Council on

Children & Families

A Research Brief on Child Well-being

This brief was funded in part by the Annie E. Casey Foundation. We thank them for this support and acknowledge that the information presented here does not necessarily reflect the opinion of the funder.

IDENTIFYING HIGH NEED COMMUNITIES IN NEW YORK STATE

A publication by the Institute of Medicine, *From Neurons to Neighborhoods*, documents how healthy child development is impacted over the course of time by a child's biology and the context of where a child lives (1). We have learned that young children's well-being can be compromised by a range of risk factors associated with children, their families, the quality of schools they attend and their communities; it is also well-established that these risks can be offset by early supports to children and families (1-15). Therefore, identifying communities where young children are disproportionately exposed to factors that can compromise their development enables us to align and mobilize resources that promote their well-being and offset factors that place them at risk. What follows is a description of the method used to identify high need communities in New York state, with particular emphasis on children from birth to age 5 years.

Approach Used to Identify High Need Communities

The approach used to identify high need communities was an adaptation of the method developed for the needs assessment of the New York State Affordable Care Act Maternal, Infant and Early Childhood Home Visiting Program (HVP). The HVP needs assessment method has many advantages and direct applications for early learning initiatives. For instance, the HVP method used a comprehensive view of child development and identified risk factors that spanned from prenatal development through age five. Second, the HVP approach was driven by a public health perspective that recognizes the role multiple service systems play in promoting healthy child development. As a result of this approach, the identification of high need areas was informed by data from the fields of health, education, child welfare, social services and labor. Last, the approach was sensitive to the diverse urban and rural communities across New York state. This was achieved by examining risk factors in terms of their severity (i.e., prevalence rate) and burden (i.e., number of individuals impacted).

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Step 1: Identification of risk factors

A total of 20 risk factors empirically associated with healthy child development and school readiness were compiled. As noted previously, healthy child development occurs within the broad parameters of a "neighborhood" so the selected indicators incorporated risk factors at the child, family, school and community level. Due to the comprehensive nature of the risk factors, data were available at the zip code, school district, city/town and county level. Table 1 depicts the data used. (See Appendix A for a description of the impact each indicator has on child development).

Table 1. Community Risk Factors

	Risk Indicator	Geographic Area	Data Source
Child	Percent of infants weighting less than 2,500 grams at birth	Zip code	New York State Department of Health
	Percent of infants born with less than 37 weeks gestation	Zip code	New York State Department of Health
	Percent of children birth through 5 years with a diagnosed condition with a high probability of resulting in developmental delay or have not attained developmental milestones in accordance with state definition	Zip code	New York State Department of Health
	Percent of births where mother received pregnancy-related health care in the last three months of pregnancy or not at all	Zip code	New York State Department of Health
	Percent of children ages 3 through 4 years in school district enrolled in preschool special education programs	School District	New York State Education Department
Family	**Percent of children birth through 5 years in households below the 200% federal poverty level**	**Town**	**U.S. Census American Community Survey 2005-2009**
	Percent of children birth through 5 years living in female headed households	**Town**	**U.S. Census American Community Survey 2005-2009**
	Percent of children birth through 5 years living in families that are homeless	**School District**	**New York State Education Department**
	Percent of children birth through 5 years in households receiving benefits from the supplemental nutrition assistance program (food stamps)	**Zip code**	**New York State Office of Temporary & Disabilities Assistance**
	Rate per 1,000 children birth through 5 years in indicated reports of abuse or neglect	**Town**	**New York State Office of Children & Family Services**
	Rate per 1,000 children birth through 5 years in foster care	**Town**	**New York State Office of Children & Family Services**
	Percent of children birth through 5 years living in migrant families	**County**	**Migrant Center Outreach**
	Rate of live births per 1,000 adolescent females ages 15 through 19 years	**School District**	**New York State Education Department**
School	Percent of students in school district who are enrolled in a school identified by the New York State Education Department as "persistently low achieving"	School District	New York State Education Department
	Percent of students in school district who do not graduate in four years with a regular high school diploma	School District	New York State Education Department
	Percent of kindergarten through grade 12 public school students receiving free or reduced-price lunch	School District	New York State Education Department
	Percent of grade 4 students in school district who do not meet reading proficiency level	School District	New York State Education Department
	Percent of students with limited English proficiency	School District	New York State Education Department

Community	Percent of children ages 0 through 5 years tested for elevated blood levels for the first time that have confirmed elevated blood levels	County	New York State Department of Health
	Percent of individuals ages 16 years and older who were not employed but were able, available and actively looking for work	County	New York State Department of Labor

Step 2: Define "community"

The next step in identifying high-need communities was to define what constituted a community. Although most data were available at the county level, examining data at this level raised concerns since it might mask particularly vulnerable areas; therefore, a lower geographic area was preferred.

It was decided that data would be presented at the sub-county level, representing towns and cities. [1] This geographic level was selected since data at this level:

- offered a closer look at geographic areas than could be viewed at the county level;
- were more stable than lower levels of data; and,
- had a direct application for planning and service delivery. Most service systems in New York state are county-based so an approach that examined high need communities at the town and city geography would allow county planners to draw from resources across multiple service systems that were in their purview and provide necessary supports, increasing the degree of alignment across systems.

Step 3: Convert data to a common geographic level

As previously noted, the data represented counties, cities/towns, school districts and zip codes. Due to these differences, data were deconstructed into U.S. Census block areas then reconstructed to reflect cities and towns. [2]

Step 4: Calculate an overall risk measure for each community

The risk indicators were measured using various scales (e.g., weight at birth, scores on tests, employment status). Additionally, data were represented in terms of counts and rates. Therefore, each indicator was converted to a common metric (i.e., Z-score). Since some geographic areas had low numbers, a weighted standard deviation was calculated for each of the indicators and used to develop the Z-scores. The set of Z-scores (20 burden and 20 severity scores for each city/town) was averaged and the result was a single need measure for each town and city. This need measure reflected the *collective cross-system need* for each town or city. Communities with Z-scores above the mean (i.e., a value greater than 0) were considered high need.

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[1] The county subdivision data for New York City represented each of the boroughs. This meant that our ability to identify high need areas would be compromised if viewed at the broad level of Queens, Richmond, Manhattan, Kings or the Bronx. To have a view equivalent to that used in the rest of the state, risk factors were gathered and examined by Public Use Microdata Areas (PUMAs) for New York City. While PUMAs were never intended to be interpreted as geographic areas, the PUMAs in New York City are organized by planning areas for each of the boroughs and are most similar to the city/town geography used elsewhere in the state.

[2] This approach allowed us to identify the Indian Lands in New York state and we were able to treat these lands as distinct geographic areas.

The following towns and cities had a collective high need measure 1.5 or more standard deviations above the mean.

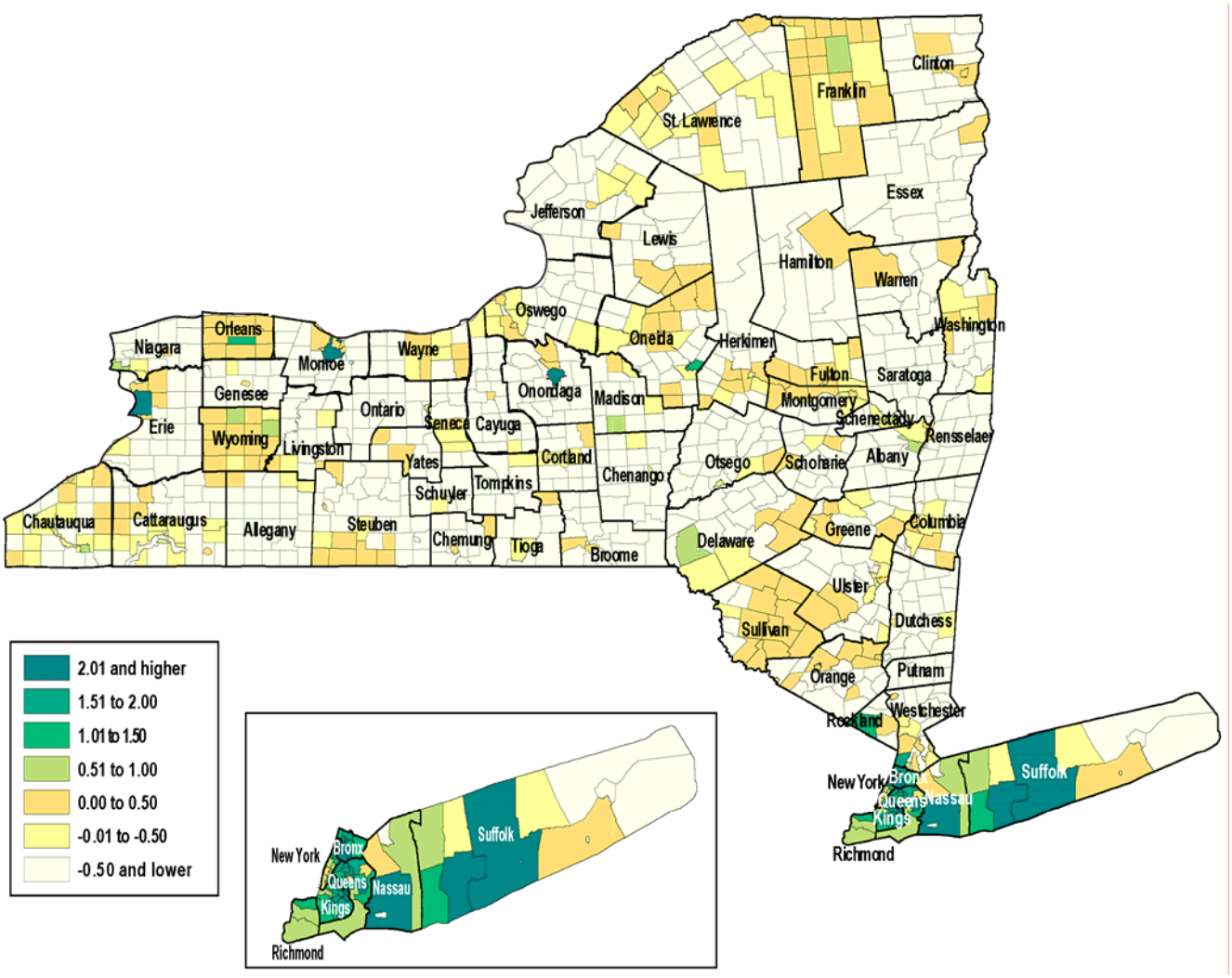
EXTREME NEED COMMUNITIES *	
Hempstead town	3.47
Buffalo city	3.27
Islip town	2.76
Mott Haven/Melrose/Hunts Pt/Longwood	2.72
Rochester city	2.64
Brookhaven town	2.57
Morrisania/Crotona/E Tremont/Belmont	2.48
Soundview/Parkchester/Castle Hill/Clason Pt	2.46
University Hts/Morris Hts/MtHope	2.45
Highbridge/Concourse/Mt Eden	2.35
East New York/Starrett City	2.12
Jamaica/St Albans	2.09
Syracuse city	2.08
Bushwick	2.05
SERIOUS NEED COMMUNITIES **	
Bedford Stuyvesant	1.96
Flushing/Murray Hill/Whitestone	1.90
Yonkers city	1.81
Jackson Heights/NorthCorona	1.80
Bedford Park/Norwood	1.76
Elmhurst/South Corona	1.74
East Flatbush	1.74
Ridgewood/Middle Village/Maspeth	1.74
Brownsville/Ocean Hill	1.74
Borough Park/Kensington	1.67
Washington Heights/Inwood	1.61
Williamsburg/Greenpoint	1.60
Wakefield/Williamsbridge	1.52
Astoria/Long Island City	1.51
Bensonhurst/Bath Beach	1.51
Canarsie/Flatlands	1.51
Flatbush/Midwood	1.50
Crown Heights/Prospect Heights	1.50

*Extreme need communities are communities with average need scores 2.00 or more standard deviations above the mean of 0.
**Serious need communities are communities with average need scores 1.50 to 1.99 standard deviations above the mean of 0.

Mapping High need Communities with Community Assets

The need measure for each town and city was mapped so that the location of high need communities could be easily viewed. The result of this mapping is presented in Figure 1. Additionally, layers of community assets (e.g., early learning programs, home visiting programs, migrant outreach centers, and Early Intervention providers) were added as points to the map. This provided a view of high need communities but also instructed us regarding the potential resources and assets within a given geographic area.

Figure 1. Collective measure of need among New York communities



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Acknowledgments

During the course of this project, it became readily apparent that it "takes a village" to identify high need communities. We would like to thank the following for their contributions of data, statistical advice, and support.

Michael Acosto	New York State Department of Health
Brian Bestle	New York State Office of Temporary & Disabilities Assistance
Ronald Danforth	New York State Education Department
Rachel de Long, MD	New York State Department of Health
David Dlugolecki	New York State Office of Temporary and Disabilities Assistance
Vajeera Dorabawila, PhD	New York State Office of Children and Family Services
Leonard Gaines, PhD	Empire State Development
Glen Johnson, PhD	Lehman College, formerly with New York State Department of Health
Carolyn Kairns	New York State Office of Temporary & Disabilities Assistance
Ellen MacGregor	New York State Office of Children and Family Services
Will Messier	Migrant Statewide Outreach Identification & Recruitment Program
Christina Murphy	The National Center on Family Homelessness
Elizabeth Morcom Kenney	New York State Education Department
Paul Nance	New York State Office of Children and Family Services
Donna Noyes, PhD	New York State Department of Health
Patricia Persell	New York Council on Children & Families
Kirsten Siegenthaler	New York State Department of Health

Appendix A

	Risk Factors	Impact on Child Development
Child	Infants weighting less than 2,500 grams at birth	Low birthweight is a major cause of infant mortality and increases an infant's chances for dying in infancy. Low birthweight infants, especially infants born to teen mothers, are at risk for health problems such as blindness, deafness, mental retardation, mental illness, and cerebral palsy. As the birthweight decreases, children have a greater likelihood of these outcomes. Ten percent of all health care costs for children can be attributed to low birthweight
	Infants born with less than 37 weeks gestation	Preterm delivery underlies most low birthweight births, which increase infants' risk of health problems, as outlined above. While the etiology of preterm birth remains unknown, several factors are associated with preterm and low birthweight births. Lifestyle behaviors - such as cigarette smoking, insufficient weight gain or nutritional intake during pregnancy and use of other drugs - are known risk factors. Socioeconomic disadvantage is also closely related to low birthweight. Mothers who are young, have less than a high school education and are not married are at the greatest risk of low socioeconomic status and delivering low birthweight babies.
	Children ages birth through 5 years with a diagnosed condition with a high probability of resulting in developmental delay or have not attained developmental milestones in accordance with state definition	It is important to identify children diagnosed with developmental delays during their early stages of development so that clinical staff, in conjunction with parents, can provide appropriate services that can reduce the impact on children's development
	Children ages 3 to 4 years enrolled in preschool special education programs	Preschool special education is one of the services provided to children with developmental delays.
	Births where mother received pregnancy-related health care in the last three months of pregnancy or not at all	Receiving late or no prenatal care during a pregnancy can result in negative health outcomes for both the mother and the child. Women who receive late or no prenatal care are at a much higher risk of bearing a child who is of low birthweight, stillborn, or who dies within the first year of life. Teenagers are especially at risk.
Family	Children ages birth through 5 years in households below the 200% federal poverty level	Children's healthy development—their successful attainment of physical, social-emotional, and cognitive skills—is essential to their ability to succeed in a dynamic society. Yet, children who experience poverty are disproportionately at-risk of being exposed to factors that can compromise their development. Furthermore, their reduced likelihood of meeting traditional childhood milestones can translate to adulthood outcomes that pose challenges to them throughout their entire life. The negative effect of poverty begins before birth with the quality of pregnant mothers' nutrition and prenatal care. Its early detrimental impact is further compounded by the nature of parent-child interactions in homes, the instructional quality of schools, and the environmentally unsafe housing and neighborhoods where children live. The emotional strain that poverty places on children and families also is well-established as debilitating to children's healthy development.
	Children ages birth through 5 years living in female headed households	Children in female headed households are more likely to live poverty than children in other household types. This difference remains even after accounting for benefits and supports available from anti-poverty programs.
	Children ages birth through 5 years living in families that are homeless	Homeless children are at greater risk for health problems including asthma, exposure to lead poisoning and poor nutrition. Homeless children also are more likely to have poorer cognitive development and lower academic performance than their housed peers. They are more likely to score poorly on tests and are more likely to be held back a year in school.
	Children ages birth through 5 years in households receiving benefits from the supplemental nutrition assistance program (food stamps)	The number and percent of children receiving food stamps measures the extent to which children live in families that require governmental assistance to purchase a minimally adequate diet. Children living in households where there is limited or uncertain availability of food (i.e., food insecurity) are two-thirds more likely than peers from households with adequate food to experience developmental risks that include poorer gross and fine motor skills, language skills, and social-emotional development. Food insecurity also is often linked with an increased risk for undernutrition and being overweight among children in low-income families, with both conditions having negative health consequences
	Children ages birth through 5 years in indicated reports of abuse or neglect	Child abuse and maltreatment represent an impairment or imminent danger of impairment of a child's physical, mental or emotional condition due to the failure of a parent, guardian or other person legally responsible for the child to exercise a minimum degree of care toward the child. This can involve the failure to provide a minimum degree of care regarding a child's basic needs, such as food, clothing, shelter, medical care, education, or proper supervision or guardianship. It can also involve the parent or other legally responsible person's use of excessive corporal punishment, the abuse or misuse of drugs or alcohol, and abandonment of a child.

Risk Factors		Impact on Child Development
	Children ages birth through 5 years in foster care	Children are placed into foster care for a wide variety of reasons including: safety issues, their families are at least temporarily unable to care for them, specialized care or treatment is needed or behavioral problems have lead to a placement. Since children in foster care make up a majority of those in out-of-home care in New York State, this measure also provides insight into the extent to which children are removed from their homes and placed in out-of- home care in New York State.
	Children ages birth through 5 years living in migrant families	The continual movement among migrant families influences children's ability to build peer relationships and develop academic continuity.
	Children with limited English proficiency	Exposure to multiple languages, especially at a young age can have many advantages. In particular, children are more readily able to become bilingual. However, this can be detrimental if children live in language isolated households and are not able to speak or understand English when they are ready for school. This represents school age children who have limited English language proficiency and require support.
	Pregnancies among adolescent females ages 15 through 19 years	Assuming the responsibilities of parenting before one is financially, socially or emotionally prepared carries increased risks of later difficulties for the parent, the child, and the community. Adolescent mothers are less likely than their non-parenting peers to complete high school and marry. They are more likely to have large families and live in poverty. Their children are at greater risk of infant mortality, poor health, lower cognitive development, worse educational outcomes, higher rates of behavior problems, and higher rates of adolescent childbearing themselves.
Schools	Students enrolled in a school identified by New York State Education Department as "persistently low achieving"	The quality of one's education is impacted by the quality of the school available. This indicator identifies the portion of children within a district who attend a school the State Education Department has identified as "persistently low achieving."
	Students who do not graduate in four years with a regular high school diploma	The attainment of a high school diploma impacts one's opportunities for employment and potential lifelong earnings. Lack of this degree places youth at a considerable disadvantage.
	Kindergarten through grade 12 public school students receiving free or reduced-price lunch	The percentage of students participating in the School Lunch Program is an indicator of student poverty and its concentration in public schools. Research has documented that children from low-income families are more likely than others to go without necessary food; less likely to be in good preschool programs; more likely to be retained in grade; and more likely to drop out of school.
	Grade 4students who do not meet reading proficiency level	Children must learn to read by grade 3 so they are able to use their reading skills to learn in all academic areas.
Community	individuals ages 16 years and older who were not employed but were able, available and actively looking for work	The degree of unemployment reflects employment opportunities within the community.
	Children ages birth through 5 years tested for elevated blood levels for the first time that have confirmed elevated blood levels	Lead is neurotoxic and particularly harmful to the developing nervous systems of fetuses and young children. Lead poisoning can affect nearly every system in the body and extremely high blood lead levels can cause severe neurologic problems, effecting children's learning and behavior.