

Community Research Institute

*Empowering communities with quality research and data*

# EXECUTIVE SUMMARY

## Kent County Early Childhood Indicators – Baseline Data

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**Johnson Center**  
at Grand Valley State University



*Every young child in Kent County will enter kindergarten ready to succeed in school and in life.*

That vision inspires and guides the work of our community's early childhood collaborative. With the help of parents, educators, healthcare providers, private and public sector service providers, policy makers and philanthropic leaders, together we are shaping a coordinated, integrated system of early childhood services that are high quality, culturally sensitive, voluntary and accessible.

Critical to our efforts is the ability to measure our collective impact, monitor systems development and report reliable, relevant information about the well-being and school readiness of young children to the broader community. To that end, we partnered with the Community Research Institute (CRI) at Grand Valley State University to identify indicators that ultimately could be adopted by the community collaborative as a part of our overall planning efforts.

Using an iterative process, more than 40 community partners worked with CRI to generate dozens of potential indicators that were then vetted and analyzed with an eye toward national best practice. The list was culled further based on a number of factors, including data availability, reliability and relevance to the five core elements of our early childhood community vision –

- Parents have the knowledge, skills and opportunities to give their young children a great start in life.
- Families have the relationships and resources they need to raise their young children, and their basic needs are met.
- Young children have quality early learning experiences starting at birth.
- Young children and their families receive the quality, comprehensive services and education they need to maximize their health.
- The community understands the importance of early childhood and invests in the healthy development and early learning of young children.

This report represents the results of those efforts. While the report is a starting point, it builds on previous efforts and includes a set of indicators that will guide us as we work to achieve our community vision.

We are profoundly grateful to everyone who contributed their time, talent and energy to this process, and to those who continue to believe in and invest in this work.

Lynne Ferrell  
Chair, Great Start Collaborative

Rebekah Fennell  
Executive Director, First Steps

## Introduction

This report provides a baseline analysis for several Kent County early childhood indicators. The process for choosing these indicators began in 2010. Four workgroups of community members came together around four broad categories: physical and behavioral health, early care and

education, parent education, and family support. The Community Research Institute (CRI) at the Johnson Center for Philanthropy at Grand Valley State University provided technical support to the workgroups identifying data sources and ensuring proposed indicators aligned with principles for good indicators. At the end of the process Kent County's Great Start Collaborative (GSC) endorsed the indicators.

When possible in the full report, we compare county numbers to state averages and in some cases, areas within Kent County, such as the City of Grand Rapids. In addition, we present detailed analyses of four early childhood indicators at the census tract level to shed greater light on the demographic trends and needs at a much more localized and focused level. We are fully committed to expanding the indicators for which we can perform this more granular geographic analysis as we access more detailed data through partnerships with state and local agencies.

Presenting the data through maps is one way we focus on areas of need within Kent County. Another way we combine findings from multiple indicators into a more focused presentation of need is the use of a statistical procedure called factor analysis. The report uses factor analysis to explore different groups of connected indicators and how they manifest different needs and challenges for sub populations (such as different racial or ethnic groups or different income levels) in different parts of the county.

Findings for individual early childhood indicators can be used to track community changes over time. For many indicators we can assess our county's progress for various sub populations at the county level. For indicators where we have more localized data, we can discover differences for these subpopulations and for different geographic areas. This can be useful for making program decisions in areas where greater needs are identified. For example, areas where there is an apparent unmet need for preschool can be identified. State, county, and city agencies have been very successful using geographic factors to identify and target for testing children at-risk for lead poisoning. Specific areas of need are often hidden in county level data that compares favorably with state or national averages. This is the main reason for seeking data with both subpopulation characteristics (such as race and ethnicity) and geographic characteristics (preferably street address) attached.

For early childhood system providers this baseline indicator report confirms the need for greater attention to the Early Childhood System in Kent County. Additionally, this report provides the necessary descriptors and geographic picture of the areas with specific needs.

For Funders and other stakeholders this report highlights the continuing struggle of many families in areas of the county to access affordable child care and other essential services. The report also highlights the need for better data access at the local level to inform decision-making about the early childhood system.

For the broader community these indicators report reliable, relevant information about the well-being and school readiness of young children in Kent County.

Our community's development of these early childhood indicators was guided by several principles. We sought to put the community in community indicators by recognizing that geography matters. We always tried to access data at the record level with street addresses attached. We sought to provide a core set of working indicators that can assist local providers in managing their early childhood services. Finally, we recognize that many services provided to children are difficult to count and many of the things we can count are not the most important for improving the lives of children.

## Key Findings

It is useful to present county-level data for these early childhood indicators to understand where we are collectively as Kent County. However, by closely examining subgroups and subgeographies within the county we begin to understand our communities and their particular needs. The following key findings from the baseline indicator data emphasize differences found for local areas within the county.

### Maternal and Child Health Index

- Areas in the city of Grand Rapids typically see poorer birth outcomes than do other areas of the county.
- Some rural areas in the northern part of the county also are experiencing birth outcomes that are worse than the county average.

### Parent Education Index

- Outcomes in certain areas of Grand Rapids are worse than for the county as a whole.
- Parts of Grandville and Wyoming are also seeing outcomes below the county average.
- Most of the rural northern areas of the county with lower than average scores on the maternal and child health index have slightly better than average scores on the parent education index.

### Child Care Affordability

- There is not one census tract in Kent County where a family living at or below 75 percent (\$16,196 for a family of four) of the Federal Poverty Level (FPL) has sufficient income to cover their housing, transportation and child care expenses.
- Among children living at or below 75 percent of FPL, the typical income deficit required for full time child care was more than \$5,700 for a four year old and \$6,600 annually for an infant.
- The typical family with a four-year-old living between 100 and 125 percent (\$21,594 - \$26,993 for a family of four) of FPL has an annual deficit of nearly \$300 while a similar family with a newborn as an annual deficit of nearly \$1,200.
- Ada, a comparatively wealthy section of the county, exhibits among the greatest child care income deficits, in part due to higher housing and transportation costs.
- Despite greater relative need in some wealthier areas of Kent County the absolute need is still greatest in Grand Rapids because of the much greater numbers of families with children living in poverty in the city.

### Children Living in Poverty

- More than one in five young children (age 0-5) in Kent County lives in families below the poverty line.
- Michigan's poverty rate for this age group is slightly higher than Kent County's, 22.7 to 20.8 percent.
- The City of Grand Rapids saw poverty among the very young decrease from its high of 37.5 percent in 2006 to 33.9 percent in 2009.

### At-risk Children Enrolled in Public Preschool

- Approximately three-quarters (73.4 percent) of economically at risk four-year-olds in Kent County are enrolled in either the Great Start Readiness Program (1,656) or Head Start (1,157).
- The other 26.6 percent of economically at-risk four-year-olds in the county, more than 1,000 children, are not being served due to a lack of available funding and slots.

#### Associated Risk and Need Factors

- A sizable population of children exhibit a combination of risk factors such as poor pregnancy outcomes and high levels of poverty. These children are concentrated in Grand Rapids but rural areas of the county also have high risk and high need children.
- Children who are both poor and linguistically isolated—English is not the primary language spoken in their homes—are concentrated in some areas of Grand Rapids, Wyoming, and Kentwood but also in rural areas in the northwest part of the county surrounding Sparta.

#### Children Ready for Kindergarten

- Twenty-seven percent of Kent County students enter kindergarten with less than age-appropriate oral language and/or early-literacy skills. This converts to almost 2,600 students.

## Factor Analysis

We simultaneously examined all indicators analyzed at the census tract level using a data reduction technique called factor analysis to reduce our broad set of indicators into three components, or factors. We developed typologies for three factors that help summarize our findings. These three factors are described as follows.

### Factor 1 – Extreme Risk - Extreme Need Children

This population exhibits many factors that would put them at risk of poor outcomes. Among the three factors, this cluster exhibits the most severe risk factors, including poor pregnancy outcomes with very high levels of poverty.

### Factor 2 – Low Income Linguistically Isolated Children

The most severe risk factors among children in this cluster are the high percentage of households that are linguistically isolated. In addition, moderately high levels of women associated with this group did not begin prenatal care during their first trimester. These children are likely to be poor and largely Hispanic.

### Factor 3 –Moderately Low Income and Isolated

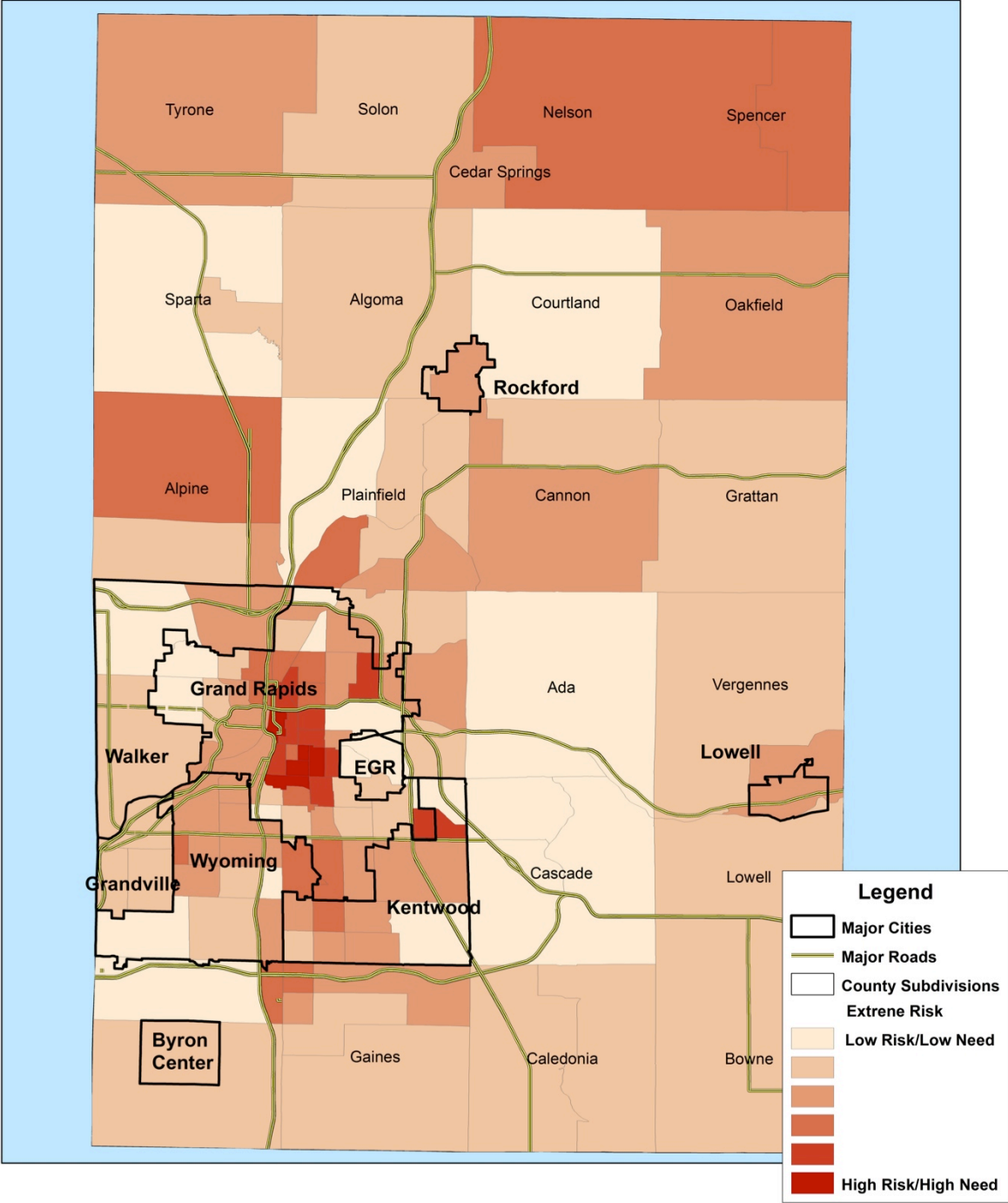
Children associated with this cluster are least likely to be enrolled in child care or preschool. The census tracts most closely associated with this factor are rural, especially in the northwest corner of Kent County. Although these tracts do not suffer from high levels of children living in poverty, they do have moderately low levels of household income.

We developed summary maps of each of these factors (see the following three pages). Areas with darker shading are those most associated with the factor. For example, in the map on the following page detailing Extreme Risk - Extreme Need Children, the areas of inner city Grand Rapids are those most associated with this factor. The lighter shaded areas, such as Ada and Cascade exhibit little to none of the characteristics associated with this factor and thus, we could conclude that on balance, there are few children with extreme risk and extreme need in these areas.

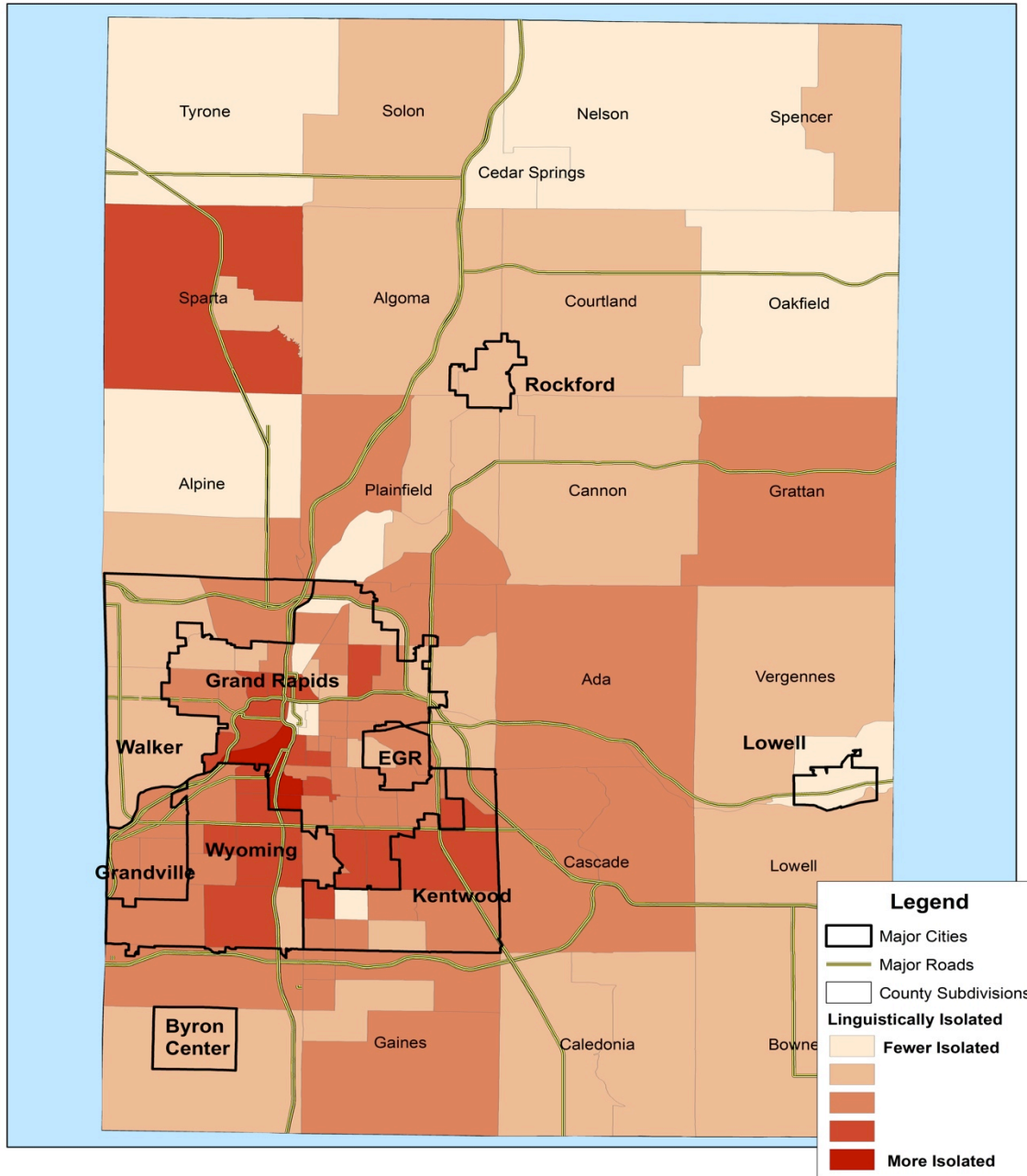
Analysis such as this can be useful in developing appropriate policy responses to the differing needs of individual communities and is particularly useful in uncovering relationships that are difficult to ascertain when examining the various indicators one-by-one.

The map on the following page represents a population that exhibits many factors that would put them at risk of poor outcomes. Among the three factors, this cluster exhibits the most severe risk factors, including poor pregnancy outcomes with very high levels of poverty. While the areas of highest risk and highest need are in the city of Grand Rapids there also are areas of greater risk and need in rural areas in the northern part of the county.

# Extreme Risk - Extreme Need Children



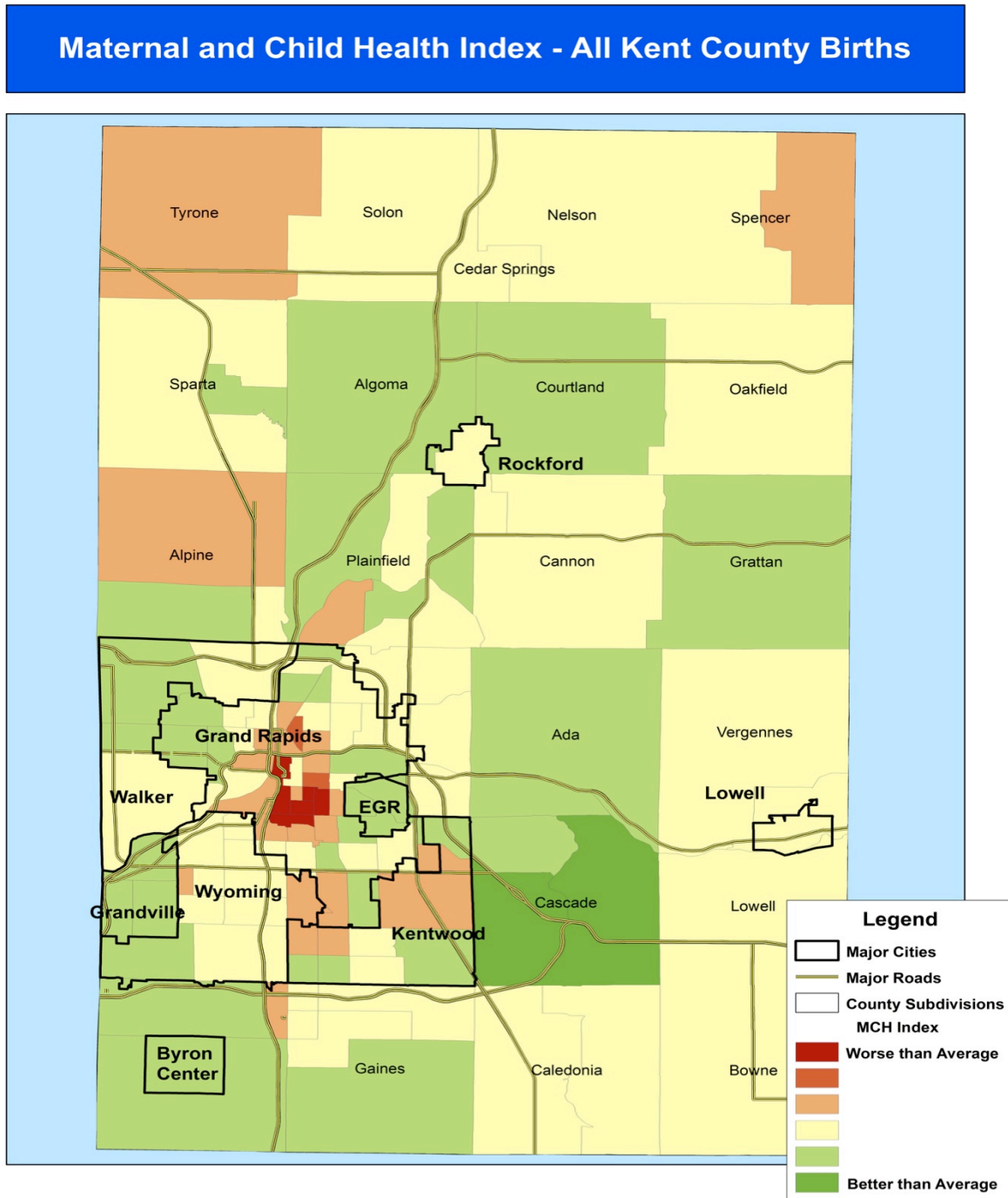
## Low-Income Linguistically Isolated Children



The most severe risk factors among children in the cluster represented in the above map are the high percentage of households that are linguistically isolated. In addition, moderately high levels of women associated with this group did not begin prenatal care during their first trimester. These children are likely to be poor and largely Hispanic. The more isolated areas on this map are spread throughout Grand Rapids, Wyoming, Kentwood, and the areas surrounding Sparta.

## Indicators Analyzed by Census Tract

For several indicators, we were able to obtain data that allows and analysis by the 126 different census tracts within Kent County. Approximately 4,000 to 5,000 people live in each census tract. Mapping these indicators enables us to view geographic areas of need that may be masked when looking at county-level data.



### Maternal and Child Health Index

This index is a composite of three items derived from state vital records. The index is composed of 1) the percentage of births delivered at full-term; 2) the percentage of births where prenatal care began within the first trimester; and 3) the percentage of births resulting in a satisfactory birth weight. Each of these three components is an important indicator of early childhood well-being.

Because this index is not widely used throughout the U.S., there are no comparable scores. The individual components, however, are widely reported at the national and state level. Kent County fares better when looking at the percentage of births delivered at normal birth weight. A total of 94 percent of births in Kent County are at normal birth weight compared to 90 percent nationally. The percentage of women who access prenatal care services within the first trimester is also higher in Kent County than nationally. About 81 percent of women accessed prenatal care within the first trimester nationally as compared to 84 percent in Kent County.

Geographic differences are apparent when examining all births through this index and when looking at births for different sub-populations. Areas within the city of Grand Rapids typically see poorer birth outcomes than do births in other areas of the county. However, some rural areas in the northern part of the county also are experiencing birth outcomes that are worse than the county average.

### Parent Education Index

A composite of four items derived from state vital records – the percentage of births in which the mother did not smoke during pregnancy; the percentage of births in which the mother did not consume alcohol during pregnancy; the percentage of births in which the mother conceived a subsequent pregnancy 18 or more months after a previous birth; and the percentage of births in which the birth certificate contains data about the father (a proxy for planned pregnancy). As with the Maternal and Child Health Index, these components all have important influences on early childhood well-being.

In Kent County, the percentage of women that did not smoke during pregnancy was equal to the national average of about 90 percent. Mothers of Non-White infants reported slightly lower rates of those that did not smoke during pregnancy at 86.4 percent versus 90.7 percent of mothers to White infants.

As with the maternal and child health index, the parent education index presents different outcomes in different parts of the county. Outcomes in certain areas of Grand Rapids are worse than the county as a whole. Parts of Grandville and Wyoming also see outcomes below the county average. Most of the rural northern areas of the county with lower than average scores on the maternal and child health index have slightly better than average scores on the parent education index.

### Children Living in Poverty

The percent of children age 0-5 in families living in poverty during the previous year. In 2009, the latest year for which data are available, the U.S. Department of Health and Human Service's threshold for a family of four (i.e. two parents with two children) was \$22,050 (this includes pre-tax cash income but not non-cash assistance such as food stamps or housing subsidies). The 2011 poverty threshold for a family of four is \$22,350. Poverty is linked to a number of negative educational, health-related, and emotional outcomes for children. These effects begin before birth and continue into a child's adulthood.

More than one in five young children in Kent County live in families below the poverty line. The state poverty rate for this age group is slightly higher than the rate for Kent County, 22.7 percent to 20.8 percent. The City of Grand Rapids saw poverty among the very young decrease from its high of 37.5 percent in 2006 to 33.9 percent in 2009 among children 0 to 5 years old.

### Child Care Affordability

A measure of the family income deficit a hypothetical child at various poverty levels would need to attend full time child care, factoring in housing and transportation expenses. This deficit model seemed most appropriate for the analysis since it offers policy makers the ability to better understand resource gaps required to provide child care services for those most in need as well as the cost of subsidizing those services when and where appropriate. We chose to include housing and transportation expenses in our formula because they are the largest expenses for the typical household and there are a number of generally accepted methods for estimating such expenses.

Among children living at 75 percent or below of Federal Poverty Level (FPL), the typical income deficit required for full time child care was more than \$5,700 for a four year old and \$6,600 annually for an infant. There is not one census tract within Kent County where a family living at 75 percent or below of FPL would have sufficient income to cover their housing, transportation and child care expenses. For children living in families with incomes between 100 and 125 percent of FPL, the overwhelming majority of families would also have severe income deficits if utilizing child care services. The typical family with a four-year-old living between 100 and 125 percent of FPL would have an annual deficit of nearly \$300 while a similar family with a newborn would have an annual deficit of nearly \$1,200.

For many indicators analyzed for this report areas of inner-city Grand Rapids have shown areas of greatest need. When looking at child care affordability, however, Ada, a comparatively wealthy section of the county, exhibits among the greatest child care income deficits. This is mainly a function of the housing costs in Ada, which are three to four times that of many census tracts in Grand Rapids. Despite greater relative need in some wealthier areas of Kent County the absolute need is still greatest in Grand Rapids because of the much greater numbers of families with children living in poverty within the city.

## **Indicators Analyzed at the County Level**

### At-risk Children Enrolled in Publicly Funded Preschool

Estimating the number of at-risk children involves two separate calculations. The numerator for the calculation is the number of at-risk children enrolled in publicly funded preschool (an estimate of the number of at-risk children whose needs are met). This is defined as the sum of four-year-old children enrolled in either Head Start or the Great Start Readiness Program during the current year. The denominator for the calculation is the number of first grade children receiving free or reduced (cost) lunches (FRL) at school. The total number of children in first grade receiving FRL is a proxy for total need. Preschool and early intervention programs have

been shown to have a number of positive effects on children from low-income families but not all low-income children are enrolled in preschool. This measure estimates the percentage of four-year olds from low-income families who are enrolled in publicly funded preschool. The estimates only consider economic risk factors, not other non-economic risk factors.

We estimate that the total number of 4-year-old children in need in Kent County is 3,833 based on the number of children eligible for FRL. Currently, about 2,813 or almost three-quarters (73.4 percent) of at-risk four-year old children in Kent County are enrolled in either the Great Start Readiness Program (1,656) or Head Start (1,157). Based on these estimates, there are gaps in the number of children potentially eligible for one of the two preschool programs and the ability to meet those needs. We estimate that greater than a quarter or 1,020 of at-risk 4-year-old children in Kent County have unmet needs. It should be noted that this is a conservative estimate as it is based solely on economic risk and does not account for other risk factors, such as primary language other than English or low educational attainment of parents.

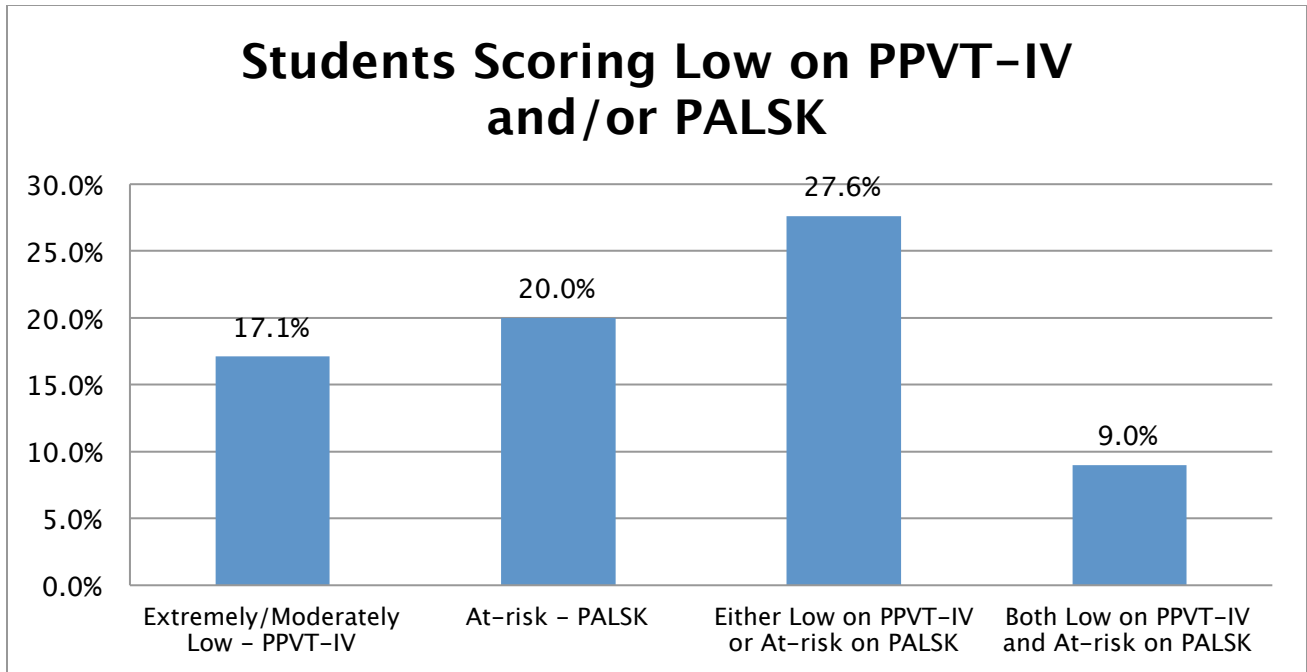
#### Children Ready for Kindergarten

Percent of children performing at or above grade level on the PPVT-IV and the PALSCK tests. There is great community-wide interest in children's readiness levels as they begin their school careers. Nationally, there is no broad agreement on what readiness includes, but cognitive pre-literacy measures can be used as a proxy for academic readiness. The Peabody Picture Vocabulary Test (PPVT-IV) measures the receptive vocabulary of children. Vocabulary assessment is strongly related to reading comprehension and correlates highly with general verbal ability. Vocabulary acquisition is an important indicator of a child's linguistic and cognitive development and readiness for formal schooling. The Phonological Awareness Literacy Screening K (PALSCK) consists of screening instruments that measure young children's knowledge of several important literacy fundamentals including: phonological awareness, alphabet knowledge, knowledge of letter sounds, spelling, concept of word, and word recognition in isolation.

In the fall of 2010, a stratified random sample of approximately 600 children beginning kindergarten in Kent County were administered either the PPVT-IV or PALSCK tests. On the PPVT-IV approximately one out of six students (17.1 percent) scored in either the low or the extremely low range. Given that the total kindergarten enrollment in Kent County ISD schools in 2010-11 was 9,404 students, approximately 1,600 children entered kindergarten with less than age appropriate oral language skills.

The PALSCK test identifies children as at-risk of needing special services to progress to reading at grade level by third grade. Twenty percent of children in the sample taking the PALSCK scored in the at-risk range.

These two assessments cover different topics. So a student scoring high on one assessment may not score high on the other. Figure 10 also shows students who scored either extremely or moderately low on the PPVT-IV, at-risk on the PALSCK, either extremely or moderately low on the PPVT-IV or at-risk on the PALSCK, and both extremely or moderately low on the PPVT-IV and at-risk on the PALSCK. Twenty-seven percent of Kent County students enter kindergarten with less than age-appropriate oral language and/or early-literacy skills. This converts to almost 2,600 students.



#### Children Appropriately Immunized

The percent of children age 19-35 months who have received a series of age-appropriate immunizations. These immunizations reduce the risk of disease and help prevent outbreaks. Children that are fully immunized often indicate appropriate parental engagement with their children.

Kent County's immunization rate for young children (19 to 35 months old is a commonly reported age group) for 2010 is higher than the rate for Michigan as a whole (65.6 percent versus 62.5 percent). This was the case for all of the past five years except 2009.

#### Substantiated Victims of Abuse and/or Neglect (age 0-5)

The rate of substantiated cases of abuse or neglect for children ages 0-5. Child abuse and neglect data typically fall into one of two broad categories: 1) the rate of child abuse and neglect reports and 2) the rate of substantiated child abuse and neglect cases. This distinction is very important because in most cases, reports of child abuse and neglect do not end up becoming substantiated by Child Protective Services. The rate of substantiated cases is generally a more accurate measure of the prevalence of abuse and neglect because it reflects cases that are verified. Children who experience abuse or neglect in their early years are more likely to be absent from school, have lower educational aspirations, and experience anxiety, depression, and other psychological issues in adolescence.

The Kent County rate is consistently higher than that for the state as a whole. In some recent years the gap has been small, in others it has been large. At both the state and county levels, the rate of substantiated cases of child abuse and/or neglect for young children (0-5 years old) is consistently higher than the overall rate for children (0 to 17 years old). Although Kent County appears to have higher rates of abuse and neglect compared to the statewide averages, this may be, in part, a function of increased awareness—as the public becomes more aware of child abuse and neglect and how to report it the reported rate may increase as less instances go unreported.

### Hospitalization Rate for Ambulatory Care Sensitive Conditions

The rate of children ages 0-5 hospitalized for identified ambulatory care sensitive conditions (ACS). ACS conditions often are used as a proxy for access to preventive care. Researchers argue that certain conditions, like asthma, are ambulatory care sensitive — that is hospitalization is largely preventable by timely and appropriate primary and preventive health care. Thus, high rates of hospitalization and emergency department utilization for these conditions are an indicator of a need for better or more appropriate primary care

Kent County's ACS hospitalization rate for children 0 to 5 years old declined over the past two years after increasing from 2006 to 2007. The current rate is considerably lower than the rate for Michigan as a whole. We are seeking access to hospital discharge data from the Michigan Hospital Association to determine the extent to which ACS conditions are present among various subgroups and geographic areas within Kent County. This analysis will give us a more complete understanding of where children in the county are facing access barriers to primary care services.

### Elevated Blood Lead Level

Percent of tested children 0-72 months with confirmed elevated blood lead level ( $\geq 10$  mg/dL, micrograms per deciliter). Children who are identified by risk factors related to where they live are targeted for blood lead testing. According to the Centers for Disease Control and Prevention consequences of lead exposure can include: nervous system and kidney damage; poor muscle coordination; learning disabilities; attention deficit disorder; and speech, language and behavior problems.

The percent of tested children with elevated blood lead levels in Kent County has consistently decreased over the last five years (from 2.4 percent in 2006 to 0.7 percent in 2010). This decline has been mirrored, though less dramatically, in the state as a whole (from 1.6 percent in 2006 to 0.8 percent in 2010). The decline has been even more pronounced in the City of Grand Rapids. The city's rate of tested children with elevated blood lead levels declined from 4.1 percent in 2006 to 1.3 percent in 2010. The city's rate is still almost double the rate for the county and for Michigan as a whole. In 2010, 10,735 children 0-72 months in Kent County were tested for blood lead. Just under half of those tested (4,959) lived in the City of Grand Rapids.

## **Indicators Being Developed**

### Recommended indicators for which CRI is working to access data

*(Data are collected for these indicators. CRI is working to access and analyze the data. Once complete, analysis of these indicators will be added to the baseline report).*

- Medical home (proxy is % of children of Medicaid who have received all age-appropriate medical checkups)
- Dental home (proxy is % of children of Medicaid who have received all age-appropriate dental checkups)
- Identification of special needs (we are working to determine the most appropriate indicator to measure early identification and intervention for children who qualify for special education services)

### Recommended indicators for which data are not currently available

- Children read to daily
- Housing & transportation index
- Body mass index