the nature and quality of existing systems that support these children. The data presented in this section identify how many children have been identified and are participating in IDEA Part B and Part C services. However, Kentucky's system can be improved by further exploring the nature and effectiveness of Child Find activities in counties and districts. Kentucky also will benefit by further integrating information on the proportions of children served, relative to demographic representation in counties and districts. Such data can help local communities ensure there are sufficiently strong services, such that the most vulnerable or isolated of children and families (including children and families for whom English is a second language) are engaged.

[111] Cited in Kids Count: https://datacenter.kidscount.org/data/tables/129-children-living-in-linguistically-isolated-households-by-family-nativity?loc=19&loct=2#detailed/2/19/false/871,870,573,869,36,868,867,133,38,35/78,79/472,473; as noted "A linguistically isolated household is defined as a household in which no person 14 years old and over speaks only English, and no person 14 years old and over who speaks a language other than English speaks English "very well"."

Kentucky also might benefit from an assessment of the nature and quality of services for the English-language learning populations. While certain language services are mandated within the educational system, it is not clear at present how families are learning about and participating in needed services prior to their engagement in the K-12 system.

Kentucky's All STARS initiative encourages participating sites to consider family and community engagement. To advance to level 3 or higher, sites need to document specific strategies for engagement, some of which are targeted for families. The state's recent validation study assessed the quality of family-teacher relationships; study findings can inform technical assistance and training efforts.

Section 7. Measurable Indicators of Progress that Align with the State/Territory's Vision and Desired Outcomes for the Project

Measurable Indicators to Track Progress

This section presents three examples of data partners who make regularly updated early childhood data available on an ongoing basis, at state and county levels. The state has additional data partners in the form of partner agencies, who make data available upon request for example, and other agencies or groups that compile and present information on different aspects of an early childhood system.

Kentucky Center for Statistics

The Kentucky Center for Statistics (KYSTATS; https://kystats.ky.gov/) provides regular (e.g., annual) updates in multiple education and workforce development domains including early childhood, high school, postsecondary education, career and technical education, teacher preparation, and work ready communities. The KYSTATS interactive website provides access to state, regional, and county-level data along with guidance and training, to enhance the use of data by state and local leaders. This report contains data specific to early childhood: child developmental status is assessed, annually, using the BRIGANCE Early Childhood Kindergarten Screen III (BRIGANCE, or Common Kindergarten Entry Screener)[112]. The kindergarten screener assesses development in five domains: Academic/Cognitive, Language Development, Physical Development, Self-Help and Social-Emotional Development. Three of these domains (Academic/Cognitive, Language Development, and Physical Development) are combined into an overall rating. It must be noted, the screener is not designed or intended to produce summative outcome data. Thus, caution must be used in interpreting these data.

Current Readiness Data

The maps shown in Exhibits 208 through 213 present population-level metrics on child developmental status (as assessed in fall 2018). The data are presented by quintile, wherein counties shaded in blue experience the lowest percentages of children assessed as "ready" in each domain and counties shaded in green experience the highest percentages of children assessed as "ready" (noting that caution must be used in interpreting "readiness"). Exhibit 208 presents a composite measure, based on cognition and general knowledge, language and communication skills, and physical well-being. Counties with higher percentages of children assessed as "ready" are shaded in green while counties with lower percentages are shaded in blue. Overall, 51.1 percent of entering kindergarten students were assessed as ready (using the composite indicator) for kindergarten in fall 2018 (range 21.2 to 84.6 percent). By domain:

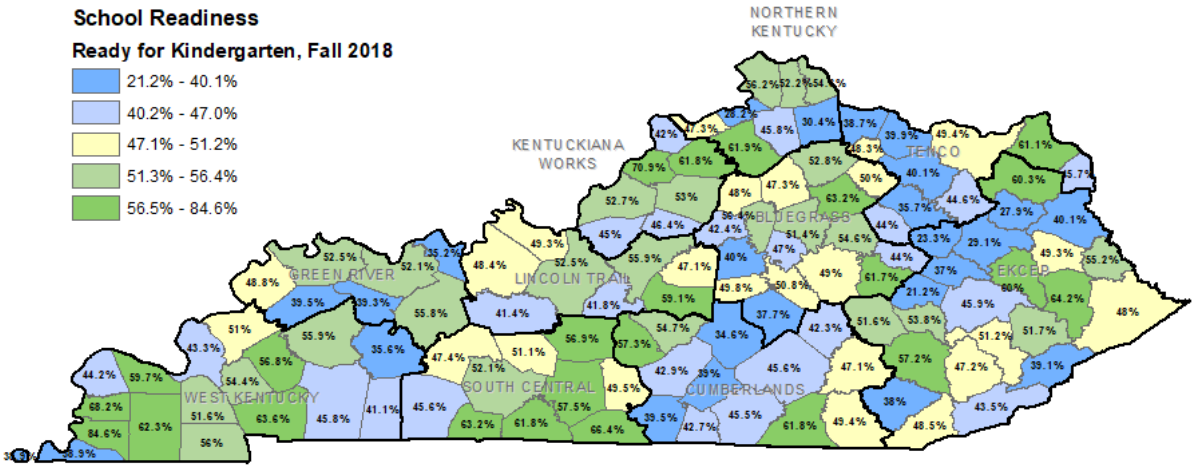
> 51.1% of fall 2018 entering kindergarten students were assessed as "ready", using a composite measure of readiness that included cognition, general knowledge, language, communication, and physical well-being.

[112] https://kystats.ky.gov/Latest/ECP

- 36 percent were assessed as ready in cognitive and general knowledge skills (range 9.6 to 74.4 percent);
- 73.8 percent were assessed as ready in language and communication skills (range 56.1 to 94.9 percent);
- 48.2 percent were assessed as ready with regard to physical well-being (range 17.1 to 84.6 percent);
- 51.9 percent were assessed as ready in self-help skills (range 33.3 to 75 percent); and
- 77.3 percent were assessed as ready in social and emotional skills (range 59.2 to 97.4 percent).

Thus, there is variation in readiness not only by location (as shown below) but also by developmental domain, with children exhibiting greater readiness in social-emotional and language and communication skills compared to self-help skills, physical well-being, and cognitive and general knowledge skills.

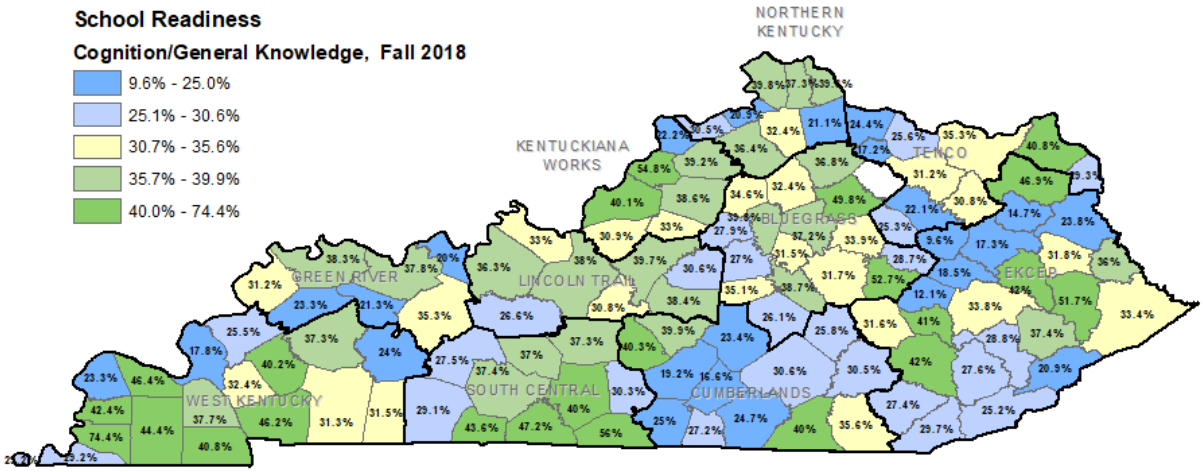
Exhibit 208 Percent Children Assessed as Ready for Kindergarten in Fall 2018



Data Source: Kentucky Center for Statistics (KYSTATS), Early Childhood Profile, 2019

Exhibit 209 presents county-level data on cognition and general knowledge. Counties with higher percentages of children assessed as "ready" in cognition and general knowledge are shaded in green while counties with lower percentages are shaded in blue.

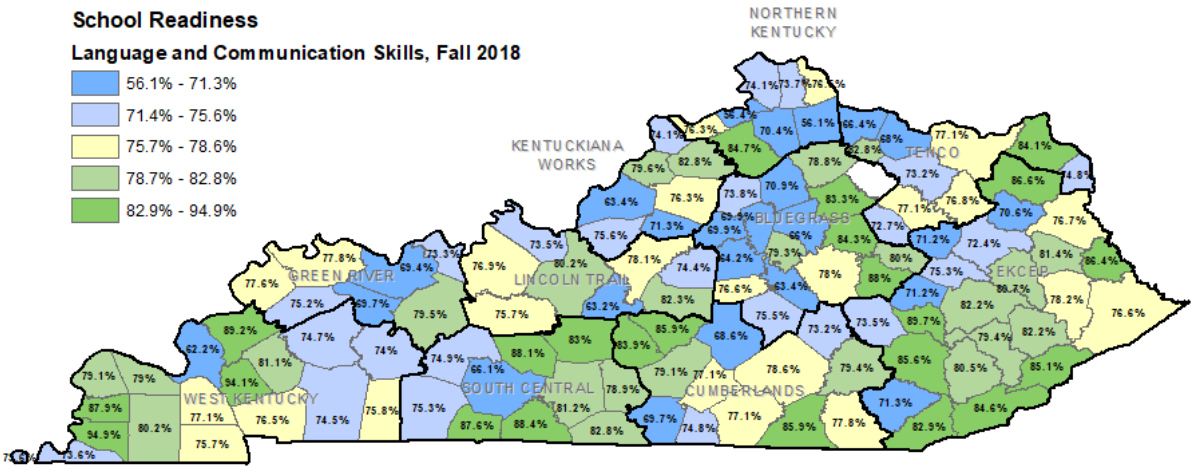
Exhibit 209 *Cognition and General Knowledge in Fall 2018*



Data Source: Kentucky Center for Statistics, Early Childhood Profile, 2019

Exhibit 210 presents county-level data on language and communication skills. Counties with higher percentages of children assessed as "ready" in language and communication skills are shaded in green while counties with lower percentages are shaded in blue.

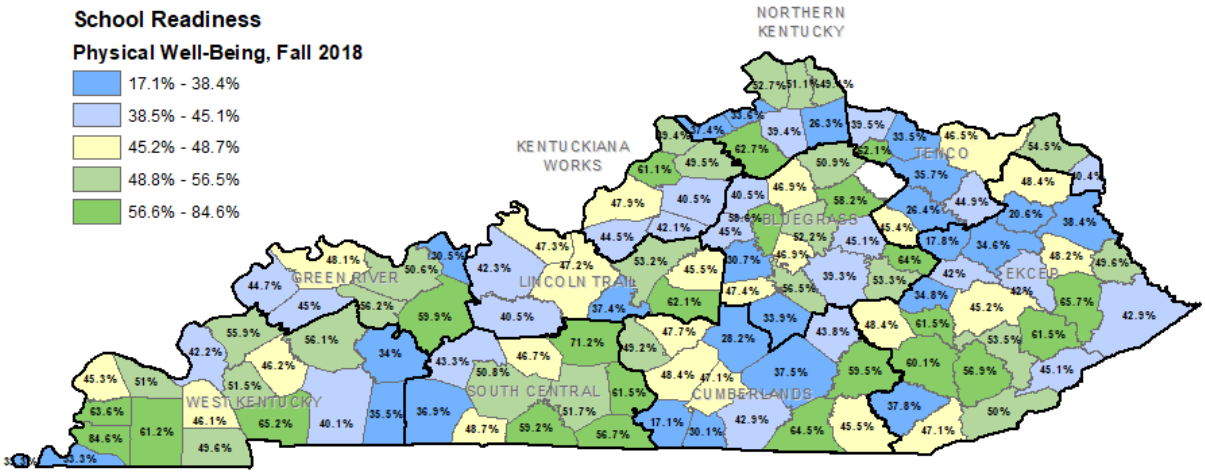
Exhibit 210 *Language and Communication Skills in Fall 2018*



Data Source: Kentucky Center for Statistics, Early Childhood Profile, 2019

Exhibit 211 presents county-level data on physical well-being. Counties with higher percentages of children assessed as "ready" in physical well-being are shaded in green while counties with lower percentages are shaded in blue.

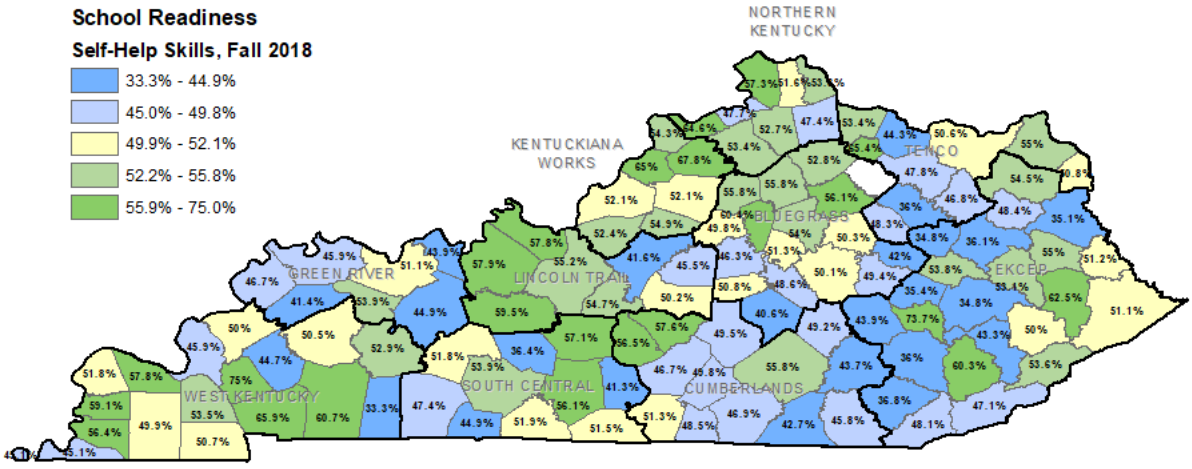
Exhibit 211 Physical Well Being in Fall 2018



Data Source: Kentucky Center for Statistics, Early Childhood Profile, 2019

Exhibit 212 presents county-level data on self-help skills. Counties with higher percentages of children assessed as "ready" in self-help skills are shaded in green while counties with lower percentages are shaded in blue.

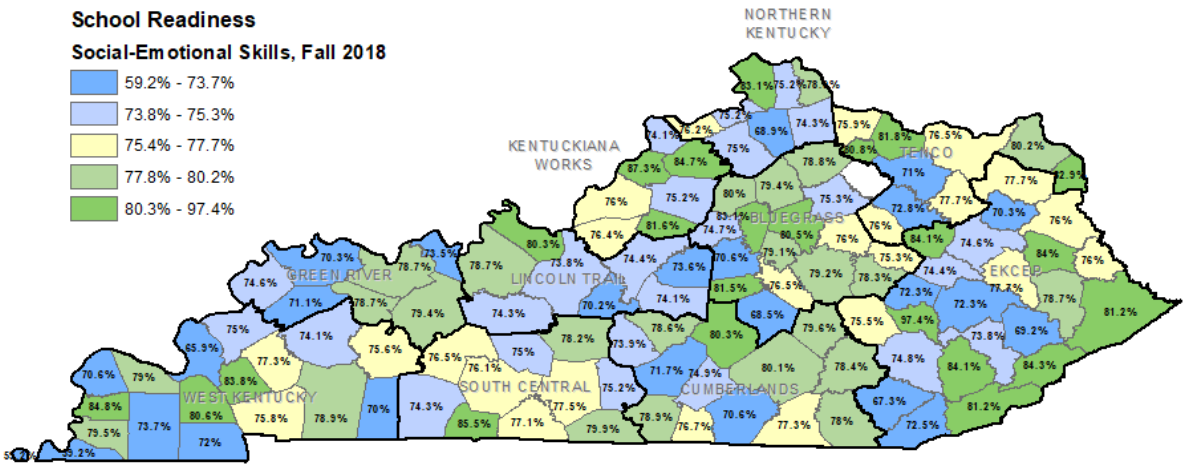
Exhibit 212 Self-Help Skills in Fall 2018



Data Source: Kentucky Center for Statistics, Early Childhood Profile, 2019

Finally, Exhibit 213 presents county-level data on social and emotional skills. Counties with higher percentages of children assessed as "ready" in socio-emotional skills are shaded in green while counties with lower percentages are shaded in blue.

Exhibit 213 Social-Emotional Skills in Fall 2018



Data Source: Kentucky Center for Statistics, Early Childhood Profile, 2019

A review of county statistics does not indicate a straight-forward change (such as an increase or decrease) in readiness. Rather, performance ebbs and flows over time—and in so doing, deserves further attention and analysis. County-level data from 2014 to 2018 are presented in Appendix B to illustrate this finding.

The KYSTATS' Early Childhood Profiles (https://kystats.ky.gov/Latest/ECP) contain additional indicators of interest for state and local stakeholders, some of which are referenced later in this report. These include (a) third-grade reading proficiency (including a state- and county-level analysis of the relation of school readiness scores to third-grade reading proficiency), (b) participation in All STARS, Kentucky's Quality Rating Improvement System (QRIS), and (c) participation in programs such as the Special Supplemental Nutrition Program (SNAP), Women, Infants, and Children (WIC), First Steps, Health Access Nurturing Development Services (HANDS), and Child Care Assistance Program (CCAP) Count programs. Figures 4 and 5 present screenshots of the 2019 Early Childhood Profile.

Among the strengths of the KYSTATS interactive reports, the format allows the disaggregation of data into regional and local levels. Data also are available over time, allowing for comparison of annual findings with prior years. Further, KYSTATS makes training available to state and local stakeholders, to develop data fluency and capacity and to encourage and promote its use for local and regional planning.

Figure 4 *KYSTATS 2019 Early Childhood Profile: School Readiness and Third-Grade Reading Proficiency*

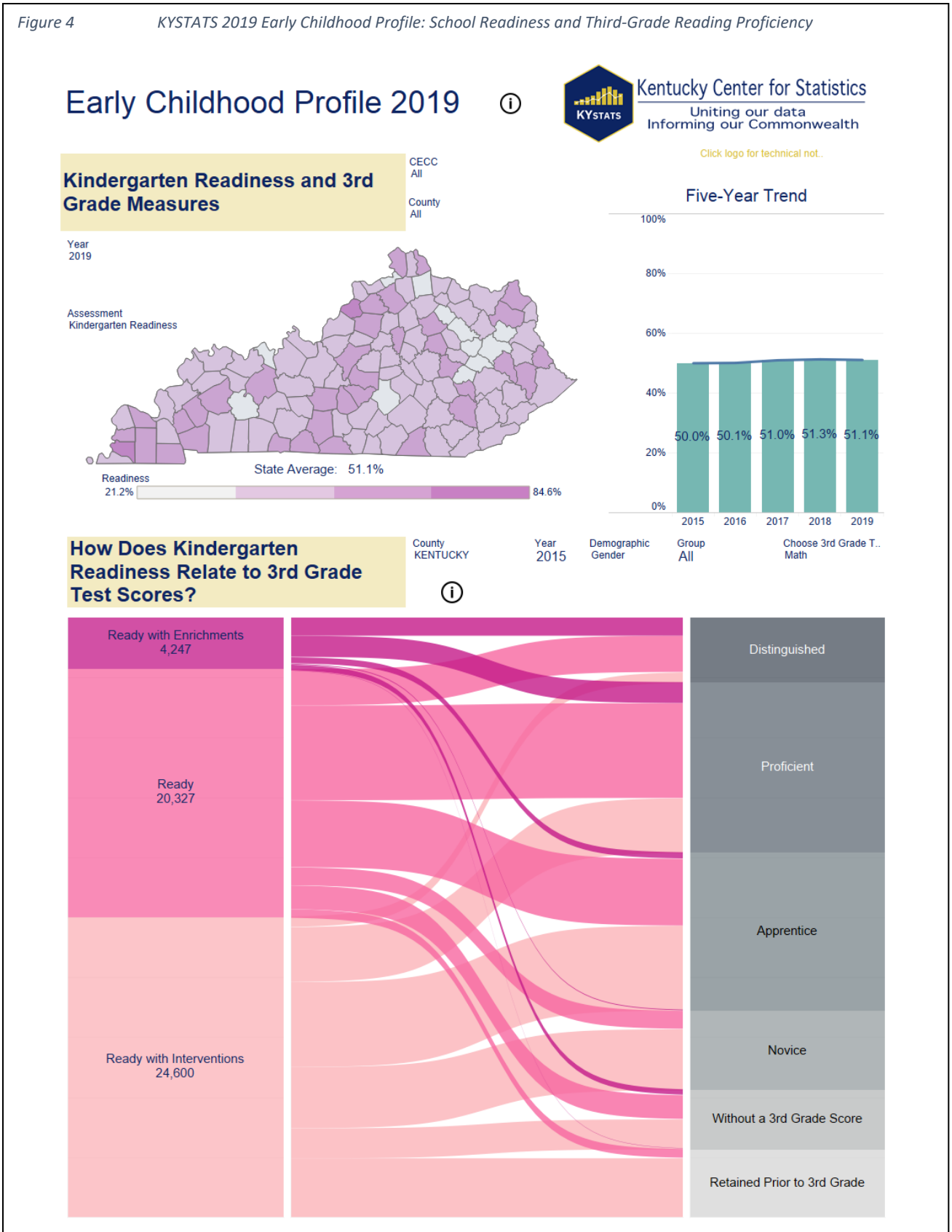
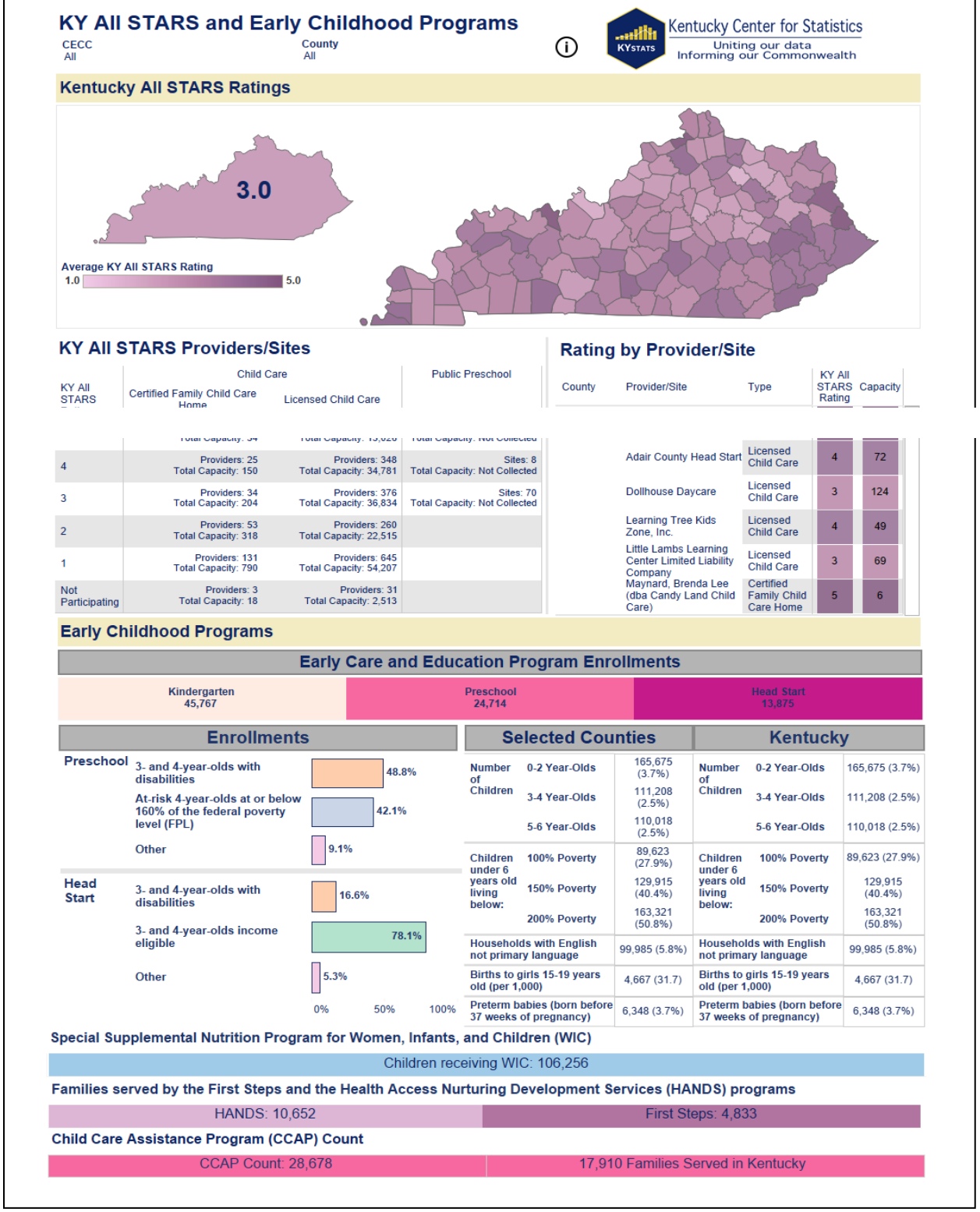


Figure 5 *KYSTATS 2019 Early Childhood Profile: All STARS and Other Program Participation*



Kentucky Youth Advocates/Kids Count

Kentucky Youth Advocates compiles and provides a wealth of data to the annual Kids Count update (https://datacenter.kidscount.org/data#KY/2/0/char/0). Multiple data points were used in the current report, especially to capture information on service need (i.e., poverty) and use for poverty-responsive programs. Like the KYSTATS, Kentucky Youth Advocates supplies data that can be tracked over time and at different levels: state, county, school district, congressional district, etc. Topics include: demographics, family nativity, employment and income, public assistance, housing, poverty, disabilities, early childhood, community environment, family structure, birth outcomes, health insurance, vital statistics, dental health, mental health, child abuse and neglect, out-of-home placement, and other--with selected data disaggregated by age groups, race, or ethnicity.

Kentucky State Data Center

The Kentucky State Data Center at the University of Louisville (http://ksdc.louisville.edu/) facilitates the use of U.S. Census data in Kentucky. The data center houses vital statistics data along with data (or links to additional data) on crime, demographics, education, health, housing, income and poverty, and other topics.

Early Care and Education Training Records Information System

Kentucky's Early Care and Education Training Records Information System (ECE-TRIS; https://tris.eku.edu/ece/content.php?CID=1) is housed at Eastern Kentucky University and is a web-based database for the training records of early care and education professionals across the state.

Strengths and Weaknesses of Indicators

The strength of the data and data partners described so far is accessibility. The use of interne-linked datasets, available to users by download and regularly updated, has the potential to make important early childhood information widely available to many stakeholders. Further, the range of data represented across partners meshes with many of the factors that are important in a comprehensive systems approach, such as Kentucky's emergent Prenatal-Third Grade framework.

The data partners described in this section provide data that are important for understanding early childhood needs and context, often at the county or district level. This stated, the availability of a wide range of early childhood-related data should not be confused with a deliberate and curated set of indicators chosen by stakeholders for their power in assessing system progress and needs. Moving forward, Kentucky has the opportunity to develop a data plan to complement its strategic plan, with a focus on indicators that are meaningful to stakeholders and inform progress on the plan.

Vulnerable children exist in every county. Indicators should help stakeholders across levels consider the nature and extent of vulnerability, including an analysis by age, race, ethnicity, primary language, etc. Indicators also should help stakeholders piece together the puzzle of how best to serve vulnerable children and families. This is a process that can and should include assistance to stakeholders so as to ensure the best use (and to avoid misuse) of the data once it is made available.

Development of Additional Measurable Indicators

The ECAC's Data Subcommittee, KYSTATS, and other data partners have an opportunity to further align data with Kentucky's early childhood strategic plan and systems model. With a new strategic plan finalized, it will be important for the ECAC (or, its Data Subcommittee) to engage in meaningful conversation about how to measure progress on the plan. This involves working with technical specialists (e.g., methodologists) who can carefully consider and make recommendations on measurement techniques.

One of Kentucky's strengths is its data partners. These partners can work with the ECAC to align existing data with new indicators to track progress on its plan and the development of the system. The state's new strategic plan is emergent; this stated, the ECAC and its data partners can work with existing system models (such as that contained within this report) and other heuristics (including current research) to have conversations about Kentucky's Prenatal-Third Grade framework and the variables or indicators that will allow Kentucky to measure the progress and results of different initiatives.

Measurable Indicators of Progress: Synthesis

This section presented information to respond to the following questions:

1. **What measurable indicators currently exist that can be used to track progress in achieving the goals of this grant and your strategic plan?**
2. **What are the strengths and the weaknesses of these indicators? Include the extent to which they can be used to describe the current conditions experienced by vulnerable, underserved and rural populations?**
3. **What opportunities are currently under way involving developing additional measurable indicators to track progress in achieving the goals of this grant and your strategic plan?**

As reported in this section, Kentucky has a number of data partners that make regularly updated data available, publicly, for stakeholders. Three examples were provided in this report: the Kentucky Center for Statistics, the Kentucky State Data Center, and Kentucky Youth Advocates. Other data partners may make data available upon request or in response to specific queries. The examples provided in this section are by no means exhaustive.

The data that are made available across data partners include vital statistics (e.g., birth rates, population projections), basic health information, family structure and stability, participation in early care and education programming, child development upon kindergarten entry, and third grade test scores. Thus, there is a wealth of information available to inform and understand Kentucky's Prenatal-Third Grade framework. Making data available, however, is not the same as intentionally developing a suite of indicators that can be used to track system development, and to hold different system partners accountable for progress (or lack thereof). Thus, Kentucky now has an opportunity, with the development of an updated early childhood strategic plan, to further develop a complementary data plan. The Data Subcommittee of the ECAC is primed to guide this work, moving forward.

Section 8. Issues Involving ECCE Facilities

This section contains available information on early care and education facilities. There are guidelines and expectations for facilities, established by all three operational models (licensed or certified child care, Head Start, and public preschool). However, there are no systematic and regularly updated central databases that capture facilities data across all three models. That stated, there is a need to determine where facilities (a) need attention to ensure basic safety and suitability and (b) need to be developed in order to meet the demand for early care and education programming.

Issues Involving ECCE Facilities

The Division of Child Care made a data extract of licensing visit concerns related to premises (wherein the visits occurred between January and March 2019) available for review; the extract contains information on licensed and certified sites. As can been seen In Exhibit 214, 453 premises issues (with 898 deficiencies) were noted at sites during this time period. The issues relate to a variety of concerns but all reflect structural aspects of the site. The most prevalent concerns related to floors, walls, and ceilings (n=51), wherein the standard requires "Floors, walls, and ceilings shall be smooth, in good repair, and constructed to be easily cleaned." Premises issues were noted in facilities in 80 counties, which reflects both the scope of licensing visits that occurred during the three month period as well as the scope of concerns. Not surprisingly, counties with higher numbers of programs also had higher counts of deficiencies.

Exhibit 214 Premises Concerns with Child Care Facilities

	Standard	Premises Issues Noted During Licensing Site Visits (n=453)		
		Certified	Licensed Type I	Licensed Type II
35 square feet per child	Exclusive of the kitchen, bathroom, hallway, and storage area, there shall be a minimum of thirty-five (35) square feet of space per child.		10	
60 square feet	(20) An outdoor play area shall be: (b) A minimum of sixty (60) square feet per child, separate from and in addition to the thirty-five (35) square feet minimum pursuant to subsection (6) of this section;		2	
Building requirements	The building shall be constructed to ensure the: (a) Building is: 1. Dry; 2. Adequately heated; 3. Ventilated; and 4. Well lit, including clean light fixtures that are: a. In good repair in all areas; and b. Shielded or have shattered proof bulbs installed; and (b) Following are protected: 1. Windows; 2. Doors; 3. Stoves; 4. Heaters; 5. Furnaces; 6. Pipes; and 7. Stairs.		29	1
Fences	Fences shall be: (a) Constructed of safe material; (b) Stable; and (c) In good condition.		12	
Floors, walls, ceilings	Floors, walls, and ceilings shall be smooth, in good repair, and constructed to be easily cleaned.		49	2
Playground conditions	An outdoor play area shall be: (d) Safe from foreseeable hazard; (e) Well drained; (f) Well maintained; (g) In good repair; and (h) Visible to staff at all times.		25	1

Premises requirements	The premises shall be: (a) Suitable for the purpose intended; (b) Kept clean and in good repair;		32	2
Protective surfaces	A protective surface shall: (a) Be provided for outdoor play equipment used to: 1. Climb; 2. Swing; and 3. Slide; and (b) Have a fall zone equal to the height of the equipment		31	3
Sinks	A sink shall be: (a) Located in or immediately adjacent to toilet rooms; (b) Equipped with hot and cold running water that allows for hand washing; (c) Equipped with hot water at a minimum temperature of ninety (90) degrees Fahrenheit and a maximum of 120 degrees Fahrenheit; (d) Equipped with liquid soap; (e) Equipped with hand-drying blower or single use disposable hand drying material; (f) Equipped with an easily cleanable waste receptacle; and (g) Immediately adjacent to a changing area used for infants and toddlers.	3	25	1
Toilet	Each toilet shall: (a) Be kept in clean condition; (b) Be kept in good repair; (c) Be in a lighted room; and (d) Have ventilation to outside air.		32	1
		31	**409**	**13**

Opportunities to Work Collaborative on ECCE Facility Improvement

As noted above and in Section 4, there are counties that are either considered child care deserts or have communities with insufficient numbers and types of care available. In these areas, there may be a need to create or open new facilities (or, to find existing resources to host programs or services). The state is continuing its work with partner agencies and local Community Early Childhood Councils to raise awareness of this issue and develop strategies to respond to the need to grow the number of placements, especially high quality placements for infants, toddlers, and vulnerable children.

Data Strengths and Needs

This report highlights the need to learn more about the state of facilities, across program types (including Head Start/Early Head Start and public preschool facilities). Existing data were available and current on licensed or certified child care sites. However, this report also contains information on the existence of child care deserts—which suggests the need to learn more about how to incubate and support new programs in areas where there is insufficient care. Thus, the data need is two-fold: (1) understanding the existing need to assist programs in ensuring the physical location is safe, meet regulations, and is sufficient for providing high quality care and (2) understanding the emerging or escalating needs to help communities develop new options for parents and families. Moving forward, Kentucky has the opportunity to meaningfully incorporate facilities data into its ECIDS, capturing information from partner agencies that can inform technical assistance and training as well as community efforts to improve the availability of high quality early care and education environments for young children.

Section 9. Barriers to the Funding and Provision of High- Quality Early Childhood Care and Education Services and Supports and Opportunities for More Efficient Use of Resources

Barriers to Funding and Provision of High-Quality Early Childhood Care and Education Supports

Policy or Regulatory Barriers

Kentucky provides early childhood care and education primarily through three operational models: private child care, Head Start/Early Head Start, and public preschool. As noted earlier in this report, **private child care** consists of several types of care:

Regulated child care

- Licensed Type I: facility that regularly provides child care services for four (4) or more children in a non-residential setting; or thirteen (13) or more children in a residential setting.
- Licensed Type II: the primary residence where child care is regularly provided for at least seven (7), but not more than twelve (12) children including related children.
- Certified Family Child Care Home: person who cares for a child in their own home; and shall not exceed six (6) unrelated children at anyone (1) time; or four (4) related children in addition to six (6) unrelated children for a maximum of ten (10) hours at anyone (1) time.

Non-Regulated child care

- Registered: private individual that provides care for someone receiving child care assistance, such as a relative or neighbor who is not regulated by the Division of Regulated Child Care.

The CCAP provides subsidies for eligible students. The dollar value of subsidies is informed by market rate studies conducted every two years (with the most current market rate study completed in 2017). The current market rates available for private providers are presented in Appendix C.

Head Start and Early Head Start receive federal funding, while Kentucky's public preschool program primarily is funded with state resources. Further, Kentucky has a policy of "full utilization," which requires the local coordination of preschool and Head Start services, so as to "*avoid duplication of preschool services and supplanting of federal funds and to maximize the use of Head Start funds to serve as many four-year-old children as possible.*[113]"

The presence of different operational models provides flexibility in program structure and options for families. At the same time, the different regulatory and administrative expectations have to be accommodated within one, unifying, approach to quality, which is Kentucky All STARS. The implications of operating different models are presented in Exhibit 215, which compares each model on key concepts or requirements.

[113] https://education.ky.gov/curriculum/conpro/prim-pre/Pages/Head-Start-Full-Utilization.aspx

As the review of policy and regulatory language in Exhibit 207 shows, Kentucky All STARS is unified in name and intention—but each operational model has distinct responsibilities to different agencies. This affects the process of implementing Kentucky All STARS more than the unified goal of providing the highest possible quality of care and education for young children. This also creates the potential for duplication of functions and confusion at sites that participate in blended or braided funding (e.g., site administrators may be confused as to which regulations have standing when the site applies for its rating). Both elements require attention to ensure a more efficient system. A more streamlined approach is desirable for all parties—but this will likely require a determination of which regulations take precedence, and which might be deferred without affecting the quality of care. Moving forward, Kentucky also may explore opportunities to further improve the consistency of implementation across the models, including the consistency of supports, technical assistance, and training provided to professionals. Kentucky also can consider a more intensive audit of policies and regulations across the three models, to determine areas most amenable to alignment.

Kentucky All STARS

Unified Kentucky All STARS standards required for child care, public schools and Head Start. Cross agency collaboration and process governed by MOU.			
	Child Care **DCC**	**Public Preschool** **KDE**	**Head Start**
Vision or Goals for Kentucky All STARS:	Quality Improvement	Acknowledging existing quality	Acknowledging existing quality
Standards:	Kentucky All STARS; Child Care Licensing	Kentucky All STARS; Kentucky Preschool Program Review (P2R)	Kentucky All STARS, Federal Head Start Regulations. If blended, then follow the highest requirements of the blended sites.
Rating:	**Initial entry:** Programs enter at Level 1. Desk Audit and incentive. ERS required for levels 3-5. **Rating:** Every 3 years. Child Care Licensing is conducted annually.	**Initial entry:** Schools enter at level 3; Staff reviewed rubric/docs and ECERS-3 to engage schools in increasing beyond 3 stars. **Annual:** District conducts ECERS-3 on 1/3 of classrooms, update and submit Preschool Performance Report and Program Approval Form. **3rd Year Mid-cycle:** District completes All STARS Renewal. RTC reviews evidence and ECERS-3 scores. **6th Year Full Review:** District completes P2R and All STARS renewal. ECERS-3 completed by RTC for 30% of classrooms at each site. KDE review P2R and All STARS evidence.	**Initial Entry:** Programs enter at 3 stars. All programs are monitored by Child Care if licensed or through P2R if blended with preschool

Monitoring:	Annual: Annual Quality Review; Child Care Licensing visits centers each year for licensing renewal	District conducts ECERS-3 every year. KDE and RTCs processes submitted documentation.	Licensed HS sites are monitored in the same manner as all child care sites. HS programs that are blended with preschool are monitored by preschool. HS programs also participate in all Federal Monitoring
Staffing:	**Rating:** Eastern Kentucky University and Division of Child Care; **PD/TA:** University of Kentucky through Child Care Aware; **Licensing:** Div. of Regulated Child Care	**Rating:** KDE (assisted by RTCs) reviews evidence and documentation, conducts site visits when needed; RTCs conduct ECERS-3 visits, Districts conduct ECERS-3 annually and report scores to RTCs. **Monitoring:** RTC reviews 3-year mid-cycle evidence and annual ECERS-3 scores. KDE reviews annual documentation and all 6th year Full Monitoring also conducts site visits as necessary. **PD/TA:** RTCs and Districts provide PD.	**Rating:** Licensed HS sites are rated in the same manner as all child care sites. HS programs that are blended with preschool are rated in the same manner as preschool. **Monitoring:** HS programs participate in all Federal and state required monitoring with blended programs. **PD/TA:** HS programs and Federal HS provides PD/TA to HS grantees. HS sites also participate in PD/TA through the blended program models
Technical Assistance or Coaching:	CCRR (University of Kentucky, or UK): Quality Coaches and Health and Safety Coaches.	RTC based on KDE priorities, observations, monitoring and by request. Districts offer required and district specific trainings. Teachers are required to have professional learning plans and 24 hrs. of PD. Teacher assistants are required to have 18 hrs. PL.	
Professional Development:	CCRR (UK): PD Coaches, trainings. Teacher scholarships (Tobacco $).	RTC offers trainings and develops trainings by request. Districts offer required trainings. Teachers must have 24 hrs. of PD.	HS receives money within their grant to attend necessary PD as needed. HS, CC and school districts often share PD opportunities.

Financing/Incentives:	Initial achievement award; Annual quality award; Tiered incentive per subsidy reimbursement. Non-monetary grants (curricula, etc.).	No incentives tied to All STARS. Districts/sites must use preschool allocations and district general funds to ensure quality.	HS programs that are licensed have the ability to receive incentive dollars through licensed child care. Those HS programs that are blended with public preschool are not eligible for incentives.

Financing the System

The concept of sustainable funding was addressed in Kentucky's recent Race to the Top Early Learning Challenge grant sustainability study. That study, in part, targeted the ability of professionals within the state to sustain "every day" quality and to continue to meet and improve programming, in concert with All STARS standards. The study team noted two major challenges on this front:

1. The 2017 Cost of Quality study estimated the costs at different quality levels for the Kentucky Preschool Program and the Child Care Assistance Programs and found that the reimbursement rates for both programs were significantly lower than the cost of care and the disparity is particularly dramatic for infants and toddlers[114]. One of the primary concerns is that early education programs face cost barriers associated with the hiring and retaining of qualified teachers as well as the costs of research-based curricula and classroom materials to ensure a stimulating environment.
2. Families experience cost barriers associated with finding and selecting high-quality care—higher quality care is more expensive and many families require subsidies to afford this level of care.

On this latter point, many working families may not be able to afford higher quality care, as they are not eligible for CCAP support. Further, existing supports may not be sufficient to meet the "true cost" of high quality care—which means private child care programs (a) may not provide the highest quality of care that is possible (or that they would like to provide or are capable of providing) or (b) may stop providing services. Data presented in an earlier section of this report indicate a decrease in the number of private child care providers, for example, although it is speculation to conclude that the decrease is due to cost factors (either alone or in part).

A recent report by the National Academy of Sciences is helpful for understanding "*how to fund early care and education for children from birth to kindergarten entry that is accessible, affordable for families, and of high quality, including a well-qualified and adequately supported workforce.*[115]" The authors recommended the following strategies:

- Consistent standards for high quality across all programs,
- Reflect the total cost of high quality early education including teacher compensation,
- Access to affordable high-quality early education for all children without parental requirements,
- Both institutional support to providers who meet quality standards and assistance directly to families,
- State level coordinating entity to process state and federal funding streams,
- Governments increase funding and revise tax preferences to provide adequate, equitable and sustainable funding,
- A coalition of public and private funders develop plans to guide transitions toward reformed financing structures,

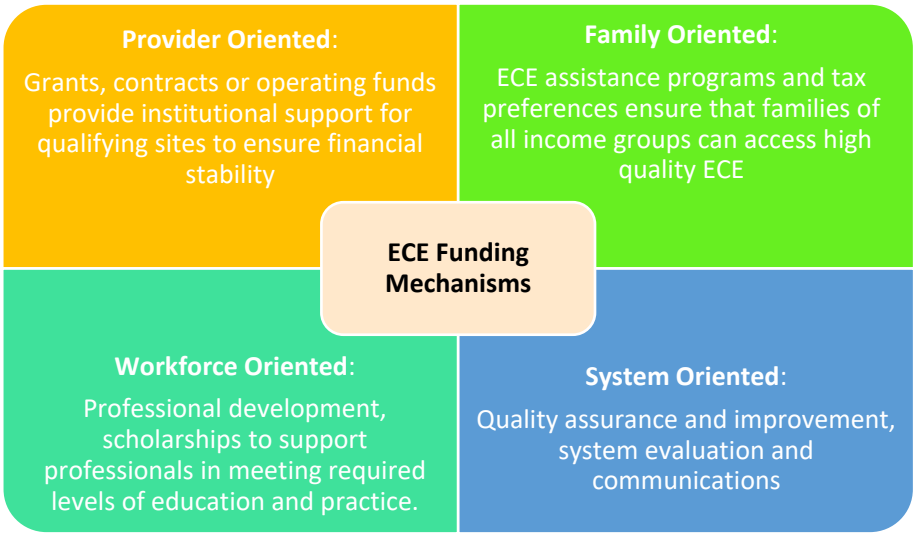
[114] Building Blocks: The Kentucky Early Childhood Cost of Quality Study. Prichard Committee for Academic Excellence, 2017. http://prichardcommittee.org/wp-content/uploads/Cost-of-Quality-Brief-November-2017.pdf

[115] National Academies of Sciences, Engineering, and Medicine. (2018). Transforming the Financing of Early Care and Education. Washington, DC: The National Academies Press.

- Financial assistance to increase professionals' knowledge and competencies to achieve required qualifications,
- Grants to institutions and systems of post-secondary education to develop ECE programs and align curricula with the science of child development and high-quality professional practice, and
- Research and evaluation to ensure efforts to improve ECE system are resulting in positive outcomes for children and in the recruitment and retention of a highly qualified workforce.

In short, states should develop financing mechanisms that reflect the total cost of early care and education, which includes a highly qualified and appropriately compensated workforce. These mechanisms should include components that are Provider Oriented, Family Oriented, Workforce Oriented and System Oriented (Exhibit 216).

Exhibit 216 Recommended ECE Funding Mechanisms



With specific regard to Kentucky, some of the major system elements that are critical in sustaining quality include:

- Teacher scholarships to support teachers in completing degrees and credentials,
- Teacher compensation to sustain a highly qualified workforce,
- Professional development that is ongoing and intensive to support quality instruction,
- Subsidy reimbursement rates that reflect the full cost of care including qualified staff, and
- Specialized supports and services for children with high needs such as those that have experienced trauma.

The real question is where to source the funds that will allow Kentucky to respond to these specific needs. Kentucky, like many other states, relies on a variety of sources including state tax revenue, federal resources in the form of formula grants and recurring spending, and funds made available to Kentucky from the Tobacco Master Settlement Agreement. These resources, combined, must account for the bulk of investments made in the entire early childhood care and education system—and not just in early care and education programs. Thus, there are competing interests for

the finite resources at hand. As discussed below, the state is completing a fiscal mapping study that is more fully exploring these different funding resources as well as the barriers attached to each.

Opportunities for More Efficient Allocation of Resources Across the System

Fiscal Mapping of System Elements

As noted above, Kentucky relies upon a comprehensive collection of early childhood care and education programs and services, which receive funding from federal, state, or a blend of federal and state agencies. Two major partners, for example, include the Cabinet for Health and Family Services and the Kentucky Department of Education, each of which operate statewide programs designed to provide services for eligible young children and their caregivers. In addition, Kentucky's early childhood system is the beneficiary of Tobacco Master Settlement Agreement (MSA) funds.

Kentucky currently is conducted a fiscal mapping project, encompassing more than 30 state and federal early childhood-related resources. The fiscal mapping project was designed to illuminate different resource streams and to assist the state in identifying efficiencies (including a review of policy and regulatory barriers). Exhibit 217 presents many of the streams that are being investigated (noting that local resources are not included).

Exhibit 217 Funding Sources

Federal and State Resources		Tobacco MSA
• Individuals with Disabilities in Education Act Parts C and B • Head Start and Early Head Start • Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV) • Healthy Start • Women, Infants, and Children • Temporary Aid for Needy Families • Child Care and Development Fund • KCHIP (Children's Health Insurance) • Medicaid • Visually Impaired Preschool Services Program	• Striving Readers Comprehensive Literacy • Newborn Metabolic and Cardiac Screening • Early Hearing Detection and Intervention • Prenatal Program • Child Fatality Review • PDG - KY Strengthening Families • Knox Promise Neighborhood • Perry Promise Neighborhood • CCAMPIS • Food programs – including CCAFP and others • Libraries • State expenditures in support of public preschool	• Early Childhood Development Programming • Health Access Nurturing Development Services (HANDS) • Healthy Start (MSA funds) • Folic Acid Program • Early Childhood Mental Health • Early Childhood Oral Health • Substance abuse prevention and treatment for pregnant women with a history of substance abuse problems • Early Childhood Adoption and Foster Care Supports Program • Early Childhood Advisory Council

The Bipartisan Policy Center recently completed a national examination of the efficiency of state early childhood systems[116]. Kentucky was noted to be drawing down 100% of TANF and child care funds and received a score of 29.5, which was below the average score of 35. It is important to review the methodology for the study in order to understand the score:

[116] https://bipartisanpolicy.org/wp-content/uploads/2018/12/Kentucky-State-Fact-Sheet.pdf

To compare states, BPC developed a scoring system that combines several of the measures of program organization and integration discussed in the report. Specific factors considered in the scoring system include the following:

- The number of state agencies involved in administering core early care and education (ECE) programs, specifically Child Care and Development Fund (CCDF); Temporary Assistance for Needy Families (TANF); IDEA Part B, Section 619 preschool grants for children with disabilities; IDEA Part C early intervention program for infants and toddlers with disabilities; Child and Adult Care Food Program (CACFP); state Pre-K; and the Head Start Collaboration Office.
- Whether some funding streams were split across agencies (such as child care subsidy and child care quality programs).
- The institutional home for child care, state Pre-K, and CACFP administration.
- The institutional home of the Head Start Collaboration Office

BPC's scoring system also took into account whether a state had an early childhood state advisory council (SAC) and the degree to which a state's quality rating and improvement system (QRIS) was integrated with its child care subsidy systems. (For example, did the state have a QRIS and, if so, was it linked to licensing, whether required or voluntary, for child care providers who participated in the state's child care subsidy system?)

Bonus points were awarded for states that supplemented their federal ECE funding beyond specified matching or maintenance-of-effort requirements. States lost points if they did not draw down all of their federal matching child care funds.

The general concept was that states scored higher for more integrated administration of ECE programs and for supplementing federal funds with additional state resources beyond the minimum level required, whereas states scored lower if ECE program administration was spread over a larger number of agencies and/or the state did not use all the federal funds available to it. In BPC's scoring system, states could earn a maximum of 50 base points, based on ECE integration, and a maximum of 20 bonus points, based on supplementing federal funds with additional state resources.

Source: https://bipartisanpolicy.org/report/ece-administration-state-by-state/

Thus, Kentucky scored below the average score across states, but above the midway value on the 50 point scale. Recommendations included many topics which currently are under discussion:

- Facilitate cross-agency communication to ensure seamless coordination and transition for IDEA Part C (infants/toddlers) and Part B, Section 619 (3-5 year olds).
- Increase efficiency and cost-effectiveness of monitoring and oversight by aligning the administration of the Child Care and Development Fund (CCDF) with state Pre-K and the Child and Adult Care Food Program.
- Improve program alignment and efficiency by co-locating CCDF with state Pre-K and Head Start Collaboration Office.
- Ensure the State Advisory Council for Early Education and Care, mandated by the Improving Head Start for School Readiness Act of 2007, is fulfilling its required activities, including conducting a statewide needs assessment on the quality and availability of early care and learning programs.
- Include licensing as the entry level for state Quality Rating and Improvement System to ensure program quality

Source: https://bipartisanpolicy.org/wp-content/uploads/2018/12/Kentucky-State-Fact-Sheet.pdf

As Kentucky more fully explores and makes progress towards a unified Prenatal-Third Grade framework, ideas regarding alignment, coordination, and efficiency are particularly salient.

Business and Economic Development Needs

Early care and education programs provide a critical support for businesses, helping to ensure a stable labor pool can participate in the workforce. Thus, Kentucky seeks to partner with local communities and Chambers of Commerce to further understand business and economic development needs. This includes an understanding of how businesses are growing—what is the nature of the desired workforce, the days and shifts care is or will be needed, locations best suited for parents, the affordability of high quality care for the workforce, etc. This also includes an understanding of how communities and businesses are prepared to assist parents in finding and using care.

Barriers to the Efficient Use of Resources: Synthesis

This section addresses the following questions:

1. **What barriers currently exist to the funding and provision of high-quality early childhood care and education supports?**
    a. **Are there characteristics of the current governance or financing of the system that present barriers to funding and provision of high-quality ECCE services and supports?**
    b. **Are there policies that operate as barriers?**
    c. **Are there regulatory barriers that could be eliminated without compromising quality?**
    d. **For this question, you should be sure to include a discussion of supports in the broader early childhood system not just the ECCE system.**

The information presented in this section focuses primarily on the regulations attached to private child care, public preschool and Head Start/Early Head Start, as these are the three operational models for providing early care and education programs in Kentucky. Further, a fiscal mapping study currently is underway that addresses multiple system domains, including financing and policies. Study results are expected in winter 2019.

The three operational models all participate in a unified approach to quality, which is Kentucky All STARS. At the same time, each model operates under a distinct array of policies and regulations, which reflect the funding and licensing attached to each model. The presence of different policies and regulations creates duplication of functions across models and confusion when a site uses braided or blended funding (and thus, may find different regulations apply, as described in Exhibit 208).

2. **Are there opportunities for a more efficient allocation of resources across the system?**
    a. **Have there been successful efforts in the state at implementing strategies that have improved the efficient use of resources?**
    b. **Why and how were they successful and what needs to be done to replicate them?**
    c. **Have there been efforts that were undertaken, but did not show positive results?**
    d. **What can be learned from these experiences?**

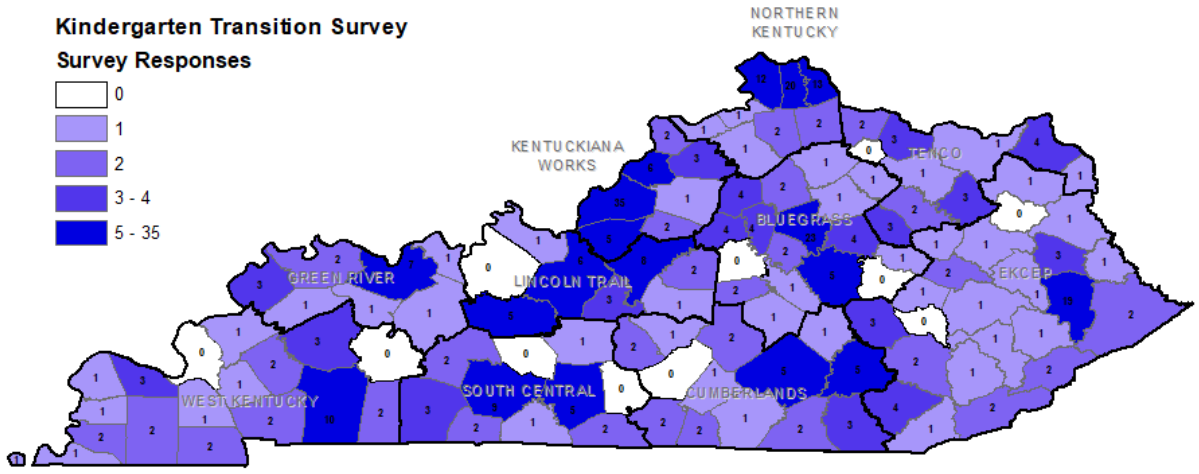
Kentucky's Early Childhood Advisory Council (ECAC) implemented the fiscal mapping project, with support from the PDG B-5 grant, as a means of understanding how much financial investment is available (from state and federal resources) **and still needed** to meet the needs reflected in a comprehensive early childhood system. The ECAC can use this study as a complement to the Needs Assessment and Strategic Planning processes; many of the resource streams explored by the fiscal

mapping projects also were explored and discussed in the Needs Assessment process and can be discussed further in the Strategic Planning process. Moving forward, it will be important to consider local contributions to the early childhood system, as a complement to state and federal resources, and the sustainable processes that can be built for regularly updating the fiscal information as well as the policies and regulations that accompany the investments. Of most interest is how the fiscal mapping information, combined with information from this Needs Assessment, can inform the state's action plans, focusing on the efficient and leveraged use of resources to serve children according to their needs. Implementing recommendations for efficiencies requires a careful examination of the regulations and statutes that accompany the different state and federal investments. The early childhood sector that is the unified Kentucky All STARS initiative appears to be most primed to receive this level of analysis. However, the fiscal mapping project is not restricted to the state's TQRIS, which is of value as Kentucky considers efficiencies across the multiple sectors involved in early childhood.

Section 10. Transition Supports and Gaps

This section contains information from a statewide transition practices survey, which was distributed to members of the early care and education profession in spring 2019. As of this reporting, 109 (90.8%) of 120 counties were represented by at least one respondent. A total of 361 respondents (172 in 77 rural counties, 42 in 14 partially rural counties, 147 in 18 non-rural counties) completed the survey (Exhibit 218). Respondents represented local Community Early Childhood Councils (n=11), Head Start grantees or programs (n=27), Local Education Authorities or independent school districts (n=29), elementary schools or public preschools (n=124), private child care programs (n=118), among others (including community organizations, n=52). Respondents reported that their roles included administrators (directors, or owners; n=182), preschool coordinators (n=91), teachers (providers or instructional staff, n=45), and others (n=43).

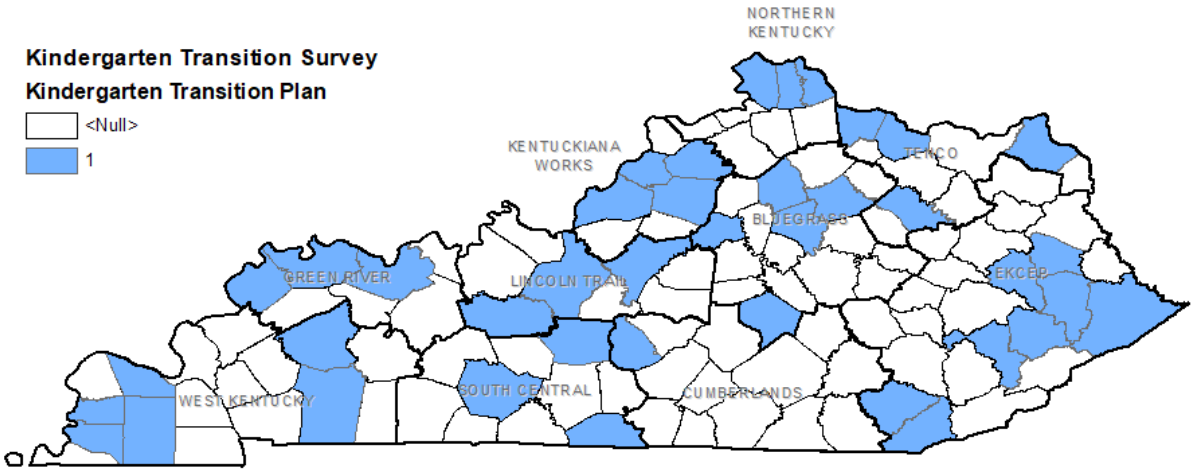
Exhibit 218 *Counties Responding to the Survey of Transition Practices: Number of Survey Responses*



Strengths and Weaknesses of Transition Supports (and Differences by Type of Respondent)

One guiding practice for kindergarten transitions is the development and use of a **Kindergarten Transition plan**; 67 of 281 respondents (24%) reflecting 40 counties (Exhibit 219) reported that their county has a written plan. Of note, 159 respondents (57%) reported that they were unsure.

Exhibit 219 Counties Reported to have a Written Kindergarten Transition Plan



Of 272 responses, 191 (70.2%) respondents indicated that their counties offer **activities to promote or support rising kindergarten children and families**. In addition to other kindergarten readiness events, the most commonly mentioned activities included:

- "Pre-packaged" programs such as Born Learning Academies, and Me and My School, Count Down to Kindergarten, Kindergarten Jumpstart, etc. (27.5%),
- Field trips, open houses, or classroom visits (26.3%), and
- Kindergarten readiness camps (18.1%).

Respondents also were asked to choose from a list of strategies for parents and families; there were 230 responses:

- 85% reported events to connect schools and families and children (such as kindergarten registration days or events),
- 65% reported parent-teacher meetings, which may include parents of pre-kindergarten children, early care and education providers (e.g. private child care, public preschool, Head Start), and kindergarten administrators or teachers),
- 62% reported web-based, internet or social media tools (e.g. Facebook, Twitter) designed to communicate information to parents of prekindergarten children,
- 55% reported marketing and outreach materials about kindergarten transitions designed for distribution in your county, community, or school district,
- 44% reported web blasts or email alerts about kindergarten registration materials and information,
- 5% reported another type of strategy, and
- 3% reported "none of the above."

Exhibit 220 presents the 98 counties that were reported to provide at least one strategy for parents and families. Exhibit 221 presents additional details on the nature of strategies, as well as the percent of child care, Head Start, and public preschool respondents who reported the use of each

strategy in their communities. In reviewing the information provided in Exhibit 221, it is important to note that responses may indicate a lack of awareness of what other educators or programs in counties may be doing. Thus, a survey respondent who indicated that a strategy is not being used may not be aware of its use by other educators in the same county or district.

Exhibit 220 *Counties Reported to Provide at least One Strategy for Parents and Families*

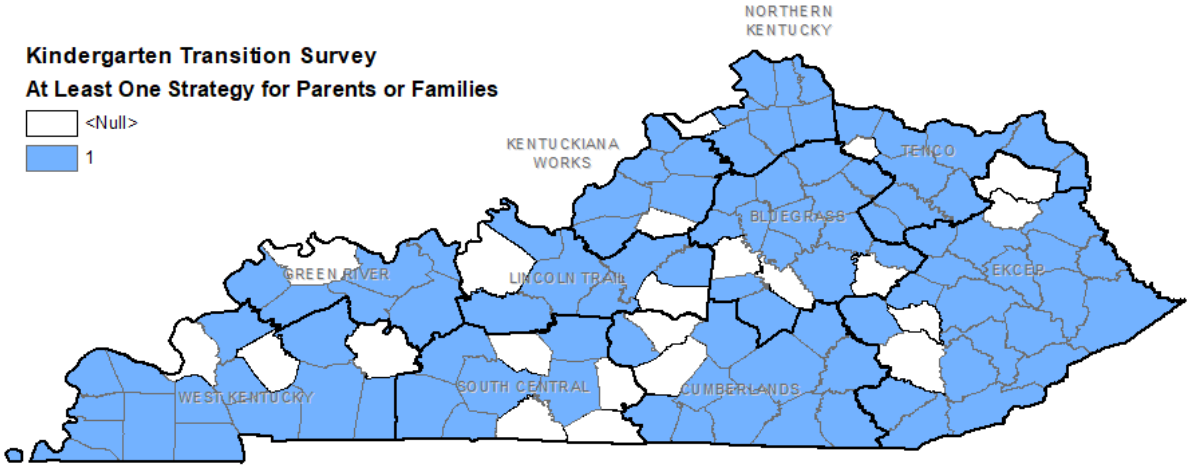


Exhibit 221 *Parent and Family Strategies by Type of Respondent*

	Private child care (n=117)	Head Start (n=27)	Local education authority/ public preschool (n=153)	Community Early Childhood Council (n=11)
Parent-teacher meetings, which may include parents of pre-kindergarten children, early care and education providers (e.g. private child care, public preschool, Head Start), and kindergarten administrators or teachers	26% 30	44% 12	58% 88	36% 4
Marketing and outreach materials about kindergarten transitions designed for distribution in your county, community, or school district	25% 29	26% 7	45% 69	45% 5
Web-based, internet or social media tools (e.g. Facebook, Twitter) designed to communicate information to parents of pre-kindergarten children	24% 28	30% 8	58% 89	36% 4
Events to connect schools and families and children (such as kindergarten registration days or events)	48% 56	52% 14	63% 97	45% 5
Web blasts or email alerts about kindergarten registration materials and information	12% 14	19% 5	44% 67	27% 3

Some strategies focused on children. From 225 respondents:

- 84% reported a chance for children to meet or talk to their kindergarten teacher(s) (e.g. "Meet the teacher night"),

- 64% reported (a) kindergarten orientation and (b) kindergarten materials distributed within the community - backpacks, books, crayons, etc.,
- 56% reported summer programming, such as short-term kindergarten club or camp offered summer before school,
- 21% reported home visits by kindergarten teachers,
- 7% reported another type of strategy, and
- 2% reported "none of the above."

Exhibit 222 presents the 97 counties that were reported to provide at least one strategy for children. As noted above, when examining data by type of respondent (Exhibit 223) it should be noted that some respondents may not be aware of strategies used by other educators or programs in their district or county.

Exhibit 222 Counties Reported to Provide at least One Strategy for Children

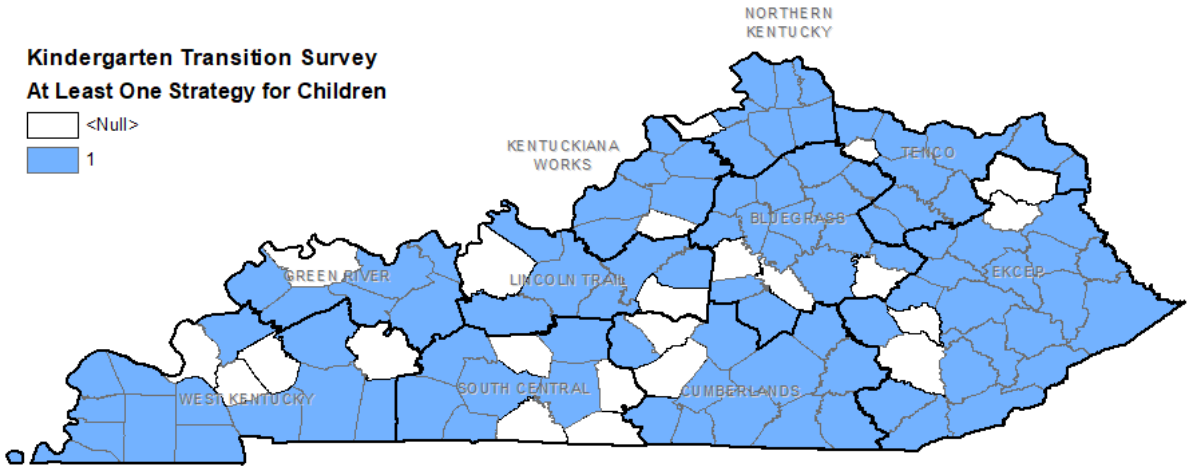


Exhibit 223 Child Strategies by Type of Respondent

	Private child care (n=117)	Head Start (n=27)	Local education authority/ public preschool (n=153)	Community Early Childhood Council (n=11)
Kindergarten materials distributed within the community - backpacks, books, crayons, etc	26% 30	41% 11	54% 82	36% 4
Summer programming - such as short-term kindergarten club or camp offered summer before school	25% 29	19% 5	46% 70	36% 4
A chance for children to meet or talk to their kindergarten teacher(s) (e.g. "Meet the teacher night")	49% 57	41% 11	61% 94	45% 5
Home visits by kindergarten teachers	12% 14	9% 1	17% 26	--
Kindergarten orientation	31% 36	19% 5	54% 83	27% 3

Respondents also noted the existence of strategies and activities for professionals. Of 230 respondents:

- 66% reported sharing of information between parents, early care and education providers (e.g. private child care, public preschool, Head Start), and kindergarten administrators or teachers. Information may include health information, developmental information or screening results, child portfolios, or other materials or communications,
- 46% reported kindergarten transition and family engagement training or workshops for early care and education providers, kindergarten teachers, or school staff,
- 35% reported a transition planning or advisory team for your county that includes early care and education providers or teachers, kindergarten teachers, administrators, parents, and stakeholders from other community agencies (such as Head Start),
- 32% reported joint professional development for early care and education teachers and kindergarten teachers to align knowledge and strategies,
- 25% reported planning events to align curriculum and approaches between early care and education and K-12 systems,
- 15% reported "none of the above," and
- 10% reported some other form of activity or service for professionals.

Exhibit 224 presents the 95 counties that were reported to provide at least one strategy for early care and education professionals, while Exhibit 225 presents information on strategies for professionals, disaggregated by type of respondent. The caveats noted earlier regarding respondent awareness of strategies apply here as well.

Exhibit 224 Counties Reported to Provide at least One Strategy for Professionals

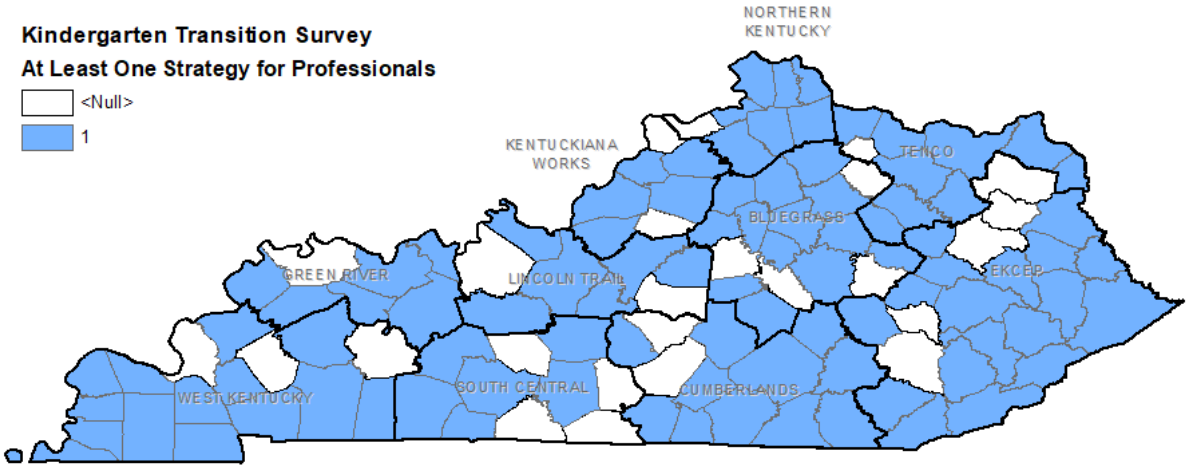


Exhibit 225 Professional Strategies by Type of Respondent

	Private child care (n=117)	Head Start (n=27)	Local education authority/ public preschool (n=153)	Community Early Childhood Council (n=11)
Kindergarten transition and family engagement training or workshops for early care and education providers, kindergarten teachers, or school staff	17% 20	26% 7	42% 64	36% 4
Joint professional development for early care and education teachers and kindergarten teachers to align knowledge and strategies	10% 12	15% 4	32% 49	27% 3
Planning events to align curriculum and approaches between early care and education and K-12 systems	6% 7	15% 4	27% 41	27% 3
Transition planning or advisory team for your county that includes early care and education providers or teachers, kindergarten teachers, administrators, parents, and stakeholders from other community agencies (such as Head Start)	8% 9	26% 7	35% 53	18% 2
Sharing of information between parents, early care and education providers (e.g. private child care, public preschool, Head Start), and kindergarten administrators or teachers. Information may include health information, developmental information or screening results, child portfolios, or other materials or communications.	26% 31	37% 10	58% 89	36% 4

Effectiveness of Communication between Early Care and Education Providers and School Systems

One hundred eighty (n=180) respondents cited various strengths in their counties. The most often cited (21.1%) as a strength was **communication and information sharing both across agencies and with parents**. Other strengths mentioned included collaboration between agencies, transition events and resources, and community support.

While 21.1% of respondents noted communication as a strength, 19.8% also indicated that communication with and outreach to private child care and preschool about kindergarten readiness and transition supports is greatly in need of improvement. It was noted by three respondents that communication between the private and public sectors is enhanced in those counties with a CECC and Preschool Partnership Collaboration and Director Leadership Academies. An important gap is the need for outreach to families or children who are not in private or public early education programs.

There were many different comments among the 177 received about gaps and weaknesses of transition supports in their counties, including

- Communication and information-sharing between public (preschool and Head Start) and private (home-, faith-, center-based) early care and education programs (19.2%),
- Parent communication (especially for those whose first language is not English or who lack the resources to access the internet), knowledge, and education about the importance of school readiness and transitions (14.1%), and

- Reaching and preparing children who are not in any organized early education programs (12.4%) or who have not received any previous early intervention services (2.3%).

Communicating with Parents

Two hundred and nine (209; Exhibit 226) respondents answered the question, "Agencies in my county communicate with parents about transition activities (other than kindergarten registration information) by…".

Exhibit 226 Communication Methods: Parents

	%
Providing printed information and materials	72.7%
Making media or social media announcements	61.2%
Distributing flyers within the community	55.0%
Providing web-based information and materials	53.1%
There are no transition activities for parents or children	7.2%
Other	5.7%

When asked what types of information were communicated, 220 respondents indicated that:

- 77% reported communicating information about the kindergarten registration process and logistics,
- 67% reported communicating information for parents about preparing children for school,
- 30% reported communicating an introduction to elementary school policies and procedures,
- 25% reported communicating an overview of the kindergarten curriculum,
- 20% reported being unsure what was communicated, and
- 2% reported communicating (a) another type of information or (b) none of the above.

Targeted Supports

Of the 361 surveys completed, 217 (60.1%) respondents representing 95 counties answered a question about targeted transition supports for children who are vulnerable or underserved, in rural, and/or have special learning or developmental needs (Exhibit 227). Overall, more than half (60.8%) of those responding to the question noted that there are supports for children with special learning or developmental needs and slightly less than half (49.3%) indicated that there are transitions supports in their counties for children who are vulnerable or underserved. More than one third of those responding indicated that either they are unsure (34.6%) whether supports are available and 3.2% said that no targeted transition supports are provided in their counties. Overall, 33.2% of all respondents (including 23.1% of respondents representing rural or partially rural counties) said that targeted supports are provided for children in rural areas.

Exhibit 227 Targeted Supports for Children

	Overall	Respondent County Type		
		Not Considered Rural	Partially Rural	Rural
Children with special learning or developmental needs	60.8%	20.7%	6.9%	33.2%
Children who are vulnerable or underserved	49.3%	17.5%	6.0%	25.8%
Unsure if there are targeted transition supports	34.6%	16.1%	5.1%	13.4%
Children in rural areas	33.2%	10.1%	3.7%	19.4%
There are no targeted transition supports	3.2%	--	1.4%	1.8%

Survey participants provided additional information on the nature of targeted transition supports across different populations of interest, shown in Exhibits 228 to 230. Exhibit 228 provides responses for vulnerable or underserved children, Exhibit 229 provides information for rural children, and Exhibit 230 presents information for children with special learning or developmental needs.

Exhibit 228 Targeted Transition Supports for Vulnerable or Underserved Children

	% (of n=91)
Kindergarten readiness camps / transition activities (school visits, parent & staff meetings, etc.)	41%
Programs & services	31%
• Books/literacy programs, summer programs, home visits, FRYSC, Head Start, and other programs and services	
Collaboration with agencies & organizations	26%
• CECCs, FRC, Head Start, and other agencies and organizations	
Information for parents	20%
Identify / target families	16%
Family/community events & activities	15%
Backpacks, school supplies, readiness materials	11%
Screenings, developmental and other	8%
Food/food assistance	8%

Exhibit 229 Targeted Transition Supports for Rural Children

	% (of n=64)
Programs & services	42%
• Home visits, First Steps, Head Start, Born Learning Academy, FRYSC, FRC, books/literacy, and other programs and services	
Parent information & education	31%
Kindergarten readiness camps / transition activities (school visits, parent & staff meetings, etc.)	30%
Backpacks, school supplies, readiness materials	9%

Family events & activities	9%
Identify / target families	9%
Summer programs	8%
Collaboration with agencies & organizations	6%
Food/food assistance	6%

Exhibit 230 Targeted Transition Supports for Children with Special Learning or Developmental Needs

	% (of n=119)
Kindergarten readiness camps / transition activities (school visits, parent & staff meetings, etc.)	32%
Programs & services	29%
• First Steps, Head Start, specialists (e.g., OT, PT, etc.), preschools and daycares, and other programs and services	
Collaboration with agencies & organizations	17%
• First Steps, preschools and schools, Head Start, and other agencies and organizations	
Special needs transition plans	28%
• ARC meetings, IFSP to IEP transition, and other individualized transitioning	
Identify / target families	9%
Screenings	8%
• Developmental screenings and other screenings	
Family events/activities	4%
Parent information & parenting education	4%
Backpacks, school supplies, readiness materials	2%

Other Transition Supports

Respondents were asked to indicate what additional types of transition supports might be available, in addition to support for transitioning to kindergarten. Responses are shown in Exhibit 231. The most commonly cited support was for the transition from Early Head Start or Head Start to a different program, which is understandable given Head Start's guidance and requirements on transitions. Also frequently cited was support for transitions into special education or related services, from other settings, and support for transitioning across age groupings in early care and education settings.

Exhibit 231 Other Transition Supports

	N
Transitioning from Early Head Start or Head Start to other programs	102
Transitioning into special education, learning, or developmental services from other settings	98
Transitioning across age groupings in private child care, Early Head Start/Head Start, or public preschool settings	92
Transitioning from special education, learning, or developmental services from other settings	78
Transitioning into a center or classroom-based setting for the first time	66
Transitioning children for whom English is a Second Language into education, health, or other services	53

Of interest, 61 respondents reported that they were unsure of other transition information or supports provided in their community (while two respondents reported that no other transition information or supports were provided). Thus, there is an opportunity for additional community education regarding transition supports using a more holistic approach.

Focus group participants also provided feedback on transition strengths and weaknesses. Participants noted the importance of teacher involvement and the child's current location, in preparing them for the next placement or site. Several strategies were suggested for improving transitions:

- Improve knowledge regarding learning strategies for children (address gaps in knowledge and misconceptions),
- Define what it means to be "on track" and how to get there, and
- Give parents basic information on transitions (e.g., how to enroll, where to get information on school programs, assessments, and how to get children ready).

Additional feedback on transitions was available from community stakeholders, who participated in the fall 2018 online survey. According to these stakeholders, the biggest needs related to the resources or services that help children transition into kindergarten were (a) **making sure services or information are available in more than one language (61.6%)** and (b) **making sure there is an easy website to learn about or find services (61%).** Other highly ranked needs included:

- Increase the availability of services or make sure each community has this service (56.8%);
- Increase coordination across state agencies providing these types of services (56.2%);
- Improve outreach and education about services (56.1%);
- Make it easier to find and use services (55.6%);
- Improve quality of services (55.3%);
- Increase coordination across local agencies providing these types of services (55.2%); and
- Increase the range of service options or types of services (53.3%).

Transition Supports and Gaps: Synthesis

This section presents information to respond to the following questions:

1. **What are the strengths and weaknesses of the transition supports for children moving from the early care and education system to school entry?** Results from a recent statewide survey of kindergarten transition practices indicate a range of practices. Survey respondents reported parent and family, child, and professional strategies that varied by county or district and by type of respondent, with private child care providers less frequently reporting the use of transition practices (compared to Head Start and public preschool educators). It also is possible that respondents may not be aware of transition practices occurring within their county or district—leading to varied findings within counties or districts. The lack of communication and coordination that is implied is a weakness that Kentucky currently is working to address, with support from the PDG.

2. **Are there targeted supports for vulnerable or underserved children and children in rural areas?**
    a. **What is effective about these?**
    b. **What could be better?**

Respondents identified different types of targeted supports for vulnerable children, rural children, and children with special learning or developmental needs. It could be questioned, however, whether the practices that survey respondents reported as targeted supports can be improved with a review of evidence-based practices. Again, this is an area Kentucky currently is working to address with support from the PDG.

3. **Are there transition supports across the age spans or are they for specific age populations?**
    a. **Are there transition policies/practices that support children in all types of care and education settings?**

Kentucky has identified multiple transitions of interest, starting at birth and proceeding through transition into formal education. Survey respondents also identified different types of transitions, as reported in this section. This is an area for building awareness and supports.

4. **How are parents currently provided with information about transitions?**
    a. **Is the information provided in a culturally and linguistically sensitive manner?**
    b. **What is effective about the information provided?**
    c. **What could be improved?**

Parent communication is a common transition practice, with many respondents reporting on different strategies and techniques. However, Preschool Development Planning Community Feedback Survey respondents indicated that providing information in more than one language was a need. Further, data presented elsewhere in this report indicates a wide range of languages present across Kentucky.

It also is helpful to consider the different types of information that is made available. It is relatively common to provide information about the logistics of registering for and starting school. It also is relatively common to provide information on how to get children ready for school. However, variation is possible, not only across the state but within counties and districts. Thus, Kentucky has an

opportunity to consider if and how best to standardize its approach and to provide support for counties and districts with regard to a vision for transitions and best practices.

5. **How do the supports differ based on the type of early care and education provider (e.g., Head Start, state/territory Pre-K, home care provider, private or religious-based provider)?**

It isn't surprising that public preschools, housed within or operated by the Local Education Authority, more frequently report the use of different strategies, compared to respondents working in private (licensed or certified) child care and Head Start sites. Further, it is possible for respondents to not be aware of the strategies or techniques used by other practitioners, in their county or district.

6. **How effective is the communication between early care and education providers and school systems? What could be done to improve that communication?**

Respondents provided suggestions for improving communication on the issue of kindergarten transition. These included improving cross-sector communication across public preschool, Head Start, and private (licensed or certified) child care providers. The suggestions also identified improvements for parents for whom English is a second language, and parents who have limited access to the internet. Finally, there is a concern for communicating with parents of children who are not in early care and education programs, and ensuring communications are inclusive of this population.

Section 11. System Integration and Interagency Collaboration

Practices for Effective and Supporting Interagency Collaboration

Early Childhood Advisory Council

Kentucky's primary means of ensuring interagency collaboration is the state's Early Childhood Advisory Council (ECAC), which was established by Executive Order 2012-586, and most currently amended in 2013 in Kentucky House Bill 184. Many early childhood system partners have representation on the ECAC, as shown below in Exhibit 232.

Exhibit 232 Membership of the Early Childhood Advisory Council

NAME	ROLE	ROLE DESCRIPTION	NOTES
Sarah Vanover	1	State Child Care Agency	Division of Child Care
Wayne Lewis	2	Lead State Education Agency	Department of Education
Amy Smith	3	Local Education Agencies	Pulaski Co. Schools
Amy Hood	4	Higher Education Institutions	Western KY University
Anita Dowd	5	Early Childhood Services	Commission for the Deaf
John Roden	6	Local Head Start Agency	KY River Foothills Dev. Ctr.
Sally Shepherd	7	State Head Start Collaboration	Head Start State Director
Paula Goff	8	State Agency (Part C of IDEA)	Program Director (Part C)
Kristi Putnam	9	State Health Agency	Deputy Secretary, CHFS
Travis Burton	10	Early Childhood Policy Initiative	KY Chamber of Commerce
Twila Burdette	11	Private Sector Early Childhood	Rockcastle Regional Hospital
Derrick Ramsey	12	Member At-Large	Secretary, Education Cabinet
Linda Hampton	13	Executive Director	Governor's Office of Early Childhood
Danny Carroll	14	Senator	Member of the Senate
Regina Huff	15	Representative	Member of the House of Representatives

Further, several additional members have time-limited privileges, including members from an Institute of Higher Education, a local school district, a Board of Education member from a local district, and the private sector.

The council serves the important functions of vision, guidance, and oversight. The ECAC is in the process of renewing the state's Strategic Plan for early childhood, with attention to establishing a Prenatal-Third Grade perspective on early childhood systems development. With contributions from major state agencies, the ECAC facilitates collaboration across system partners.

The ECAC supports an Executive Committee and eight sub-committees: Data, Program Investment, Mobilizing Communities, Strengthening Families, TQRIS, Communications, Professional Development, and Prenatal-Third Grade. The committee and sub-committees, in turn, activate work groups to respond to issues and requests for information and feedback.

Over the past year, the ECAC has invested in learning more from local stakeholders about the nature and functioning of the system at the community level. This has occurred in focus groups and data collections that target stakeholders, statewide, as well as invitations for different stakeholders to participate in work groups and other events. Several ideas and strategies have emerged:

- The need for state and local agencies to coalesce around training and promoting best practices for working with children with high numbers of Adverse Childhood Experiences (ACES),
- Adopting Memoranda of Understanding across partner agencies to further align and provide seamless services to parents as well as staff,
- Identify and align best practices across early care and education models,
- Use Kentucky Strengthening Families as a foundation for providing care, and
- Expand the alignment and unification of early care and education models under Kentucky All STARS (e.g., processes, consistency of implementation).

Stakeholder Engagement
In addition to the surveys and focus groups conducted for this Needs Assessment, Kentucky is conducting focus groups with the Early Childhood Advisory Council (ECAC) as one component of the strategic planning process. Kentucky also recently completed its RTT-ELC validation study, which incorporated data and feedback from a stratified, random sample of early care and education facilities, parents, and early care and education professionals across the state. Similarly, Kentucky's recently completed RTT-ELC sustainability study incorporated stakeholder interviews with ECAC members and partner agency staff. The PDG B-5 grant created opportunities for partner agency staff and other stakeholders to participate on committees and work groups, and provide input and feedback into the early childhood system planning and development process.

Community Early Childhood Councils

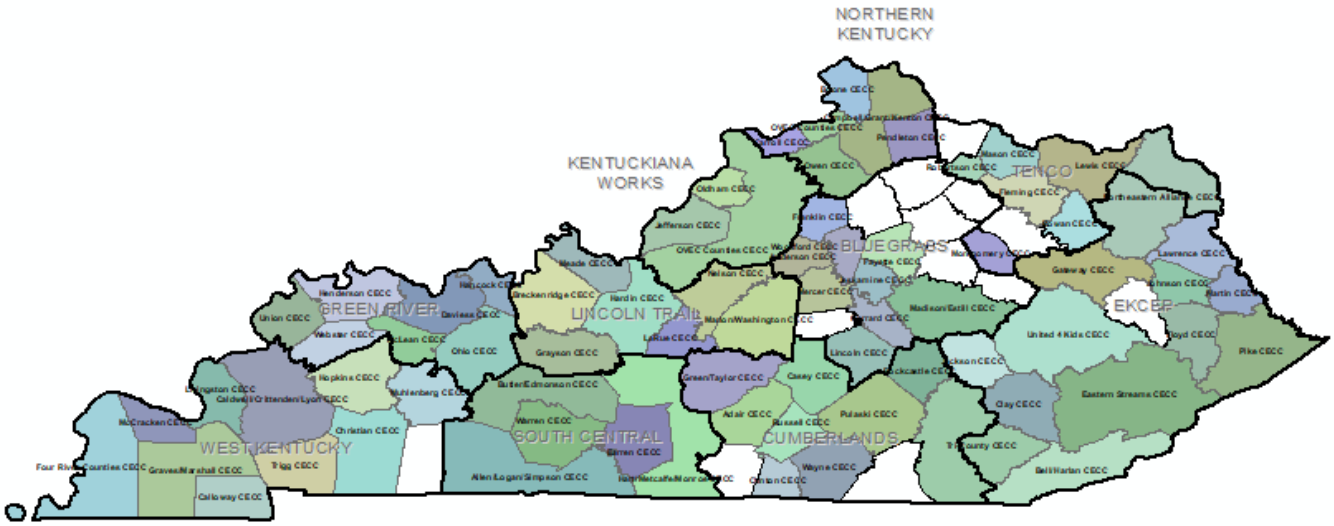
The ECAC supports Community Early Childhood Councils (CECCs), which were established to focus local attention and energy on local needs:

> Community Early Childhood Councils (CECCs) are an integral part of Kentucky's early childhood system. The councils have the crucial role of mobilizing local community members and encouraging partnerships of licensed childcare centers, certified family childcare homes and public preschool providers to offer high-quality learning environments for children who reside in their service areas.
>
> To ensure the best early care and education for our youngest citizens, we must mobilize communities at the local level to meet the locally identified needs of children and families. This strategy is the foundation for the creation of the CECCs.
>
> The Vision for Kentucky is that all young children in Kentucky are healthy and safe, possess the foundation that will enable school and personal success, and live in strong families that are supported and strengthened within their communities. The primary goal of all CECCs is to build innovative, collaborative partnerships that promote school readiness for children and families.

> These Councils bring local partners together, identify local needs, develop strategies to address those needs, and measure their results. In these pages, partners will find tools and resources to help them mobilize and improve their communities.
>
> Source: https://kidsnow.ky.gov/communities/Pages/default.aspx

Currently, there are 73 CECC's throughout the state, providing services to 107 counties (Exhibit 233).

Exhibit 233 Existing Community Early Childhood Councils



CECCs were examined during Kentucky's recent Race to the Top Early Learning Challenge grant sustainability study. As documented in that report

> In some communities, the Community Early Childhood Councils (CECC) have provided key collaborative structures to help support professionals as well as families based on that community's unique needs and contexts.
>
> Source: Irish, K. (2018). Kentucky Race to the Top Early Learning Challenge Grant Sustainability Plan. Frankfort KY: Governor's Office of Early Childhood

In Kentucky's Race to the Top Early Learning Challenge grant, the CECCs provided a platform for coordinating activities such as School Readiness Summits, the goal of which was the development of local action plans to promote and support school readiness. Kentucky's CECCs were evaluated in 2017[117]. Among the findings:

- Some CECCs were successful in leveraging resources to respond to local needs, wherein success may hinge on member participation and collaboration.

[117] https://kidsnow.ky.gov/communities/cecc/Pages/cecc-resources.aspx

- CECC members reported an increased local awareness of school readiness and related topics.
- CECCs can be successful in identifying and responding to local needs, including the need to build local commitment for early childhood work.
- CECCs facilitated the provision of resources, trainings, and other materials and activities to families with young children in their communities.

The study author also noted challenges, which included:

- Building local engagement and collaborative partnerships, and
- Changing focus to outreach and family engagement (and away from the support of local early care and education professionals).

Additional Opportunities to Improve Collaboration and Coordination

There are additional opportunities to improve coordination and collaboration across state and local agencies. In the fall 2018 community survey, for example, respondents ranked the service areas that could most benefit from improved coordination. With regard **to improving coordination across local agencies**, the most highly ranked needs targeted:

- Services for highly vulnerable children (children exposed to traumatic experiences or environments (75.2% of respondents),
- Services for children with special learning or developmental needs (73.5%), and
- Supports for working families (such as child care subsidies or job training; 68.5%).

Less highly ranked was the need to improve local coordination for:

- Adoption/foster care services (60.7% of respondents),
- Substance abuse or opioid abuse services (57.3%),
- Resources or services that help children transition into kindergarten (55.2%),
- Health and nutrition services for children and families (54.8%),
- Child care or Preschool (53.6%),
- Mental health services for children (52.7%),
- Family Support (51.2%), and
- Apprenticeship programs for young professionals (50.9%).

The services that were least highly ranked for improving local coordination included:

- Parent education (48.8%),
- Domestic or intimate partner violence services (48.7%),
- Mental health services for adults and families (48.6%), and
- Head Start or Early Head Start (42.1%).

Suggestions for **improving coordination across state agencies** largely mirrored those for local agencies. The most highly ranked needs targeted (a) services for highly vulnerable children (children exposed to traumatic experiences or environments (74.5% of respondents), (b) services for children with special learning or developmental needs (72.8%), and (c) supports for working families (such as child care subsidies or job training; 67.4%).

Similarly, the less highly ranked (but still receiving at least 50% support) needs for improving state coordination included (a) substance abuse or opioid abuse services (60.6%), (b) adoption/foster care services (60% of respondents), (c) resources or services that help children transition into kindergarten (56.2%), (d) Child care or Preschool and health and nutrition services for children and families (both, 55%), (e) mental health services for children (52.5%), (f) domestic or intimate partner violence services (51.4%), (g) apprenticeship programs for young professionals (51.2%), and (h) Family Support (50.1%).

The services that were least highly ranked for improving state coordination included (a) mental health services for adults and families (49.5%), (b) Parent education (48.2%), and (c) Head Start or Early Head Start (44.8%).

The fall survey also provided insights into how services **need to be improved**. The services that were most highly ranked for different improvements are as follows:

Improve quality

- Services for highly vulnerable children (children exposed to traumatic experiences or environments; 75.9%),
- Supports for working families (such as child care subsidies or job training; 69.9%), and
- Services for children with special learning or developmental needs (69.8%).

Increase the range of service options or types of services

- Services for highly vulnerable children (children exposed to traumatic experiences or environments; 75.9%),
- Services for children with special learning or developmental needs (71.4%), and
- Supports for working families (such as child care subsidies or job training; 67.9%).

Improve affordability of services

- Services for children with special learning or developmental needs (68.1%),
- Services for highly vulnerable children (children exposed to traumatic experiences or environments; 68%), and
- Supports for working families (such as child care subsidies or job training; 67.2%).

Increase the availability of services/Make sure each community has this service

- Services for highly vulnerable children (children exposed to traumatic experiences or environments; 78.9%),
- Services for children with special learning or developmental needs (74.2%), and
- Supports for working families (such as child care subsidies or job training; 70.9%).

Improve outreach and education about services

- Services for highly vulnerable children (children exposed to traumatic experiences or environments, 75.8%),
- Services for children with special learning or developmental needs (74.4%), and
- Supports for working families (such as child care subsidies or job training; 68.6%).

Make it easier to find and use services (e.g., hours services are available, reducing paperwork)

- Services for highly vulnerable children (children exposed to traumatic experiences or environments; 77.7%),
- Supports for working families (such as child care subsidies or job training; 73.3%), and
- Services for children with special learning or developmental needs (72.6%).

Make sure there is an easy website to learn about or find services

- Services for highly vulnerable children (children exposed to traumatic experiences or environments; 74.7%),
- Services for children with special learning or developmental needs (72.6%), and
- Supports for working families (such as child care subsidies or job training; 70.3%).

Make sure services or information are available in more than one language

- Services for highly vulnerable children (children exposed to traumatic experiences or environments; 74.1%),
- Services for children with special learning or developmental needs (72%), and
- Supports for working families (such as child care subsidies or job training; 66.7%).

Stakeholders appear to be united in the need to improve services in multiple ways for vulnerable children, children with special learning or developmental needs, and working families. Some challenges noted by focus group participants included:

- Consistency of training and programming across Institutes of Higher Education,
- Lack of availability of early intervention service providers or therapists across needs (e.g., speech therapy, occupational therapy, physical therapy) and locations,
- Lack of awareness (especially among the public and policy makers) regarding the importance of early childhood education and specifically the return on investment of early care and education and the impact of learning from birth through third grade,
- Lack of sufficient funding for services and programs,
- Build knowledge regarding the range of regulations and legislation affecting the early childcare care and education system, and
- Workforce development (and specifically, the need to establish a seamless path to certification, ensure equity in compensation, and build recruitment and retention efforts).

Focus group participants provided some suggestions for the more efficient use of resources, which included:

- Address bureaucracy,
- Ensure services are available when needed or when parents are able to take advantage of them,

- Build comprehensive supports for families (e.g., housing, nutrition, wages, etc.),
- Encourage collaboration among system participants, such as local leadership in school districts,
- Enhance the use of Community Early Childhood Councils, and
- Support local organizations that already are in place and generating good results.

System Integration and Interagency Collaboration: Synthesis

This section addressed the questions:

- **What practices are in place that reflect effective and supportive interagency collaboration supporting young children and families? How were they developed? What would need to happen for them to spread to other areas, agencies, or sectors?**

The primary strategy for ensuring interagency collaboration is the Early Childhood Advisory Council (ECAC), which has representation from major partners across the state. The ECAC was authorized through an Executive Order and codified into legislation. The ECAC allows for regular and collaborative communication on the state's comprehensive early childhood care and education system.

Through the ECAC, Community Early Childhood Councils (CECCs) are supported to coordinate and collaborate on work at the local level. Similar to the ECAC at the state-level, CECCs draw partners from major service providers operating within communities. Thus, Kentucky has state and local strategies for ensuring partnership. CECCs are voluntary, with little state funding (if any) available to support administrative functions; some counties choose not to participate in a CECC. Kentucky may benefit from strategies that strengthen state and local alignment on policies and practices, including assistance to CECCs that are struggling or counties that do not participate in a CECC.

Feedback collected over the past year provides suggestions for improving state and local coordination, across a range of services. Top priorities for improving both state and local coordination focused on services for vulnerable children, children with special learning or developmental needs, and working families.

Concluding Thoughts: Developing a Plan

This needs assessment was designed to be a comprehensive examination of Kentucky's early childhood system, informed by Kentucky's reframing of early childhood to be inclusive of the Prenatal-Third Grade period. Data were collected from multiple stakeholders, using a variety of tools, as well as from extant data systems. Kentucky is engaged in examining the information contained within this report, which will inform its strategic plan for the next five years. The cross-sector approach used in this assessment will be of value for the ECAC as it develops its priorities for a new strategic plan. In particular, the presentation of data across demographic, geographic, and child-and-family specific categories will help the ECAC further explore the complex inter-relations of child and family needs and to understand the causes and implications of vulnerability. In close, several themes merit summarization, which also will contribute to the development of a new early childhood strategic plan.

Kentucky needs.

Every Kentucky county has needs. The information presented in this report documents that the nature and scope of needs varies across counties. In some counties, the need is expressed as the absolute numbers of children and families who can benefit from assistance across multiple service domains. The volume of need across domains, especially in more populated counties, is worth attention. In other counties, need is perhaps best understood as the proportion of the child and family population who could benefit from assistance. In these cases, which tend to be more isolated and rural counties, it is not so much the absolute and large number of children and families in need so much as the percent of the population that is represented. Just as children and families have protective factors, one can ask whether counties and county governments have sufficient protective factors, when high proportions of their residents need support in multiple ways.

Finally, a county's needs can be examined through an assessment of change in both child and family circumstance and participation in available services: does service use increase in proportion to child and family needs? Is there a direct or indirect relationship over time, and how does the nature of the relationship inform the system's ability to deploy resources effectively and efficiently? Data presented in this report document that in some counties there is high poverty and a relatively high incidence of other needs occurring alongside an anticipated decline in population. This phenomenon merits careful discussion and planning.

Kentucky's strengths.

Kentucky has multiple strengths to draw upon in examining these data and completing a new strategic plan. Principle among these:

- Kentucky is conceptualizing early childhood within a Prenatal-Third Grade framework. This broadening will facilitate the engagement and alignment of multiple sectors devoted to serving children and families, many of which are noted in this report.
- Kentucky has engaged data partners who are building a data system that can serve as an engine for understanding needs, tracking progress, and encouraging and furthering communication among stakeholders across all levels (including state-to-local feedback and alignment).
- Kentucky's ECAC, a collection of stakeholders from across partner agencies and early childhood interests, is guiding the work of both the needs assessment and the strategic plan. By tasking

the ECAC to perform this function, Kentucky is ensuring the involvement of multiple sectors and stakeholders—each of which provides a window into policy and service implementation as well as child and family needs.

These strengths are explored in more detail, below.

Kentucky's statewide system of services.

This report captures highlights from Kentucky's existing and statewide system of services. Some services, notably those that are not present in every or the majority of counties or services that rely on philanthropic or local funding, are absent. Some services have high-quality participation data readily available while others have emerging or developing data systems. The service description includes Benefind and Child Care Resource and Referral, which are two of Kentucky's vehicles for ensuring parents are informed and able to find and use services.

Data collected for this report suggest that Kentucky can improve its ability to inform and enable parents. The study team requested feedback on options such as the use of the internet and providing information in more than one language. Simply having these options may not be sufficient, however—some counties (or, families in some counties) still may lack adequate internet services. It is possible that some parents don't have sufficient literacy in English or their primary language to access written resources. In other cases, services may exist but still not be accessible due to concerns regarding affordability, eligibility, or logistics (e.g., scheduling, need for transportation, need for translation services, etc.). The needs of working families deserve attention and consideration.

The study team analyzed data regarding the quality of early care and education programming, drawing upon the state's recently completed Race to the Top Early Learning Challenge (RTT-ELC) grant validation study to understand the quality of care in inclusion classrooms and the nature and scope of family, provider, and teacher relationships. The state's TQRIS, Kentucky All STARS, scaffolds perceptions and standards for quality. As a primary service of interest for the PDG, the variation in average quality across the state and the existence of child care deserts in some counties is a concern.

Workforce development is the foundation of sustainable quality. Information from the RTT-ELC validation study provides insights into how workforce development can be strengthened, with implications for education, credentialing, and ongoing professional development. Notably, Kentucky may have the opportunity to better align professional desires and preferences with regard to how training and technical assistance are received with the consistency of training and technical assistance across the state and the methods for providing training and technical assistance.

Responding to trauma.

The PDG focuses on vulnerable and under-served children and children in rural communities. In Kentucky, vulnerability and location can intersect with exposure to substance abuse and the opioid epidemic along with other forms of trauma. The system needs to work collectively to respond to trauma, grounding its approach in the importance and primacy of parents and families. Kentucky's Strengthening Families approach provides a framework for working with families. Kentucky has the opportunity to expand and enhance the presence and depth of this framework, statewide, to help ensure parents (including foster, adoptive, and grand-parents) can fully embrace their role and their ability to respond to individual child needs.

Data strengths and challenges.

Kentucky has many system strengths in the existence of state data centers (such as the Kentucky Center for Statistics, the Kentucky State Data Center, Kentucky Youth Advocates, and the Early Care and Education Training Records Information System). This stated, there are multiple opportunities to further strengthen the availability of system-supportive data.

Development of a unique state-system identifier, for further development of the state's Early Childhood Integrated Data System and State Longitudinal Data System. The PDG is providing resources to further this work, and the ECAC's Data Subcommittee has identified priorities for new data sets and partners. One priority that is emerging from this Needs Assessment is the need to better understand how many children and families are engaged in the system—across the variety of services that address vulnerability. Kentucky's also can develop its ability to understand comprehensive service use, wherein the use of multiple services by children and families can be tracked. These efforts can include an assessment of the numbers of children and families in need versus the numbers considered eligible and the numbers enrolled and fully participating in services.

One of the state's data priorities will be ***Head Start and Early Head Start***. Currently, the state cannot generate an unduplicated count of children serving or waiting to be served across its early care and education models (child care, Head Start, and public preschool). Kentucky also can improve its ability to track braided or blended service delivery across Head Start sites, to further inform and improve Kentucky All STARS as a unified system for quality.

Expansion of the state's Early Childhood Integrated Data System. The Kentucky Center for Statistics has prioritized specific data elements for this expansion, which include:

- Children served through the Individuals with Disabilities in Education Act, Part B (housed within the Kentucky Department of Education),
- Vital Statistics, including
    - Birth records,
    - Births to teen mothers, and
    - Births to mothers who are not High School graduates,
- TWIST—Kentucky's foster care system,
- Adoption records,
- Benefind records, including
    - KCHIP participation,
    - SNAP participation,
    - KTAP participation, and
    - Medicaid participation,
- WIC participation,
- Referrals to child protective services,
- Children substantiated as victims of child abuse or neglect (noting cases linked to alcohol and substance abuse),
- Victims of child abuse,
- Children of incarcerated parents,
- Children waiting for or not served in programs,
- Incidence of vulnerability or children with Adverse Childhood Experiences,
- Attendance records, and
- Prevalence of screenings, flags, referrals, and diagnoses for special health, learning, or developmental disabilities.

Parent eligibility, needs, and preferences. Kentucky can make gains in understanding several aspects of parent and family service participation, including:

- Outcomes for working families or families who are either wait-listed or found ineligible for services,
- Parent and family accessibility concerns, such as location, cost, and scheduling of services, or
- Parent demand for licensed or regulated child care, as opposed for informal child care or stay-at-home care.

A complement to these efforts is enhanced outreach, education, and awareness building for families so that families can maximize their choices and preferences, across service domains.

Transitions as philosophy, policy, and practice.

Kentucky gathered data, statewide, on the nature and scope of practices to support the transition to kindergarten. The findings encompasses strategies for children, parents, and professionals and included an examination of practices for highly vulnerable children and children in rural communities. The data suggest that professionals working in the same county (or district) may be unaware of transition practices used in their county or district. Thus, there appears to be a need to improve planning and communication around kindergarten transitions, so as to ensure there is more consistency and awareness, statewide.

In reviewing its data, Kentucky has identified the concept of healthy transitions as a philosophy that can inform policy and practice. Further, transitions are not limited to the enrollment into kindergarten. Rather, transitions occur across early childhood and can reflect movement of children from home into non-parental or group settings as well as across group settings or age groups. This more holistic framing of transitions is an opportunity for Kentucky to inform and enhance its work across service domains, inclusive of the training and professional development early childhood care and education professionals may need to provide high-quality services to children, families, and other professionals.

Sustainability.

Improving a system is not necessarily about providing more services. Rather, sustainable improvements can come as a result of improving processes. There are several areas where Kentucky has an opportunity to further examine or improve its processes.

Leveraging resources.

Kentucky currently is completing a statewide fiscal mapping project of major state and federal early childhood resources. As of the time of this report, Kentucky has identified more than 30 funding streams. What follows is a discussion of how to leverage these resource streams to more effectively and efficiently serve eligible children and families. This discussion can include considerations of how to better braid and blend resources. Currently, programs such as Head Start braid or blend funds at the local level, to make the most of existing resources. Kentucky can further consider the guidance and assistance that is necessary to expand braiding and blending to more locations and, possible, to a greater range of services.

Importance of partnerships and alignments.

As noted above, Kentucky's ECAC guides and provide oversight for the state's early childhood investments. The ECAC consists of members from partner agencies across the state, giving agencies the opportunity to provide advice and generate buy-in into major policy statements. The state's Kentucky All STARS system is an example of a statewide system for which partner agencies (e.g., Division of Child Care, Kentucky Department of Education, and Head Start) can use the structure of the ECAC to share information and discuss alignments in policy and practice.

Locally, Community Early Childhood Councils (CECC) guide and provide oversight for local investments. The CECCs have membership from local agencies and programs. CECCs function as volunteer collectives, with the opportunity to apply for and use periodic funding, which is implemented through the Governor's Office of Early Childhood (GOEC).

State and local agencies serve complementary and symbiotic roles. This is to say, the overall system benefits when state and local agencies have well-functioning feedback loops and provide the nature and level of services that are needed for children and families to thrive. With this in mind, Kentucky has an opportunity to strengthen the CECCs and help CECCs maintain focus on and respond to system gaps and weaknesses. Kentucky also has the opportunity to further examine and strengthen communication around and alignment of state and local work—especially with regard to services for highly vulnerable children, children with special learning or development needs, and services for working families. Enhancements to state and local alignment can include the use of data as an engine for driving system adaptations and responsiveness. While state policies, regulations, and standards provide a consistent structure for ensuring quality and availability of services, local implementation and responsiveness helps ensure child and family needs are met.

Ensuring the system supports both education and economic development.

The early childhood system supports both early education and economic development. Representatives from the state's Chamber of Commerce sit on the ECAC. Kentucky also has the opportunity to enhance and expand its outreach and partnership with local or regional Chambers across the state, to ensure the system serves both roles.

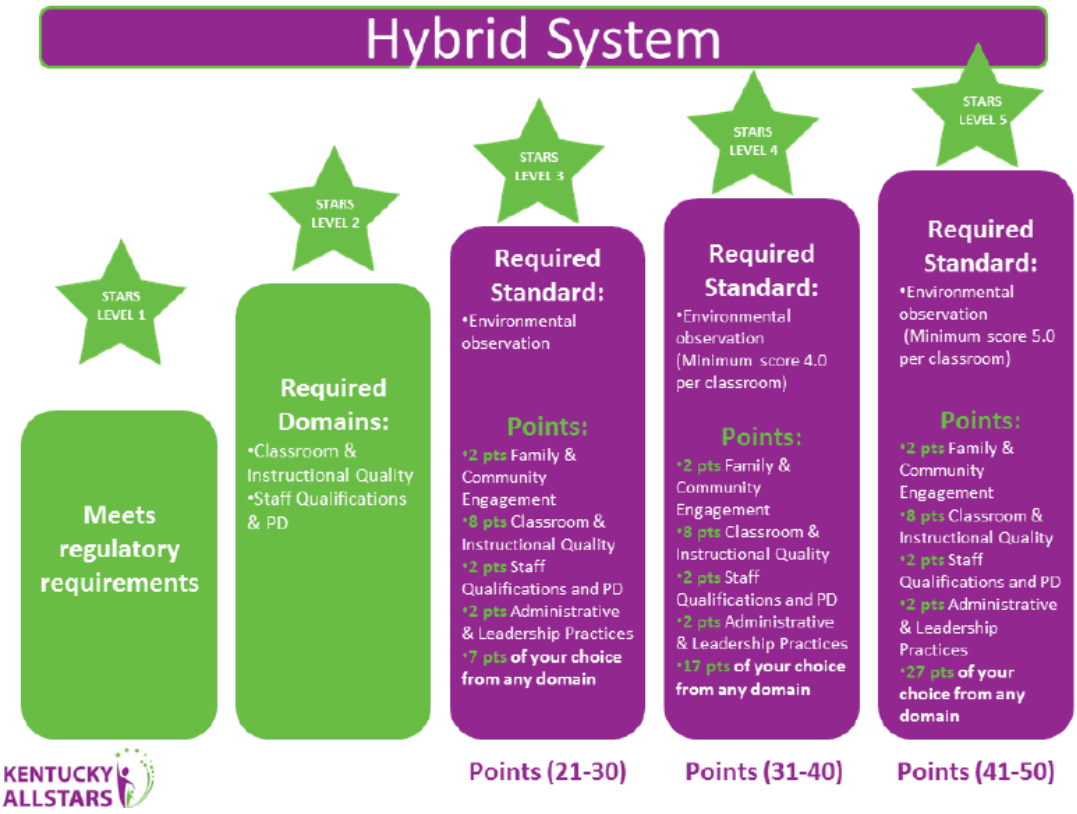
Growing awareness and understanding of the importance of the prenatal to third grade period.

There is an ongoing need to help stakeholders across the state understand the importance of early childhood. This includes outreach to parents, businesses, educators, civic groups, elected representatives, and others. In providing outreach, it can be important to ensure stakeholders realize that the system is for "*every child, every family*." Survey participants reported the need to improve outreach and education about services for highly vulnerable children, children with special learning or developmental needs, and working families. It is possible that some families aren't aware of or don't feel connected to the system, especially when the system appears to have limited options for helping children and families with their needs. Thus, part of the work in growing awareness and understanding about the importance of early childhood is growing the ability to respond to parent needs and preferences and helping parents understand that a system goal is to help parents find and use the services that best support their individual children and families.

Next Steps

This report is a resource for the ECAC, partner agencies, and any Kentucky stakeholder interested in better understanding the importance of early childhood, the needs of Kentucky children and families, and opportunities for meaningful and sustainable improvements. Moving forward, this report will be made available, both in whole and as a series of issue briefs, to facilitate discussion and planning.

Appendix A: Kentucky All STARS



Kentucky All STARS Standards of Quality

Domain	Max Points	Standard
Family and Community Engagement (10 points)	2 Points	Program/Site administrator and 75% of staff complete professional learning activities related to strengthening family engagement.
	2 Points	Implement family engagement activities that promote children's development and learning.
		• Implement at least one family engagement activity per year that promotes children's development and learning.
		• Implement at least three family engagement activities per year that promote children's development and learning.
	2 Points	Two-way communication with families.
	2 Points	Implements transition supports for children and families.
	1 Point	Share community resources with families.
	1 Point	Builds partnerships with community agencies.
Classroom and Instructional Quality (20 points)	Required	50% of teaching staff have professional learning activities in developmental screening.
	2 points	Ensure developmental screening within 90 days of enrollment and referral (if needed) within 30 days of screening for all enrolled children.
	Required	Complete an environmental self-assessment using a valid and reliable tool appropriate for the ages/settings of children served.
	2 points	Implements curriculum that aligns with Kentucky Early Learning Standards (KYEL).
	1 point	Implements specialized supplemental curricula.
	2 points	KY Early Learning Standards are incorporated into lesson plans.
	2 points	Staff support IFSP/IEP goals of individual children.
	2 points	Staff conduct ongoing curriculum-based assessment to inform instruction.
	2 points	Assessment results are used to inform individual and group instruction.
	2 points	Instructional assessment findings are shared with families.
	Required	Participate in an environmental observation on a valid and reliable tool: • No minimum at Level 3 • Minimum of 4.0 per classroom at Level 4 • Minimum of 5.0 per classroom at Level 5
	1 point	National Accreditation acknowledged by state approved organization.
	4 points	Maintain NAEYC staff-to-child ratios and group size requirements: • Meets for Infants • Meets for Toddlers • Meets for Preschoolers

Staff Qualifications and PD **10 points)**	**Required**	Program/site Administrator/director receives 10 hours of professional learning in curriculum, instructional practices and/or teaching and learning OR have an approved early childhood credential or degree.
	Required	50% of teaching staff receive 10 hours of professional learning in curriculum, instructional practices and/or teaching and learning OR have an approved early childhood credential or degree.
	1 point	50% of teaching staff participate in professional learning activities related to curriculum-based assessment.
	1 point	Program/Site Administrator achieves the Kentucky Director Credential OR holds an administrator certificate in a field not related to early childhood and the equivalent of 3 credit hours in child development or at least 5 years full time related experience in early childhood field.
	3 points	Program/Site Administrator achieves appropriate Credential as outlined on the Kentucky Career Lattice: • Level 2 or above on the Kentucky Career Lattice • Level 3 or above on the Kentucky Career Lattice • Level 4 or above on the Kentucky Career Lattice
	4 points	Teaching staff complete appropriate credentials: • 50% achieve Level 1 or above on the Kentucky Career Lattice • 40% achieve Level 2 or above on the Kentucky Career Lattice • 30% achieve Level 3 or above on the Kentucky Career Lattice • 20% achieve Level 4 or above on the Kentucky Career Lattice
	1 point	Individual PD plan aligns with state identified professional core knowledge and competencies.
Administrative and Leadership Practices **(10 points)**	1 point	Administrator/Director is a member of EC Professional organization.
	2 points	Teaching staff are provided weekly lesson planning time.
	2 points	Has a system for evaluating staff performance by monitoring and providing feedback for improvement.
	2 points	Implements a continuous improvement plan: • Seeks input from staff on the continuous improvement plan. • Seeks input from families annually on implementation of the continuous improvement plan
	3 points	Provide at least 11 days Paid Time Off Annually 1 point; Health Insurance 1 point; Retirement 1 point

Appendix B: School Readiness by County

Exhibit 234 *Percent of Children Assessed as Ready for Kindergarten (Composite Measure), by County, 2015 to 2019*

	Ready for Kindergarten 2015	Ready for Kindergarten 2016	Ready for Kindergarten 2017	Ready for Kindergarten 2018	Ready for Kindergarten 2019
Adair	37.2%	48.6%	43.7%	49.0%	42.9%
Allen	37.4%	35.9%	48.0%	64.8%	61.8%
Anderson	56.4%	45.7%	54.9%	46.1%	42.4%
Ballard	48.2%	67.4%	62.1%	47.0%	44.2%
Barren	47.2%	53.3%	58.6%	60.1%	57.5%
Bath	44.5%	43.3%	28.0%	33.7%	35.7%
Bell	42.3%	39.6%	38.8%	45.3%	48.5%
Boone	58.5%	60.5%	56.7%	55.8%	56.2%
Bourbon	48.0%	48.8%	41.1%	58.0%	63.2%
Boyd	47.1%	49.1%	49.3%	44.6%	45.7%
Boyle	45.5%	54.8%	46.8%	47.6%	49.8%
Bracken	41.6%	46.1%	51.5%	46.2%	38.7%
Breathitt	47.8%	37.3%	47.4%	43.4%	45.9%
Breckinridge	48.5%	46.4%	50.0%	50.3%	48.4%
Bullitt	50.1%	51.0%	49.6%	47.6%	45.0%
Butler	43.1%	50.0%	47.3%	43.3%	47.4%
Caldwell	56.6%	46.0%	63.4%	50.8%	56.8%
Calloway	52.2%	63.5%	48.0%	52.7%	56.0%
Campbell	56.0%	51.0%	58.1%	53.3%	54.6%
Carlisle	68.4%	54.1%	60.8%	63.2%	68.2%
Carroll	46.0%	38.0%	36.2%	43.7%	47.3%
Carter	50.5%	54.2%	54.5%	61.1%	60.3%
Casey	39.2%	40.1%	46.6%	33.5%	34.6%
Christian	44.6%	49.7%	47.3%	43.0%	45.8%
Clark	64.4%	64.2%	55.6%	55.6%	54.6%
Clay	32.4%	26.5%	33.7%	27.2%	57.2%
Clinton	39.2%	38.2%	34.3%	40.4%	42.7%
Crittenden	45.9%	51.0%	46.6%	55.4%	51.0%
Cumberland	39.7%	35.7%	40.7%	41.7%	39.5%
Daviess	50.3%	49.6%	49.4%	52.2%	52.1%
Edmonson	57.7%	45.5%	55.7%	62.0%	51.1%
Elliott	46.8%	31.4%	32.9%	41.0%	27.9%
Estill	49.3%	48.2%	71.5%	66.7%	61.7%
Fayette	52.6%	54.8%	51.1%	53.2%	51.4%
Fleming	45.4%	42.2%	51.7%	38.5%	40.1%
Floyd	44.8%	58.0%	59.6%	59.3%	64.2%
Franklin	48.3%	46.6%	48.2%	45.3%	48.0%

Fulton	48.2%	48.2%	65.5%	40.9%	38.9%
Gallatin	44.8%	44.0%	37.5%	27.4%	28.2%
Garrard	44.2%	44.2%	58.9%	54.4%	50.8%
Grant	49.3%	50.7%	44.7%	44.8%	45.8%
Graves	58.2%	62.9%	62.9%	62.1%	62.3%
Grayson	44.9%	36.7%	39.6%	53.7%	41.4%
Green	54.8%	48.8%	58.7%	48.9%	57.3%
Greenup	55.2%	63.1%	66.9%	64.4%	61.1%
Hancock	55.1%	45.4%	46.3%	56.7%	35.2%
Hardin	49.9%	50.8%	51.8%	51.1%	52.5%
Harlan	44.3%	42.4%	39.9%	42.4%	43.5%
Harrison	52.0%	44.3%	52.3%	56.6%	52.8%
Hart	41.2%	47.7%	41.2%	36.0%	56.9%
Henderson	56.0%	51.6%	51.2%	47.3%	52.5%
Henry	53.2%	49.2%	62.6%	65.0%	61.8%
Hickman	59.5%	80.5%	63.6%	69.2%	84.6%
Hopkins	57.3%	57.4%	59.4%	57.6%	55.9%
Jackson	55.2%	45.5%	46.9%	43.2%	51.6%
Jefferson	51.9%	48.1%	52.4%	55.0%	52.7%
Jessamine	46.5%	46.5%	51.2%	48.0%	47.0%
Johnson	44.5%	52.5%	44.0%	49.0%	49.3%
Kenton	50.7%	52.3%	50.2%	53.3%	52.2%
Knott	30.5%	34.7%	52.7%	61.5%	51.7%
Knox	33.2%	39.2%	46.5%	28.0%	38.0%
LaRue	49.7%	47.4%	43.1%	41.4%	41.8%
Laurel	41.1%	48.6%	42.3%	49.8%	47.1%
Lawrence	45.2%	51.1%	44.2%	46.8%	40.1%
Lee	32.4%	27.8%	29.5%	19.2%	21.2%
Leslie	34.1%	57.0%	55.4%	59.8%	47.2%
Letcher	57.0%	40.2%	31.8%	40.8%	39.1%
Lewis	54.9%	48.9%	30.1%	48.6%	49.4%
Lincoln	37.2%	49.8%	43.0%	42.2%	37.7%
Livingston	42.5%	48.3%	45.5%	53.2%	43.3%
Logan	45.2%	48.4%	46.8%	44.5%	45.6%
Lyon	42.5%	47.8%	55.2%	46.8%	54.4%
Madison	53.0%	52.1%	52.6%	52.9%	49.0%
Magoffin	45.5%	45.7%	55.0%	53.9%	60.0%
Marion	56.9%	58.4%	52.9%	61.9%	59.1%
Marshall	58.9%	57.1%	48.1%	50.2%	51.6%
Martin	44.1%	40.4%	38.0%	48.3%	55.2%
Mason	48.0%	45.0%	48.5%	48.5%	39.9%
McCracken	56.5%	60.2%	56.5%	56.2%	59.7%
McCreary	40.1%	39.2%	41.3%	62.8%	61.8%

McLean	35.4%	35.0%	35.9%	44.6%	39.3%
Meade	38.9%	45.6%	50.0%	43.3%	49.3%
Menifee	42.0%	38.0%	20.5%	23.0%	23.3%
Mercer	52.1%	48.8%	39.7%	38.3%	40.0%
Metcalfe	49.2%	51.5%	50.7%	48.9%	49.5%
Monroe	59.9%	52.8%	64.8%	79.7%	66.4%
Montgomery	57.2%	50.0%	41.3%	37.0%	44.0%
Morgan	37.3%	34.9%	28.5%	25.0%	29.1%
Muhlenberg	40.4%	50.2%	51.3%	38.9%	35.6%
Nelson	54.5%	56.7%	60.6%	55.9%	55.9%
Nicholas	42.0%	43.9%	33.3%	0.0%	50.0%
Ohio	39.1%	37.6%	51.0%	50.6%	55.8%
Oldham	65.0%	66.8%	70.8%	67.3%	70.9%
Owen	68.9%	54.7%	69.2%	64.7%	61.9%
Owsley	54.1%	45.5%	31.7%	36.6%	53.8%
Pendleton	39.4%	44.7%	45.5%	42.1%	30.4%
Perry	44.5%	46.9%	50.8%	48.8%	51.2%
Pike	50.0%	47.2%	53.1%	51.2%	48.0%
Powell	26.9%	24.9%	35.5%	47.0%	44.0%
Pulaski	41.0%	46.8%	45.8%	45.8%	45.6%
Robertson	66.7%	72.2%	45.5%	48.0%	48.3%
Rockcastle	43.4%	43.0%	39.0%	42.4%	42.3%
Rowan	51.5%	40.0%	37.9%	40.9%	44.6%
Russell	40.1%	44.6%	37.5%	41.2%	39.0%
Scott	51.5%	44.8%	50.6%	44.2%	47.3%
Shelby	56.5%	58.8%	53.5%	53.5%	53.0%
Simpson	43.1%	42.7%	62.6%	51.9%	63.2%
Spencer	46.2%	54.1%	53.7%	65.5%	46.4%
Taylor	42.4%	49.6%	42.3%	47.4%	54.7%
Todd	40.3%	44.3%	41.4%	44.2%	41.1%
Trigg	50.4%	39.1%	40.1%	53.6%	63.6%
Trimble	39.7%	50.6%	63.5%	39.7%	42.0%
Union	49.7%	53.6%	55.4%	54.7%	48.8%
Warren	54.3%	51.9%	53.5%	51.1%	52.1%
Washington	43.4%	45.9%	41.5%	53.1%	47.1%
Wayne	46.8%	39.1%	42.2%	40.7%	45.5%
Webster	43.6%	50.3%	32.5%	40.8%	39.5%
Whitley	50.9%	48.4%	51.5%	47.6%	49.4%
Wolfe	36.0%	31.2%	32.2%	40.8%	37.0%
Woodford	51.3%	50.6%	48.8%	62.9%	56.4%

Exhibit 235 Percent of Children Assessed as Ready for Kindergarten (Cognition and General Knowledge), by County, 2015 to 2019

	Cognitive General Knowledge 2015	Cognitive General Knowledge 2016	Cognitive General Knowledge 2017	Cognitive General Knowledge 2018	Cognitive General Knowledge 2019
Adair	21.8%	29.7%	27.3%	30.2%	19.2%
Allen	25.6%	21.7%	34.4%	47.2%	47.2%
Anderson	43.2%	32.6%	38.3%	29.5%	27.9%
Ballard	35.3%	57.0%	45.3%	27.7%	23.3%
Barren	34.6%	39.0%	42.6%	42.7%	40.0%
Bath	33.6%	28.3%	15.3%	19.8%	22.1%
Bell	32.8%	23.3%	22.4%	33.2%	29.7%
Boone	43.3%	47.2%	41.5%	40.5%	39.8%
Bourbon	33.6%	33.3%	33.9%	45.4%	49.8%
Boyd	32.5%	33.2%	33.2%	28.3%	29.3%
Boyle	34.5%	40.5%	33.0%	31.1%	35.1%
Bracken	24.8%	33.3%	33.7%	37.7%	24.4%
Breathitt	33.8%	19.6%	30.7%	26.6%	33.8%
Breckinridge	35.0%	29.9%	34.3%	30.9%	36.3%
Bullitt	34.7%	34.3%	34.4%	33.4%	30.9%
Butler	29.3%	31.0%	32.4%	28.4%	27.5%
Caldwell	47.6%	30.9%	42.5%	32.6%	40.2%
Calloway	39.7%	48.4%	33.9%	39.9%	40.8%
Campbell	41.8%	37.1%	41.9%	38.3%	39.6%
Carlisle	54.4%	45.9%	49.0%	49.1%	42.4%
Carroll	28.8%	20.4%	21.0%	29.1%	30.5%
Carter	37.2%	42.5%	44.9%	44.6%	46.9%
Casey	29.8%	27.4%	39.7%	24.7%	23.4%
Christian	32.5%	33.2%	32.6%	28.8%	31.3%
Clark	48.8%	46.1%	38.2%	41.2%	33.9%
Clay	20.9%	17.3%	20.5%	17.5%	42.0%
Clinton	24.8%	28.2%	17.1%	30.3%	27.2%
Crittenden	31.6%	34.3%	34.1%	33.8%	25.5%
Cumberland	31.7%	28.6%	33.3%	26.7%	25.0%
Daviess	37.1%	36.5%	39.4%	36.4%	37.8%
Edmonson	48.2%	28.8%	33.0%	39.5%	37.0%
Elliott	27.7%	27.1%	20.0%	21.8%	14.7%
Estill	39.2%	38.0%	57.6%	56.1%	52.7%
Fayette	40.5%	43.0%	40.3%	40.6%	37.2%
Fleming	30.1%	27.3%	38.6%	30.4%	31.2%
Floyd	31.5%	45.3%	51.5%	43.4%	51.7%
Franklin	33.6%	32.5%	35.1%	29.5%	34.6%
Fulton	32.5%	31.3%	39.5%	30.3%	29.2%
Gallatin	32.4%	26.6%	24.2%	18.9%	20.9%

Garrard	34.6%	29.1%	42.6%	37.2%	38.7%
Grant	33.6%	37.3%	27.5%	26.9%	32.4%
Graves	42.4%	48.1%	48.7%	46.6%	44.4%
Grayson	31.6%	23.5%	23.7%	34.9%	26.6%
Green	46.8%	36.6%	50.4%	34.4%	40.3%
Greenup	41.4%	44.1%	50.1%	48.5%	40.8%
Hancock	38.8%	30.6%	30.9%	36.1%	20.0%
Hardin	33.7%	35.2%	36.9%	38.2%	38.0%
Harlan	24.5%	24.4%	22.4%	22.7%	25.2%
Harrison	36.4%	30.3%	37.8%	39.6%	36.8%
Hart	29.9%	32.2%	24.3%	26.7%	37.3%
Henderson	37.3%	38.5%	35.9%	32.1%	38.3%
Henry	27.3%	35.6%	45.0%	42.8%	39.2%
Hickman	40.5%	73.2%	45.5%	43.6%	74.4%
Hopkins	45.1%	41.2%	45.9%	43.1%	37.3%
Jackson	34.5%	26.1%	25.0%	28.4%	31.6%
Jefferson	39.3%	37.0%	41.1%	42.8%	40.1%
Jessamine	32.6%	30.8%	37.9%	31.5%	31.5%
Johnson	28.5%	37.4%	32.5%	35.2%	31.8%
Kenton	36.0%	39.5%	36.3%	36.5%	37.3%
Knott	17.8%	20.8%	36.7%	44.6%	37.4%
Knox	23.3%	26.8%	31.6%	20.1%	27.4%
LaRue	40.8%	36.1%	31.7%	31.2%	30.8%
Laurel	26.5%	34.5%	29.2%	31.1%	30.5%
Lawrence	33.2%	33.3%	25.6%	30.1%	23.8%
Lee	16.2%	15.3%	11.6%	9.6%	12.1%
Leslie	22.0%	42.1%	40.2%	43.9%	27.6%
Letcher	36.3%	24.7%	20.5%	25.8%	20.9%
Lewis	35.4%	35.9%	23.3%	32.9%	35.3%
Lincoln	26.4%	34.0%	28.9%	30.3%	26.1%
Livingston	27.6%	35.6%	26.0%	40.3%	17.8%
Logan	31.0%	34.1%	33.0%	29.5%	29.1%
Lyon	35.6%	33.3%	41.4%	29.8%	32.4%
Madison	39.2%	36.7%	36.9%	37.8%	31.7%
Magoffin	31.4%	29.5%	39.4%	36.7%	42.0%
Marion	35.0%	43.1%	39.2%	49.5%	38.4%
Marshall	40.5%	39.4%	33.0%	32.3%	37.7%
Martin	31.7%	26.2%	21.9%	31.9%	36.0%
Mason	37.4%	31.7%	33.2%	33.1%	25.6%
McCracken	41.2%	44.3%	41.1%	41.1%	46.4%
McCreary	20.9%	22.2%	27.5%	39.4%	40.0%
McLean	22.2%	25.2%	26.7%	29.3%	21.3%
Meade	28.1%	35.5%	37.7%	30.8%	33.0%

Menifee	21.7%	22.8%	10.8%	11.5%	9.6%
Mercer	36.1%	36.6%	30.2%	26.2%	27.0%
Metcalfe	29.2%	32.7%	36.6%	37.8%	30.3%
Monroe	38.0%	37.0%	52.8%	59.3%	56.0%
Montgomery	36.9%	33.8%	27.2%	23.6%	25.3%
Morgan	21.1%	20.6%	21.2%	12.9%	17.3%
Muhlenberg	26.3%	32.7%	35.8%	23.5%	24.0%
Nelson	40.1%	41.5%	45.5%	39.4%	39.7%
Nicholas	28.4%	27.3%	22.7%		
Ohio	24.9%	23.1%	37.0%	32.3%	35.3%
Oldham	49.7%	53.0%	57.3%	52.9%	54.8%
Owen	49.2%	43.6%	48.6%	42.0%	36.4%
Owsley	37.7%	25.5%	17.1%	19.5%	41.0%
Pendleton	24.7%	26.4%	25.8%	22.2%	21.1%
Perry	32.6%	33.2%	35.4%	32.9%	28.8%
Pike	37.8%	33.2%	41.4%	37.0%	33.4%
Powell	16.8%	12.4%	29.0%	27.8%	28.7%
Pulaski	27.8%	32.2%	34.4%	32.5%	30.6%
Robertson	53.3%	50.0%	33.3%	28.0%	17.2%
Rockcastle	27.5%	19.6%	28.1%	22.7%	25.8%
Rowan	37.0%	27.4%	26.2%	27.9%	30.8%
Russell	22.5%	29.0%	23.9%	27.3%	16.6%
Scott	37.1%	32.7%	38.8%	32.1%	32.4%
Shelby	40.0%	44.1%	42.9%	38.0%	38.6%
Simpson	34.6%	27.7%	47.6%	36.3%	43.6%
Spencer	33.9%	37.1%	37.8%	43.6%	33.0%
Taylor	29.0%	29.9%	25.7%	36.5%	39.9%
Todd	26.6%	27.0%	28.1%	31.7%	31.5%
Trigg	35.0%	22.5%	33.2%	30.4%	46.2%
Trimble	25.6%	37.0%	44.6%	23.5%	22.2%
Union	35.9%	37.7%	33.3%	30.5%	31.2%
Warren	40.6%	37.6%	40.2%	37.3%	37.4%
Washington	24.0%	30.6%	21.2%	36.5%	30.6%
Wayne	36.9%	29.7%	30.7%	24.4%	24.7%
Webster	27.6%	34.4%	22.4%	33.1%	23.3%
Whitley	33.3%	32.0%	34.6%	32.9%	35.6%
Wolfe	19.8%	20.8%	21.1%	26.8%	18.5%
Woodford	40.6%	42.0%	33.7%	48.5%	39.8%

Exhibit 236 to 2019 *Percent of Children Assessed as Ready for Kindergarten (Language and Communication), by County, 2015*

	Language Communication 2015	Language Communication 2016	Language Communication 2017	Language Communication 2018	Language Communication 2019
Adair	71.8%	80.0%	72.7%	81.2%	79.1%
Allen	66.0%	65.0%	66.6%	81.9%	88.4%
Anderson	73.3%	71.3%	80.1%	70.5%	69.9%
Ballard	68.2%	68.6%	66.4%	69.9%	79.1%
Barren	69.6%	76.4%	76.7%	77.7%	81.2%
Bath	78.9%	74.0%	47.5%	64.4%	77.1%
Bell	78.2%	67.0%	75.8%	80.1%	82.9%
Boone	73.4%	72.7%	72.6%	69.4%	74.1%
Bourbon	70.4%	72.1%	71.1%	83.6%	83.3%
Boyd	75.5%	75.5%	78.5%	72.9%	74.8%
Boyle	76.9%	72.8%	70.9%	74.0%	76.6%
Bracken	79.2%	73.5%	81.2%	72.6%	66.4%
Breathitt	69.4%	79.1%	72.3%	76.9%	82.2%
Breckinridge	78.0%	81.0%	74.7%	75.9%	76.9%
Bullitt	77.2%	76.0%	75.8%	75.3%	75.6%
Butler	74.9%	73.2%	78.4%	73.8%	74.9%
Caldwell	80.4%	68.3%	82.4%	73.5%	81.1%
Calloway	72.7%	81.7%	68.2%	76.8%	75.7%
Campbell	75.9%	76.7%	76.5%	74.7%	76.5%
Carlisle	87.7%	83.8%	66.7%	91.2%	87.9%
Carroll	58.9%	50.4%	64.2%	74.8%	76.3%
Carter	83.6%	80.3%	81.6%	85.6%	86.6%
Casey	66.9%	70.1%	67.8%	68.4%	68.6%
Christian	71.5%	73.4%	71.0%	72.6%	74.5%
Clark	82.1%	83.2%	75.8%	79.1%	84.3%
Clay	65.1%	65.1%	72.7%	73.7%	85.6%
Clinton	68.0%	66.4%	73.6%	56.0%	74.8%
Crittenden	83.7%	65.7%	70.5%	85.1%	89.2%
Cumberland	82.5%	77.1%	81.5%	78.3%	69.7%
Daviess	69.9%	70.7%	65.5%	73.3%	69.4%
Edmonson	75.9%	73.5%	78.8%	86.0%	88.1%
Elliott	79.8%	62.9%	82.9%	79.5%	70.6%
Estill	83.8%	78.9%	85.8%	85.6%	88.0%
Fayette	65.0%	65.5%	64.7%	67.2%	66.0%
Fleming	76.0%	76.0%	79.3%	65.9%	73.2%
Floyd	72.9%	71.6%	76.7%	77.6%	78.2%
Franklin	70.0%	71.6%	73.1%	70.8%	73.8%
Fulton	81.9%	81.9%	89.1%	75.8%	73.6%
Gallatin	69.5%	69.7%	75.0%	55.7%	56.4%

Garrard	72.1%	76.2%	80.1%	83.9%	63.4%
Grant	73.2%	71.3%	64.0%	75.4%	70.4%
Graves	74.7%	78.0%	78.3%	74.8%	80.2%
Grayson	75.8%	68.0%	75.6%	80.8%	75.7%
Green	81.0%	74.4%	77.7%	62.2%	83.9%
Greenup	78.6%	82.3%	85.7%	80.1%	84.1%
Hancock	79.6%	76.9%	64.2%	70.1%	73.3%
Hardin	73.6%	76.0%	75.4%	78.4%	80.2%
Harlan	72.6%	72.3%	78.4%	80.6%	84.6%
Harrison	80.8%	68.6%	81.5%	77.4%	78.8%
Hart	79.7%	85.2%	79.7%	64.7%	83.0%
Henderson	78.9%	71.1%	78.6%	79.1%	77.8%
Henry	79.5%	77.4%	86.7%	87.2%	82.8%
Hickman	92.9%	97.6%	87.3%	92.3%	94.9%
Hopkins	77.8%	78.8%	75.8%	76.7%	74.7%
Jackson	82.8%	78.8%	73.2%	73.0%	73.5%
Jefferson	66.9%	59.9%	63.6%	64.7%	63.4%
Jessamine	78.6%	78.9%	74.0%	79.3%	79.3%
Johnson	79.0%	77.4%	76.9%	79.9%	81.4%
Kenton	73.1%	73.4%	74.1%	75.0%	73.7%
Knott	60.3%	79.2%	86.7%	88.5%	82.2%
Knox	69.0%	67.0%	74.0%	61.1%	71.3%
LaRue	70.7%	69.2%	53.9%	68.2%	63.2%
Laurel	77.6%	74.6%	74.6%	81.3%	79.4%
Lawrence	75.6%	79.9%	74.4%	80.1%	76.7%
Lee	74.3%	77.8%	74.7%	63.5%	71.2%
Leslie	67.4%	76.0%	79.5%	79.4%	80.5%
Letcher	87.5%	79.2%	79.2%	85.4%	85.1%
Lewis	76.6%	71.8%	58.3%	69.3%	77.1%
Lincoln	74.7%	76.6%	65.9%	73.8%	75.5%
Livingston	71.3%	80.5%	81.8%	67.7%	62.2%
Logan	72.4%	75.8%	72.1%	77.4%	75.3%
Lyon	80.8%	84.1%	89.7%	80.9%	94.1%
Madison	72.8%	71.1%	70.8%	79.1%	78.0%
Magoffin	73.7%	77.5%	79.4%	75.8%	80.7%
Marion	76.8%	74.3%	69.4%	78.7%	82.3%
Marshall	80.1%	76.4%	79.7%	78.2%	77.1%
Martin	75.9%	74.5%	69.3%	79.3%	86.4%
Mason	75.8%	69.3%	74.8%	74.0%	68.0%
McCracken	77.8%	75.0%	70.6%	76.0%	79.0%
McCreary	65.8%	71.6%	70.9%	91.3%	85.9%
McLean	74.7%	78.6%	46.6%	75.0%	69.7%
Meade	74.6%	73.3%	71.4%	75.4%	73.5%

Menifee	72.5%	75.9%	71.1%	77.0%	71.2%
Mercer	76.8%	72.3%	64.1%	74.8%	64.2%
Metcalfe	70.0%	81.2%	76.9%	76.7%	78.9%
Monroe	78.8%	82.4%	80.6%	85.4%	82.8%
Montgomery	71.8%	77.5%	60.6%	74.3%	72.7%
Morgan	71.8%	71.4%	75.2%	66.4%	72.4%
Muhlenberg	71.6%	79.3%	79.0%	81.0%	74.0%
Nelson	73.4%	79.1%	79.1%	79.1%	78.1%
Nicholas	85.2%	86.4%	77.3%		
Ohio	70.6%	71.0%	68.3%	71.7%	79.5%
Oldham	75.2%	72.7%	77.6%	74.3%	79.6%
Owen	83.3%	82.1%	84.1%	86.6%	84.7%
Owsley	86.9%	80.0%	75.6%	85.4%	89.7%
Pendleton	72.4%	75.5%	76.4%	67.5%	56.1%
Perry	53.4%	57.7%	76.8%	79.1%	79.4%
Pike	77.3%	74.9%	79.4%	76.2%	76.6%
Powell	71.3%	69.8%	69.9%	61.6%	80.0%
Pulaski	76.3%	79.7%	77.7%	77.8%	78.6%
Robertson	66.7%	94.4%	75.8%	80.0%	82.8%
Rockcastle	75.7%	75.9%	71.9%	75.3%	73.2%
Rowan	75.7%	66.0%	73.4%	69.2%	76.8%
Russell	65.8%	72.7%	76.1%	72.2%	77.1%
Scott	72.9%	66.9%	67.5%	68.3%	70.9%
Shelby	68.0%	69.8%	65.4%	74.8%	76.3%
Simpson	72.5%	77.7%	76.9%	81.1%	87.6%
Spencer	75.4%	75.9%	69.2%	84.2%	71.3%
Taylor	72.1%	75.8%	82.2%	79.1%	85.9%
Todd	73.4%	76.5%	83.6%	77.5%	75.8%
Trigg	77.4%	72.5%	76.7%	75.2%	76.5%
Trimble	81.0%	80.2%	75.7%	72.1%	74.1%
Union	75.8%	74.6%	80.4%	79.7%	77.6%
Warren	67.2%	63.4%	66.9%	65.8%	66.1%
Washington	71.3%	70.4%	68.6%	75.0%	74.4%
Wayne	70.8%	69.3%	66.3%	67.9%	77.1%
Webster	75.5%	72.2%	60.8%	67.7%	75.2%
Whitley	75.5%	72.0%	74.0%	76.1%	77.8%
Wolfe	69.8%	70.1%	70.0%	73.2%	75.3%
Woodford	70.5%	67.8%	67.3%	76.9%	69.9%

Exhibit 237 Percent of Children Assessed as Ready for Kindergarten (Physical Well-Being), by County, 2015 to 2019

	Physical Well-Being 2015	Physical Well-Being 2016	Physical Well-Being 2017	Physical Well-Being 2018	Physical Well-Being 2019
Adair	50.0%	56.0%	55.2%	59.1%	48.4%
Allen	35.7%	44.2%	32.9%	56.0%	59.2%
Anderson	50.8%	51.3%	54.9%	47.7%	45.0%
Ballard	55.3%	65.1%	66.4%	49.4%	45.3%
Barren	47.1%	45.7%	54.5%	58.9%	51.7%
Bath	50.8%	44.1%	30.5%	29.7%	26.4%
Bell	38.2%	42.0%	41.2%	45.3%	47.1%
Boone	56.8%	55.3%	51.9%	51.6%	52.7%
Bourbon	49.2%	44.2%	39.6%	53.6%	58.2%
Boyd	45.8%	42.1%	48.2%	42.4%	40.4%
Boyle	49.0%	50.8%	43.5%	42.5%	47.4%
Bracken	51.2%	43.1%	49.5%	39.6%	39.5%
Breathitt	48.4%	43.7%	59.9%	39.9%	45.2%
Breckinridge	58.0%	47.4%	43.4%	40.8%	42.3%
Bullitt	50.0%	45.7%	43.0%	44.1%	44.5%
Butler	49.7%	53.5%	52.7%	39.0%	43.3%
Caldwell	61.5%	48.2%	68.6%	43.9%	46.2%
Calloway	47.3%	52.2%	45.2%	41.3%	49.6%
Campbell	53.5%	43.2%	51.3%	46.6%	49.4%
Carlisle	63.2%	48.6%	60.8%	59.6%	63.6%
Carroll	60.7%	47.4%	53.3%	46.4%	37.4%
Carter	40.2%	38.5%	48.5%	52.3%	48.4%
Casey	46.4%	28.7%	37.9%	31.6%	28.2%
Christian	44.7%	48.8%	44.1%	40.9%	40.1%
Clark	52.5%	63.2%	51.3%	50.2%	45.1%
Clay	32.0%	34.9%	38.6%	26.7%	60.1%
Clinton	35.2%	33.6%	26.4%	33.9%	30.1%
Crittenden	46.9%	54.9%	38.6%	43.2%	55.9%
Cumberland	33.3%	30.0%	28.4%	25.0%	17.1%
Daviess	48.0%	51.1%	46.2%	50.7%	50.6%
Edmonson	56.9%	53.8%	52.4%	39.5%	46.7%
Elliott	44.7%	24.3%	25.7%	41.0%	20.6%
Estill	35.8%	42.8%	64.6%	61.4%	53.3%
Fayette	53.7%	54.3%	51.1%	52.6%	52.2%
Fleming	45.9%	35.1%	42.8%	28.9%	35.7%
Floyd	51.3%	56.3%	60.5%	61.7%	65.7%
Franklin	48.3%	44.4%	45.2%	47.2%	40.5%
Fulton	60.2%	48.2%	52.1%	36.4%	33.3%
Gallatin	46.7%	45.0%	44.5%	28.3%	33.6%

Garrard	40.4%	39.5%	53.5%	52.8%	56.5%
Grant	52.4%	52.0%	45.9%	47.8%	39.4%
Graves	60.5%	65.7%	67.7%	62.3%	61.2%
Grayson	46.3%	42.3%	39.6%	56.9%	40.5%
Green	54.8%	45.1%	60.3%	53.3%	49.2%
Greenup	60.0%	56.8%	61.4%	54.8%	54.5%
Hancock	49.0%	53.7%	39.8%	46.4%	30.5%
Hardin	49.8%	47.0%	44.9%	42.8%	47.2%
Harlan	55.2%	39.6%	46.6%	51.1%	50.0%
Harrison	51.5%	43.2%	55.4%	48.4%	50.9%
Hart	45.8%	46.3%	51.4%	38.7%	71.2%
Henderson	47.6%	51.2%	48.5%	43.7%	48.1%
Henry	56.1%	49.7%	55.0%	66.1%	49.5%
Hickman	57.1%	73.2%	67.3%	79.5%	84.6%
Hopkins	61.9%	61.6%	54.3%	54.0%	56.1%
Jackson	60.0%	46.7%	58.8%	43.2%	48.4%
Jefferson	51.8%	45.6%	48.5%	51.0%	47.9%
Jessamine	45.4%	44.6%	50.1%	42.5%	46.9%
Johnson	45.8%	51.3%	42.5%	45.4%	48.2%
Kenton	50.5%	49.7%	49.3%	50.5%	51.1%
Knott	32.2%	37.0%	49.7%	61.5%	61.5%
Knox	41.9%	45.1%	48.6%	23.2%	37.8%
LaRue	45.9%	42.1%	44.3%	40.1%	37.4%
Laurel	41.0%	54.7%	47.9%	54.9%	59.5%
Lawrence	43.3%	51.1%	49.4%	39.7%	38.4%
Lee	36.5%	20.8%	36.8%	21.2%	34.8%
Leslie	38.6%	62.8%	52.7%	67.3%	56.9%
Letcher	55.1%	46.3%	37.3%	50.8%	45.1%
Lewis	56.0%	47.3%	35.0%	52.1%	46.5%
Lincoln	37.8%	47.7%	29.4%	34.4%	33.9%
Livingston	40.2%	32.2%	41.7%	54.8%	42.2%
Logan	45.9%	47.1%	41.4%	34.2%	36.9%
Lyon	43.8%	46.4%	43.1%	44.7%	51.5%
Madison	53.2%	49.3%	50.4%	48.1%	39.3%
Magoffin	37.8%	31.0%	27.5%	44.5%	42.0%
Marion	58.1%	59.4%	63.5%	63.9%	62.1%
Marshall	58.3%	50.9%	38.3%	44.9%	46.1%
Martin	42.8%	39.7%	32.8%	42.2%	49.6%
Mason	41.9%	52.0%	41.6%	42.6%	33.5%
McCracken	52.0%	54.1%	50.2%	54.2%	51.0%
McCreary	53.5%	46.9%	50.6%	71.1%	64.5%
McLean	42.4%	28.2%	46.2%	35.9%	56.2%
Meade	39.2%	48.3%	51.3%	42.9%	47.3%

Menifee	65.2%	55.7%	28.9%	27.9%	17.8%
Mercer	49.0%	45.1%	34.0%	25.7%	30.7%
Metcalfe	57.5%	57.4%	63.4%	56.7%	61.5%
Monroe	62.8%	60.2%	56.5%	71.5%	56.7%
Montgomery	56.9%	47.8%	41.3%	42.4%	45.4%
Morgan	37.3%	42.9%	32.8%	31.9%	34.6%
Muhlenberg	41.9%	59.8%	60.6%	42.4%	34.0%
Nelson	49.7%	55.1%	54.3%	52.9%	53.2%
Nicholas	47.7%	71.2%	36.0%		
Ohio	48.1%	44.1%	55.7%	58.2%	59.9%
Oldham	57.8%	56.4%	63.8%	56.5%	61.1%
Owen	78.8%	75.2%	74.8%	63.0%	62.7%
Owsley	68.9%	56.4%	41.5%	48.8%	61.5%
Pendleton	44.7%	59.7%	43.8%	40.5%	26.3%
Perry	50.8%	47.4%	62.4%	52.8%	53.5%
Pike	48.6%	45.4%	51.8%	46.8%	42.9%
Powell	25.1%	25.4%	32.8%	56.3%	64.0%
Pulaski	42.3%	40.6%	39.8%	38.3%	37.5%
Robertson	53.3%	50.0%	33.3%	40.0%	62.1%
Rockcastle	47.6%	46.2%	33.8%	35.4%	43.8%
Rowan	54.5%	45.6%	44.5%	47.1%	44.9%
Russell	47.7%	52.4%	46.4%	48.7%	47.1%
Scott	49.6%	46.9%	49.0%	43.4%	46.9%
Shelby	58.4%	55.1%	55.0%	42.4%	40.5%
Simpson	23.2%	22.3%	47.3%	36.3%	48.7%
Spencer	49.1%	54.7%	47.8%	56.4%	42.1%
Taylor	46.1%	46.6%	42.7%	50.0%	47.7%
Todd	28.8%	40.9%	42.2%	30.8%	35.5%
Trigg	48.2%	44.2%	42.6%	56.8%	65.2%
Trimble	54.5%	51.9%	58.1%	48.5%	49.4%
Union	44.4%	47.8%	50.6%	51.6%	44.7%
Warren	56.2%	51.7%	52.0%	50.0%	50.8%
Washington	52.7%	41.8%	44.1%	44.8%	45.5%
Wayne	34.3%	30.7%	40.2%	40.2%	42.9%
Webster	39.9%	40.4%	36.7%	36.9%	45.0%
Whitley	48.9%	50.9%	44.7%	48.6%	45.5%
Wolfe	47.7%	42.9%	42.2%	52.1%	42.0%
Woodford	53.1%	52.5%	56.8%	60.7%	58.6%

Exhibit 238 Percent of Children Assessed as Ready for Kindergarten (Self-Help), by County, 2015 to 2019

	Self Help 2015	Self Help 2016	Self Help 2017	Self Help 2018	Self Help 2019
Adair	40.6%	51.1%	48.1%	46.6%	46.7%
Allen	51.7%	47.9%	54.6%	55.4%	51.9%
Anderson	66.4%	50.9%	55.9%	55.5%	49.8%
Ballard	70.5%	55.6%	49.0%	43.4%	51.8%
Barren	50.1%	46.2%	50.7%	48.2%	56.1%
Bath	53.1%	47.6%	54.8%	43.2%	36.0%
Bell	52.6%	50.0%	41.4%	44.9%	48.1%
Boone	59.4%	56.0%	55.7%	55.7%	57.3%
Bourbon	48.0%	51.2%	52.9%	52.9%	56.1%
Boyd	53.0%	49.7%	58.3%	44.6%	50.8%
Boyle	53.6%	61.2%	54.7%	54.2%	50.8%
Bracken	60.9%	47.0%	52.0%	49.5%	53.4%
Breathitt	35.8%	36.5%	48.5%	38.7%	34.8%
Breckinridge	52.1%	53.2%	53.4%	55.3%	57.9%
Bullitt	55.0%	50.2%	50.9%	52.7%	52.4%
Butler	63.9%	50.7%	43.9%	46.8%	51.8%
Caldwell	66.4%	51.1%	49.0%	48.4%	44.7%
Calloway	47.6%	53.4%	57.1%	50.8%	50.7%
Campbell	55.3%	55.1%	60.3%	56.4%	53.3%
Carlisle	59.3%	54.1%	49.0%	49.1%	59.1%
Carroll	60.0%	66.9%	49.5%	64.8%	64.6%
Carter	52.0%	50.7%	58.1%	54.4%	54.5%
Casey	55.3%	47.4%	55.5%	52.2%	49.5%
Christian	54.2%	55.4%	57.3%	55.5%	60.7%
Clark	58.1%	52.2%	52.4%	48.0%	50.3%
Clay	45.9%	36.9%	36.6%	40.1%	36.0%
Clinton	39.8%	40.9%	51.4%	46.8%	48.5%
Crittenden	54.7%	44.0%	36.6%	54.1%	50.0%
Cumberland	33.3%	52.2%	42.5%	38.3%	51.3%
Daviess	53.9%	53.9%	52.9%	55.0%	51.1%
Edmonson	63.6%	54.3%	46.4%	45.0%	36.4%
Elliott	52.1%	41.2%	40.0%	56.4%	48.4%
Estill	48.6%	52.1%	49.1%	52.9%	49.4%
Fayette	54.0%	56.8%	57.6%	55.5%	54.0%
Fleming	57.6%	51.7%	58.2%	51.5%	47.8%
Floyd	46.6%	45.2%	59.4%	50.5%	62.5%
Franklin	50.8%	56.0%	46.7%	52.0%	55.8%
Fulton	52.4%	49.4%	44.1%	36.4%	45.1%
Gallatin	57.3%	51.4%	63.8%	46.2%	47.7%

Garrard	50.4%	56.5%	55.5%	43.6%	48.6%
Grant	54.9%	49.7%	48.8%	51.2%	52.7%
Graves	56.4%	54.0%	56.7%	46.9%	49.9%
Grayson	47.3%	49.5%	56.2%	58.0%	59.5%
Green			70.4%	46.0%	56.5%
Greenup	55.1%	58.3%	56.7%	59.1%	55.0%
Hancock	57.3%	57.5%	43.8%	57.9%	43.9%
Hardin	53.5%	54.2%	55.1%	57.1%	55.2%
Harlan	52.7%	49.0%	42.6%	35.3%	47.1%
Harrison	54.1%	57.1%	54.7%	47.2%	52.8%
Hart	52.5%	56.5%	49.1%	48.0%	57.1%
Henderson	58.3%	48.2%	47.3%	40.0%	45.9%
Henry	43.4%	55.4%	55.3%	61.3%	67.8%
Hickman	48.8%	62.5%	60.4%	48.6%	56.4%
Hopkins	56.2%	57.7%	50.2%	50.5%	50.5%
Jackson	57.2%	38.4%	26.4%	50.0%	43.9%
Jefferson	55.6%	53.6%	52.5%	53.8%	52.1%
Jessamine	56.2%	52.6%	50.9%	57.3%	51.3%
Johnson	53.2%	58.1%	56.3%	56.1%	55.0%
Kenton	58.8%	56.0%	54.0%	54.7%	51.6%
Knott	46.6%	35.5%	45.8%	53.5%	50.0%
Knox	44.3%	50.7%	47.2%	47.8%	36.8%
LaRue	57.5%	55.4%	47.9%	58.0%	54.7%
Laurel	46.4%	47.1%	48.6%	43.9%	43.7%
Lawrence	47.7%	51.5%	45.7%	42.3%	35.1%
Lee	54.1%	44.4%	31.6%	42.3%	35.4%
Leslie	50.5%	63.3%	67.0%	57.8%	60.3%
Letcher	49.6%	45.6%	43.2%	44.4%	53.6%
Lewis	64.8%	45.3%	49.0%	42.1%	50.6%
Lincoln	49.1%	49.6%	42.2%	42.8%	40.6%
Livingston	63.1%	48.8%	48.5%	50.8%	45.9%
Logan	49.6%	44.2%	49.7%	49.0%	47.4%
Lyon	72.9%	54.4%	56.1%	69.6%	75.0%
Madison	56.4%	55.9%	50.1%	52.8%	50.1%
Magoffin	52.3%	47.7%	56.7%	58.1%	53.1%
Marion	54.9%	49.2%	45.8%	48.1%	50.2%
Marshall	59.7%	55.3%	55.0%	57.6%	53.5%
Martin	58.7%	45.3%	46.6%	43.2%	51.2%
Mason	50.0%	51.4%	55.1%	45.2%	44.3%
McCracken	54.6%	57.4%	54.2%	55.7%	57.8%
McCreary	52.4%	61.8%	50.2%	35.3%	42.7%
McLean	57.1%	48.5%	57.7%	51.6%	53.9%
Meade	49.5%	52.9%	55.3%	64.4%	57.8%

Menifee	50.7%	48.7%	51.9%	39.3%	34.8%
Mercer	54.7%	48.8%	52.3%	44.5%	46.3%
Metcalfe	54.2%	50.5%	46.6%	49.4%	41.3%
Monroe		41.7%	49.5%	46.8%	51.5%
Montgomery	54.9%	51.6%	48.7%	51.3%	48.3%
Morgan	62.9%	49.5%	46.7%	47.4%	36.1%
Muhlenberg	50.2%	47.5%	50.2%	52.8%	52.9%
Nelson	47.2%	55.8%	49.9%	49.3%	41.6%
Nicholas					
Ohio	49.7%	51.0%	51.1%	47.1%	44.9%
Oldham	64.9%	65.0%	62.9%	65.1%	65.0%
Owen	54.4%	57.8%	57.6%	50.9%	53.4%
Owsley	64.4%	48.1%	46.3%	63.4%	73.7%
Pendleton	53.0%	51.9%	57.9%	46.0%	47.4%
Perry	50.1%	43.6%	44.4%	48.4%	43.3%
Pike	52.2%	50.1%	56.9%	49.4%	51.1%
Powell	41.5%	47.6%	45.4%	51.7%	42.0%
Pulaski	57.2%	58.1%	49.6%	54.4%	55.8%
Robertson	60.0%	61.1%	54.8%		65.4%
Rockcastle	62.6%	56.6%	44.4%	57.2%	49.2%
Rowan	48.6%	50.2%	41.6%	42.4%	46.8%
Russell	45.1%	54.0%	43.6%	54.5%	49.8%
Scott	58.3%	54.7%	53.8%	56.7%	55.8%
Shelby	57.7%	61.1%	50.3%	52.5%	52.1%
Simpson	50.7%	45.6%	60.5%	66.5%	44.9%
Spencer	50.3%	55.1%	46.7%	57.1%	54.9%
Taylor	45.7%	53.8%	51.9%	55.8%	57.6%
Todd	42.6%	44.7%	40.2%	36.4%	33.3%
Trigg	63.2%	60.1%	49.5%	57.6%	65.9%
Trimble	60.8%	57.5%	66.2%	53.7%	54.3%
Union	48.4%	58.4%	56.5%	49.2%	46.7%
Warren	55.2%	52.5%	50.2%	51.2%	53.9%
Washington	49.2%	60.4%	52.5%	51.0%	45.5%
Wayne	47.2%	53.3%	38.9%	50.0%	46.9%
Webster	50.4%	56.1%	48.1%	57.1%	41.4%
Whitley	48.0%	50.6%	49.8%	47.3%	45.8%
Wolfe	53.4%	48.0%	41.7%	31.3%	53.8%
Woodford	54.4%	53.1%	55.4%	67.3%	60.4%

Exhibit 239 Percent of Children Assessed as Ready for Kindergarten (Social-Emotional), by County, 2015 to 2019

	Social Emotional 2015	Social Emotional 2016	Social Emotional 2017	Social Emotional 2018	Social Emotional 2019
Adair	78.6%	80.5%	74.3%	78.1%	71.7%
Allen	74.8%	77.0%	72.0%	77.2%	77.1%
Anderson	80.8%	79.2%	79.3%	81.2%	74.7%
Ballard	80.3%	79.4%	69.0%	76.3%	70.6%
Barren	76.9%	73.7%	76.9%	73.1%	77.5%
Bath	65.6%	68.9%	76.5%	75.8%	72.8%
Bell	83.3%	76.6%	71.0%	74.8%	72.5%
Boone	81.8%	79.8%	79.0%	81.1%	83.1%
Bourbon	77.0%	73.0%	80.2%	73.8%	75.3%
Boyd	82.7%	79.7%	83.0%	81.4%	82.9%
Boyle	79.6%	83.0%	82.1%	78.7%	81.5%
Bracken	70.4%	75.0%	69.0%	72.4%	75.9%
Breathitt	69.1%	76.3%	76.9%	73.9%	72.3%
Breckinridge	72.1%	74.6%	73.6%	77.9%	78.7%
Bullitt	78.1%	80.3%	79.0%	79.6%	76.4%
Butler	74.1%	70.4%	75.7%	71.6%	76.5%
Caldwell	84.6%	86.3%	74.5%	75.0%	77.3%
Calloway	79.4%	82.2%	80.1%	80.3%	72.0%
Campbell	82.6%	77.6%	80.2%	80.1%	78.9%
Carlisle	79.6%	67.6%	76.5%	75.4%	84.8%
Carroll	74.7%	83.8%	77.3%	84.1%	76.2%
Carter	77.1%	78.9%	82.3%	77.4%	77.7%
Casey	79.3%	76.3%	76.9%	78.3%	80.3%
Christian	73.4%	73.0%	72.5%	76.7%	78.9%
Clark	79.0%	76.6%	79.8%	77.1%	76.0%
Clay	75.4%	74.7%	72.3%	69.6%	74.8%
Clinton	76.4%	75.5%	77.1%	82.6%	76.7%
Crittenden	75.8%	83.0%	75.6%	73.0%	75.0%
Cumberland	69.8%	79.7%	77.5%	80.0%	78.9%
Daviess	80.6%	75.9%	76.7%	79.2%	78.7%
Edmonson	83.6%	73.2%	77.3%	74.4%	75.0%
Elliott	90.4%	85.3%	62.9%	75.6%	70.3%
Estill	79.1%	80.6%	76.7%	82.9%	78.3%
Fayette	80.8%	81.2%	81.5%	80.6%	80.5%
Fleming	80.0%	80.0%	86.6%	81.5%	71.0%
Floyd	76.5%	77.1%	82.6%	78.4%	78.7%
Franklin	74.2%	76.8%	78.5%	77.9%	80.0%
Fulton	72.0%	72.3%	71.2%	68.2%	59.2%
Gallatin	78.6%	80.7%	81.9%	78.3%	75.2%

Garrard	86.5%	82.9%	83.3%	77.3%	76.5%
Grant	74.6%	73.3%	70.0%	73.0%	68.9%
Graves	78.1%	78.4%	81.1%	74.1%	73.7%
Grayson	75.6%	74.2%	76.6%	74.0%	74.3%
Green			81.5%	77.0%	73.9%
Greenup	83.4%	81.9%	79.6%	85.6%	80.2%
Hancock	76.0%	77.4%	68.6%	82.1%	73.5%
Hardin	73.8%	76.2%	74.9%	77.9%	73.8%
Harlan	77.7%	80.4%	71.7%	76.5%	81.2%
Harrison	77.6%	78.3%	72.4%	75.4%	78.8%
Hart	76.5%	78.2%	71.7%	70.7%	78.2%
Henderson	77.6%	76.0%	74.5%	68.3%	70.3%
Henry	76.1%	71.4%	80.0%	81.5%	84.7%
Hickman	70.7%	77.5%	69.8%	71.4%	79.5%
Hopkins	76.1%	75.6%	69.8%	75.0%	74.1%
Jackson	88.3%	72.0%	74.5%	70.3%	75.5%
Jefferson	76.2%	76.8%	76.0%	76.5%	76.0%
Jessamine	78.5%	78.8%	77.8%	77.4%	79.1%
Johnson	77.8%	83.4%	83.0%	83.7%	84.0%
Kenton	77.9%	77.3%	76.3%	76.7%	75.2%
Knott	76.4%	76.5%	76.6%	73.2%	69.2%
Knox	72.9%	74.9%	75.7%	70.2%	67.3%
LaRue	78.1%	69.2%	76.4%	75.8%	70.2%
Laurel	80.1%	77.1%	78.8%	74.4%	78.4%
Lawrence	71.5%	77.5%	72.6%	76.9%	76.0%
Lee	81.1%	68.1%	76.8%	82.7%	72.3%
Leslie	85.3%	88.6%	87.5%	88.9%	84.1%
Letcher	76.6%	79.2%	76.2%	73.6%	84.3%
Lewis	81.7%	71.9%	77.5%	76.4%	76.5%
Lincoln	72.8%	70.0%	62.0%	69.1%	68.5%
Livingston	77.4%	79.1%	73.6%	72.1%	65.9%
Logan	79.6%	74.8%	79.4%	75.5%	74.3%
Lyon	88.6%	77.9%	78.9%	76.1%	83.8%
Madison	82.2%	80.0%	80.1%	82.3%	79.2%
Magoffin	75.8%	87.4%	83.6%	81.4%	77.7%
Marion	76.8%	75.1%	75.9%	74.0%	74.1%
Marshall	84.0%	83.8%	76.2%	80.3%	80.6%
Martin	79.8%	75.0%	78.9%	82.9%	76.0%
Mason	78.3%	77.3%	73.3%	80.7%	81.8%
McCracken	82.6%	81.2%	80.0%	81.6%	79.0%
McCreary	73.8%	77.1%	79.4%	70.6%	77.3%
McLean	82.7%	78.6%	87.1%	83.5%	78.7%
Meade	74.1%	77.0%	80.2%	80.6%	80.3%

Menifee	71.6%	78.2%	73.4%	62.3%	84.1%
Mercer	78.3%	78.5%	76.7%	75.8%	70.6%
Metcalfe	76.7%	79.2%	72.2%	79.8%	75.2%
Monroe		80.2%	68.2%	81.1%	79.9%
Montgomery	77.0%	72.8%	78.0%	76.0%	76.0%
Morgan	81.9%	79.3%	77.8%	73.3%	74.6%
Muhlenberg	78.8%	76.3%	74.5%	81.8%	75.6%
Nelson	76.3%	78.5%	77.0%	73.7%	74.4%
Nicholas					
Ohio	72.1%	80.0%	77.0%	73.6%	79.4%
Oldham	87.2%	87.4%	87.4%	87.5%	87.3%
Owen	67.1%	70.6%	83.3%	73.6%	75.0%
Owsley	93.2%	92.6%	73.2%	82.9%	97.4%
Pendleton	72.3%	65.4%	79.8%	64.5%	74.3%
Perry	76.8%	77.1%	72.2%	83.7%	73.8%
Pike	78.8%	79.7%	83.0%	80.0%	81.2%
Powell	75.0%	76.8%	74.9%	82.1%	75.3%
Pulaski	79.2%	79.6%	77.7%	78.6%	80.1%
Robertson	80.0%	72.2%	64.5%		80.8%
Rockcastle	80.8%	83.2%	73.8%	82.0%	79.6%
Rowan	79.4%	76.1%	79.6%	76.4%	77.7%
Russell	79.1%	75.1%	73.9%	75.9%	74.9%
Scott	81.4%	80.5%	80.7%	79.5%	79.4%
Shelby	76.1%	78.7%	77.9%	77.3%	75.2%
Simpson	75.1%	76.0%	79.3%	86.2%	85.5%
Spencer	72.5%	84.4%	80.7%	81.4%	81.6%
Taylor	76.0%	76.0%	75.5%	73.9%	78.6%
Todd	66.9%	67.0%	66.9%	68.6%	70.0%
Trigg	77.9%	78.3%	80.7%	77.6%	75.8%
Trimble	76.7%	82.5%	80.3%	80.6%	74.1%
Union	75.0%	71.5%	78.9%	75.0%	74.6%
Warren	80.7%	76.7%	74.6%	77.0%	76.1%
Washington	72.5%	68.8%	80.5%	82.3%	73.6%
Wayne	83.0%	77.9%	61.6%	73.0%	70.6%
Webster	71.7%	75.7%	73.8%	79.4%	71.1%
Whitley	73.7%	77.2%	81.1%	74.7%	78.0%
Wolfe	84.9%	65.3%	69.0%	73.4%	74.4%
Woodford	81.1%	82.7%	85.1%	85.5%	83.1%

Appendix C: Current CCAP Market Rates

DCC-300
(R.12/18)
922 KAR 2:160

COMMONWEALTH OF KENTUCKY
Cabinet for Health and Family Services
Department for Community Based Services
Division of Child Care

Kentucky Child Care Maximum Payment Rate Chart

County Name	Licensed Type I						Licensed Type II						Certified						Registered					
	Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age	
	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day
1.Adair	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
2.Allen	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
3.Anderson	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
4.Ballard	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
5.Barren	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6
6.Bath	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
7.Bell	20	15	20	14	19	13	20	15	17	12	17	12	18	15	17	12	17	12	10	6	10	6	10	6
8.Boone	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
9.Bourbon	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
10.Boyd	20	15	20	14	19	13	20	15	17	12	17	12	18	15	17	12	17	12	10	6	10	6	10	6
11.Boyle	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
12.Bracken	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
13.Breathitt	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
14.Breckinridge	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
15.Bullitt	24	19	21	16	20	14	24	19	21	16	20	14	21	18	19	16	18	14	13	8	12	7	11	6
16.Butler	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
17.Caldwell	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
18.Calloway	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6
19.Campbell	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
20.Carlisle	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
21.Carroll	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
22.Carter	22	15	19	13	18	13	20	15	18	13	16	12	19	15	18	13	18	13	10	6	10	6	10	6
23.Casey	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
24.Christian	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6
25.Clark	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
26.Clay	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
27.Clinton	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
28.Crittenden	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
29.Cumberland	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
30.Daviess	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6

DCC-300
(R.12/18)
922 KAR 2:160

COMMONWEALTH OF KENTUCKY
Cabinet for Health and Family Services
Department for Community Based Services
Division of Child Care

Kentucky Child Care Maximum Payment Rate Chart

County Name	Licensed Type I						Licensed Type II						Certified						Registered					
	Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age	
	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day
31.Edmonson	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
32.Elliott	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
33.Estill	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
34.Fayette	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
35.Fleming	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
36.Floyd	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
37.Franklin	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
38.Fulton	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
39.Gallatin	24	19	21	16	20	14	24	19	21	16	20	14	21	18	19	16	18	14	13	8	12	7	11	6
40.Garrard	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
41.Grant	24	19	21	16	20	14	24	19	21	16	20	14	21	18	19	16	18	14	13	8	12	7	11	6
42.Graves	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6
43.Grayson	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
44.Green	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
45.Greenup	20	15	20	14	19	13	20	15	17	12	17	12	18	15	17	12	17	12	10	6	10	6	10	6
46.Hancock	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
47.Hardin	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6
48.Harlan	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
49.Harrison	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
50.Hart	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
51.Henderson	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6
52.Henry	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
53.Hickman	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
54.Hopkins	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
55.Jackson	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
56.Jefferson	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
57.Jessamine	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
58.Johnson	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
59.Kenton	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
60.Knott	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6

DCC-300
(R.12/18)
922 KAR 2:160

COMMONWEALTH OF KENTUCKY
Cabinet for Health and Family Services
Department for Community Based Services
Division of Child Care

Kentucky Child Care Maximum Payment Rate Chart

County Name	Licensed Type I						Licensed Type II						Certified						Registered					
	Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age	
	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day
61.Knox	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
62.Larue	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
63.Laurel	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
64.Lawrence	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
65.Lee	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
66.Leslie	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
67.Letcher	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
68.Lewis	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
69.Lincoln	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
70.Livingston	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
71.Logan	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
72.Lyon	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
73.McCracken	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6
74.McCreary	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
75.McLean	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
76.Madison	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
77.Magoffin	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
78.Marion	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
79.Marshall	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
80.Martin	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
81.Mason	20	15	20	14	19	13	20	15	17	12	17	12	18	15	17	12	17	12	10	6	10	6	10	6
82.Meade	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
83.Menifee	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
84.Mercer	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
85.Metcalfe	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
86.Monroe	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
87.Montgomery	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
88.Morgan	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
89.Muhlenberg	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
90.Nelson	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6

DCC-300
(R.12/18)
922 KAR 2:160

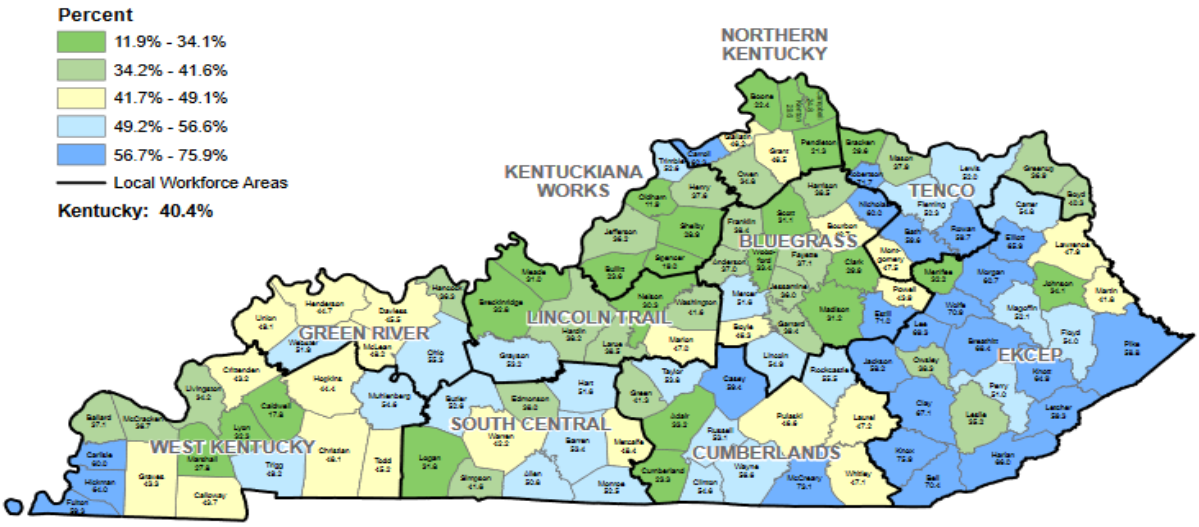
COMMONWEALTH OF KENTUCKY
Cabinet for Health and Family Services
Department for Community Based Services
Division of Child Care

Kentucky Child Care Maximum Payment Rate Chart

County Name	Licensed Type I						Licensed Type II						Certified						Registered					
	Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age		Infant/Toddler		Preschool		School-Age	
	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day	Full Day	Part Day
91.Nicholas	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
92.Ohio	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
93.Oldham	24	19	21	16	20	14	24	19	21	16	20	14	21	18	19	16	18	14	13	8	12	7	11	6
94.Owen	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
95.Owsley	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
96.Pendleton	24	19	21	16	20	14	24	19	21	16	20	14	21	18	19	16	18	14	13	8	12	7	11	6
97.Perry	20	15	20	14	19	13	20	15	17	12	17	12	18	15	17	12	17	12	10	6	10	6	10	6
98.Pike	20	15	20	14	19	13	20	15	17	12	17	12	18	15	17	12	17	12	10	6	10	6	10	6
99.Powell	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
100.Pulaski	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
101.Robertson	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
102.Rockcastle	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
103.Rowan	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
104.Russell	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
105.Scott	24	19	21	16	20	14	24	19	21	16	20	14	21	18	19	16	18	14	13	8	12	7	11	6
106.Shelby	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
107.Simpson	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
108.Spencer	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
109.Taylor	28	20	25	18	21	15	27	19	25	18	22	15	25	18	24	17	20	14	13	8	12	7	11	6
110.Todd	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
111.Trigg	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
112.Trimble	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
113.Union	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
114.Warren	25	18	22	16	20	16	22	15	23	16	21	16	20	14	17	13	17	14	10	6	10	6	10	6
115.Washington	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
116.Wayne	24	17	21	15	18	13	21	15	20	14	17	12	19	15	18	13	18	13	13	8	12	7	11	6
117.Webster	21	15	20	15	18	15	21	15	18	15	18	15	18	13	17	13	17	13	10	6	10	6	10	6
118.Whitley	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
119.Wolfe	22	15	19	13	18	13	19	14	18	13	16	12	19	14	18	13	18	13	10	6	10	6	10	6
120.Woodford	24	19	21	16	20	14	24	19	21	16	20	14	21	18	19	16	18	14	13	8	12	7	11	6

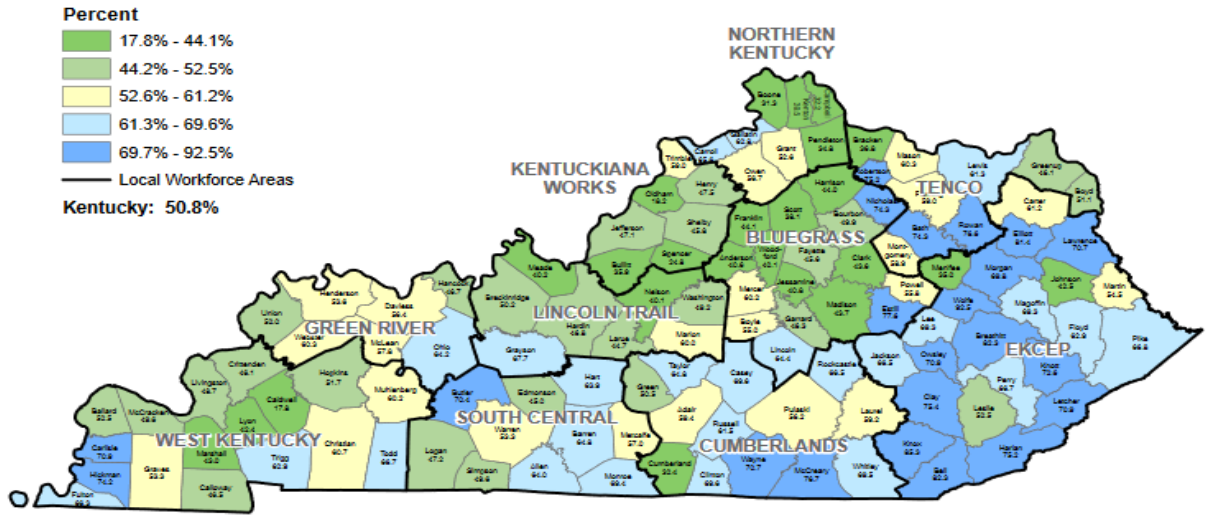
Appendix D: Children in Poverty at 150% to 200% or Less of the Federal Poverty Level

Appendix D 1 Children Experiencing Poverty in 2017: 150% or Less of the Federal Poverty Level (FPL)



Data Source: Kentucky Center for Statistics

Appendix D 2 Children Experiencing Poverty in 2017: 200% or Less of the Federal Poverty Level (FPL)



Data Source: Kentucky Center for Statistics