

Council on Children & Families

A Research Brief on Child Well-being

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NOURISHING NEW YORK'S CHILDREN

Proper nutrition, the building blocks for children's health, cognitive development and overall growth, is essential for children's healthy development. The impact of nutrition on children's development begins with the quality of their mothers' nutrition during pregnancy. Women with inadequate diets during pregnancy can have either poor or excessive weight gain and both of these conditions are associated with an increase in preterm and low birthweight infants who are at risk for such health problems as blindness, deafness, mental retardation, mental illness, and cerebral palsy (1). Additionally, pregnant women who experience marginal food insecurity have higher perceived stress, anxiety and depression scores than similar food-secure women (2). These characteristics can be detrimental to the development of their children during their pregnancies as well as impact children negatively after birth.

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 (3). 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 (4, 5). When compared to peers in food secure households, food insecure children are more likely to: (3-14)

- Be sick more often and recover more slowly;
- Have more chronic health conditions and higher hospitalization rates, especially among young children;
- Have less ability to focus and attend to school activities;
- Experience more academic problems; and,
- Demonstrate poorer psychosocial functioning and more internalizing behavior problems.

Box 1: How is Food Insecurity Measured?

Food insecurity status of households is based on conditions reported in the Current Population Survey (CPS) Food Security Supplement (FSS).^{*} Eighteen questions are posed regarding conditions and behaviors that occur in households as a result of having difficulty meeting food needs. Households that report experiencing three or more indications of food insecurity in the last 12 months are considered to be food insecure. Households reporting five or more conditions are considered to have very low food security. Eight questions pertain to food conditions in households with children. Households that report experiencing two to four conditions that indicate food insecurity among children are considered as having low food security.

Questions Used to Assess the Food Security Status of Households

1. “We worried whether our food would run out before we got money to buy more.” Was that often, sometimes, or never true for you in the last 12 months?
2. “The food we bought just didn’t last and we didn’t have money to get more.” Was that often, sometimes, or never true for you in the last 12 months?
3. “We couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for you in the last 12 months?
4. In the last 12 months, did you or other adults in the household cut the size of meals or skip meals because there wasn’t enough money for food? (yes/no)
5. If yes to question 4, how often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
6. In the last 12 months, did you ever eat less than you felt you should because there wasn’t enough money for food? (yes/no)
7. In the last 12 months, were you ever hungry, but didn’t eat, because you couldn’t afford enough food? (yes/no)
8. In the last 12 months, did you lose weight because you didn’t have enough money for food? (yes/no)
9. In the last 12 months, did you or other adults in your household ever not eat for a whole day because there wasn’t enough money for food? (yes/no)
10. If yes to question 9, how often did this happen —almost every month, some months but not every month, or in only 1 or 2 months?

Questions Asked if Households Include Children Ages 0-18 Years

11. “We relied on only a few kinds of low-cost food to feed our children because we were running out of money to buy food.” Was that often, sometimes, or never true for you in the last 12 months?
12. “We couldn’t feed our children a balanced meal because we couldn’t afford that.” Was that often, sometimes, or never true for you in the last 12 months?
13. “The children were not eating enough because we couldn’t afford enough food.” Was that often, sometimes, or never true for you in the last 12 months?
14. In the last 12 months, did you ever cut the size of any of the children’s meals because there wasn’t enough money for food?
15. In the last 12 months, were the children ever hungry but you just couldn’t afford more food?
16. In the last 12 months, did any of the children ever skip a meal because there wasn’t enough money for food?
17. If yes to question 16, how often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
18. If yes to question 16, did any of the children ever not eat for a whole day because there wasn’t enough money for food?

^{*} The CPS-FSS is the source of national and state-level statistics on food insecurity used in U.S. Department of Agriculture’s annual report on household food security. The CPS is a monthly labor force survey of about 50,000 households conducted by the U.S. Census Bureau for the Bureau of Labor Statistics. Once each year, after answering the labor force questions, the same households are asked the questions above about food security, food expenditures, and use of food and nutrition assistance programs (14).

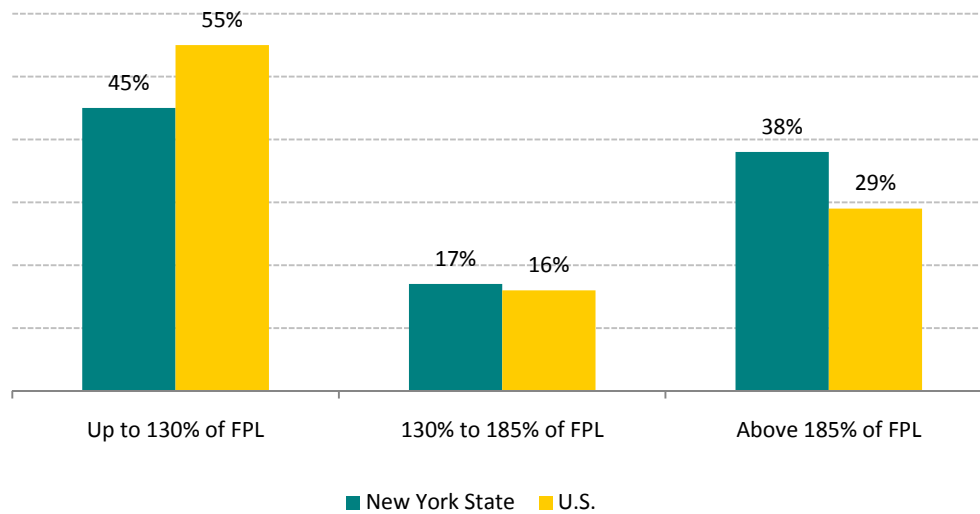
FOOD INSECURITY

Food insecurity is described as “limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways” (14). Households are considered to be food insecure if its members experience three or more indications of food insecurity in the last 12 months. See Box 1 for the specific survey items.

Results of a state-by-state study that examined food insecurity indicated (15):

- In New York, approximately two out of every 15 households (13.5%) met the criteria for food insecurity. This was somewhat lower than the percent reported nationally (16.6%).
- Food insecurity in New York households *with children* tended to be higher than the statewide rate (16.7% compared to 13.5%).
- The percentage of New York households that reported food insecurity was highest among those with incomes up to 130 percent of the federal poverty level (45%). Household members in this economic group are also eligible for SNAP benefits (formerly referred to as food stamps). About two in five New York households (38%) above 185 percent of the federal poverty level reported experiencing food insecurity.

Figure 1. Food insecurity by income level, 2009

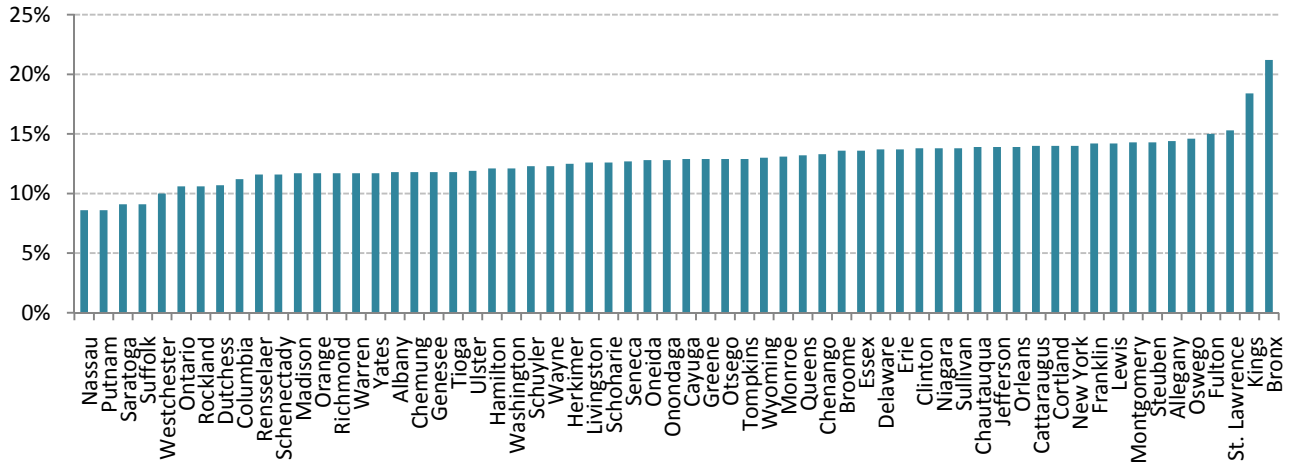


Data Source: Feeding America Map the Meal Gap, 2011

<http://feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap.aspx>

- The portion of New York households with food insecurity varied considerably by county, where individuals in Nassau households reported the lowest percentage of food insecurity at 8.6 percent. The experience of food insecurity was 2.5 times greater in Bronx households where 21.2 percent of households were identified as food insecure.

Figure 2. Food insecurity by county, 2009



Data Source: Feeding America Map the Meal Gap, 2011

<http://feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap.aspx>

- Counties experiencing the highest levels of food insecurity represented a mix of urban and rural settings. Three of these counties, Bronx, Kings and St. Lawrence, were also among the top five counties in the state with the highest poverty rates.
- Results from a 2006 study found a higher portion of rural households in New York State were food insecure (58.6%) compared to rural communities nationally (50.5%) (16).

SUPPORTS TO IMPROVE FOOD SECURITY

A number of Food and Nutrition Service (FNS) programs provided through the U.S. Department of Agriculture (USDA) serve as safety nets to those in critical need. FNS programs are intended to alleviate hunger and malnutrition by providing individuals access to food and nutrition education. Some of the programs offered through the USDA FNS include the Supplemental Nutrition Assistance Program (SNAP), formerly Food Stamps Program; the Women, Infants and Children (WIC) program and the National School Lunch Program.

Supplemental Nutrition Assistance Program (SNAP)¹

The Supplemental Nutrition Assistance Program (SNAP) is the largest nutrition assistance program administered by the USDA and is designed to help low- and no-income families purchase food. This program, which was first put in place in 1939, has proven to be instrumental in reducing food insecurity (17, 18). It has been shown that SNAP receipt reduces the likelihood of being food insecure by roughly 30 percent and reduces the likelihood of being very food insecure by 20 percent (19). Furthermore, SNAP is considered to be one of the most flexible safety nets, able to quickly respond to changes in the economy.

Milestones Related to the Supplemental Nutrition Assistance Program ⁽²⁰⁾ <i>(formerly the Food Stamp Program)</i>				
1939	1943	1961	1964	2008
The U.S. Department of Agriculture's Food Stamp Program (FSP) began as a Depression-era effort to help poor Americans and to sell surplus foods purchased by the government to prop up crop prices. The FSP was created on May 16, 1939. Mabel McFiggin of Rochester, New York, was the first American to buy the stamps.	The FSP ended in 1943, the program administrator explained, "since the conditions that brought the program into being – unmarketable food surpluses and widespread unemployment – no longer exist."	In 1961, President Kennedy announced a food stamp pilot program. Under the new version of the initiative, the stamps still had to be purchased, but surplus foods were no longer part of the program.	In 1964, President Lyndon Johnson asked Congress to make the FSP permanent. The result was the Food Stamp Act of 1964.	In 2008, a new farm bill changed the name of the FSP to the Supplemental Nutrition Assistance Program, or SNAP. The idea was that the term "food stamps" had a stigma associated with it and the government wanted people to feel comfortable relying on the program during the economic crisis underway at the time. Also, the name change underscored efforts to promote healthy food choices.

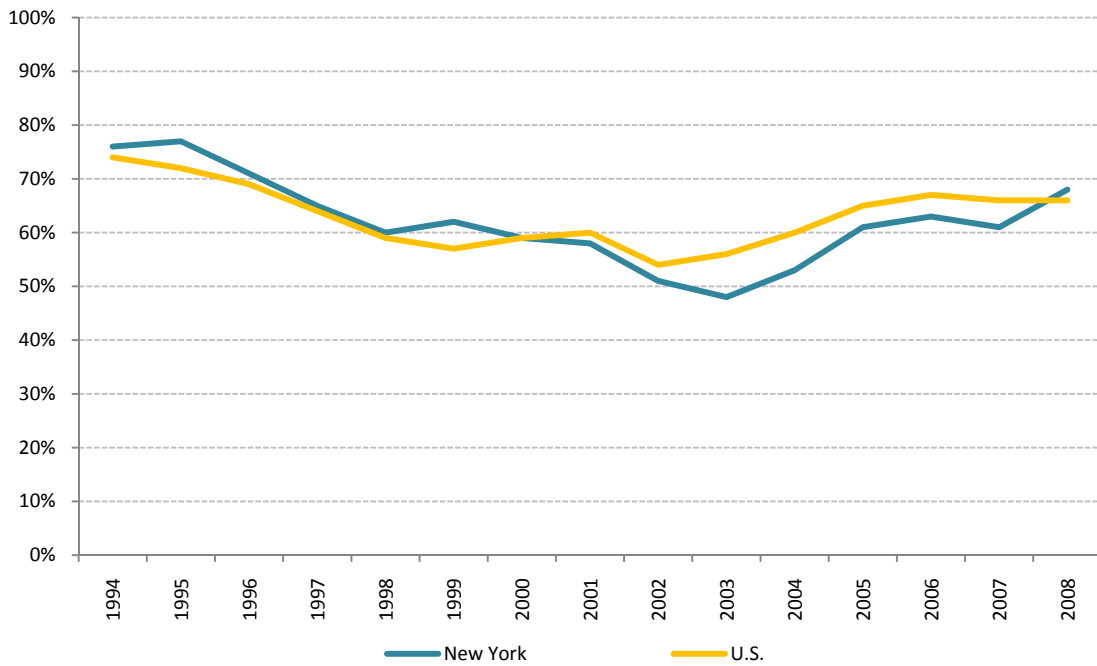
¹ In 2008, the name of the USDA Food Stamp Program was changed to Supplemental Nutrition Assistance Program (SNAP). Throughout the remainder of the brief, the term SNAP is used. However, in New York State, the title "Food Stamps" is still used to refer to this program.

The amount of SNAP benefits provided to households is determined by such factors as household income and expenses as well as the number of persons who live and eat together in the household. Income and resource limits in SNAP are somewhat higher than in public assistance programs, allowing more households to be eligible for food stamps than are eligible for public assistance.

A review of SNAP participation indicates (21):

- Overall, the trend in SNAP participation among New Yorkers appears similar to that of the nation (Figure 3).
- During the 15-year period presented (1994 through 2008), the lowest level of participation in New York occurred in 2003 with 48 percent of eligible people participating in SNAP; the highest level of participation was in 1995 with 77 percent of those eligible participating.
- In 2008, about two in three New Yorkers eligible to receive SNAP benefits (68%) participated in the program.

Figure 3. Eligible people participating in SNAP, 1994-2008

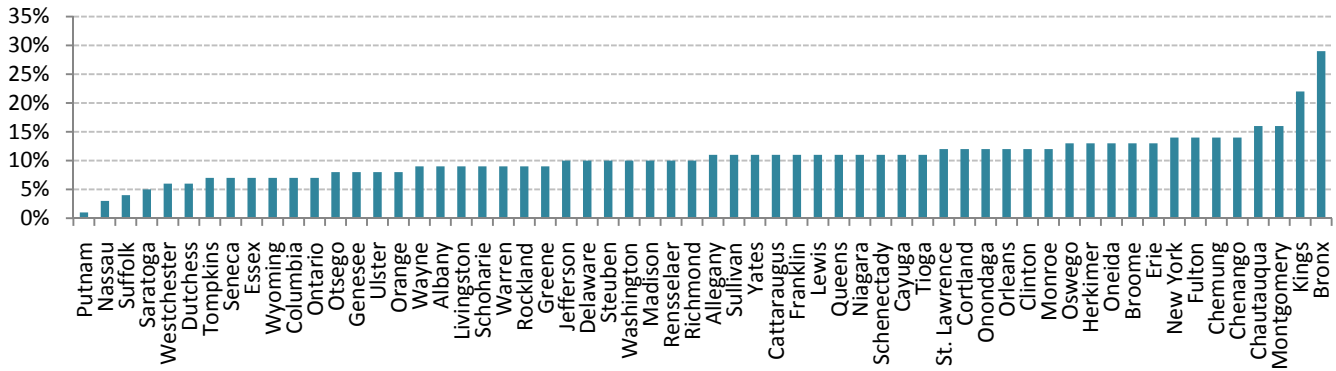


Data Source: USDA State Supplemental Nutrition Assistance Program Participation Rates, 1994-2008

A review of SNAP participation at the county level indicates (22):

- Bronx and Kings Counties, which have the highest percent of households with food insecurity (21.2% and 18.4% respectively), also rank highest in SNAP participation (29% and 22% respectively).

Figure 4. Percent of population in county receiving SNAP benefits, 2009

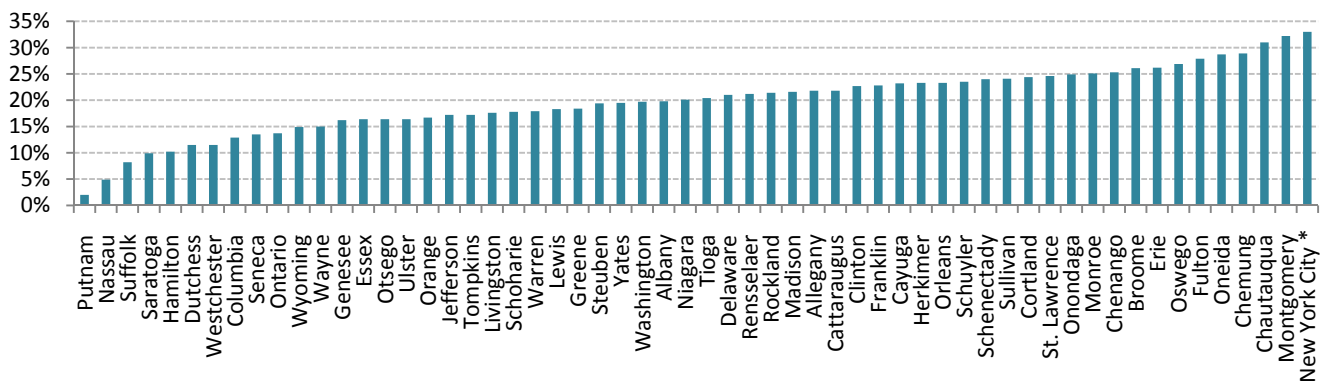


Data Source: Food Research and Action Center, 2011 http://frac.org/pdf/ny_times_snap_poverty_formatted.pdf

NOTE: Data for the five boroughs of New York City are presented separately.

- Statewide, the percent of children receiving SNAP benefits increased from 16.4 percent in 2005 to 23.6 percent in 2009, reflecting a 44 percent change (23).
- Figure 5 illustrates that the highest portion of children receiving SNAP benefits was among children living in New York City², followed by children in a mix of upstate counties: Montgomery, Chautauqua, Chemung, and Oneida (23).

Figure 5. Percent of children in county receiving SNAP benefits, 2009



Data Source: Council on Children and Families Kids' Well-being Indicators Clearinghouse, 2009 (www.nyskwic.org)

NOTE: Data for the five boroughs of New York City are grouped together and presented jointly as New York City

- While SNAP benefits provide individuals a means to access necessary food, the ability to obtain food can be impacted by the availability of stores accepting SNAP benefits. The rate of

² Data are not available for the individual boroughs of New York City; instead, New York City represents data from all five boroughs.

stores authorized to accept SNAP benefits tends to align with the portion of households eligible for benefits. County-specific rates are presented in the appendix.

National School Lunch Program

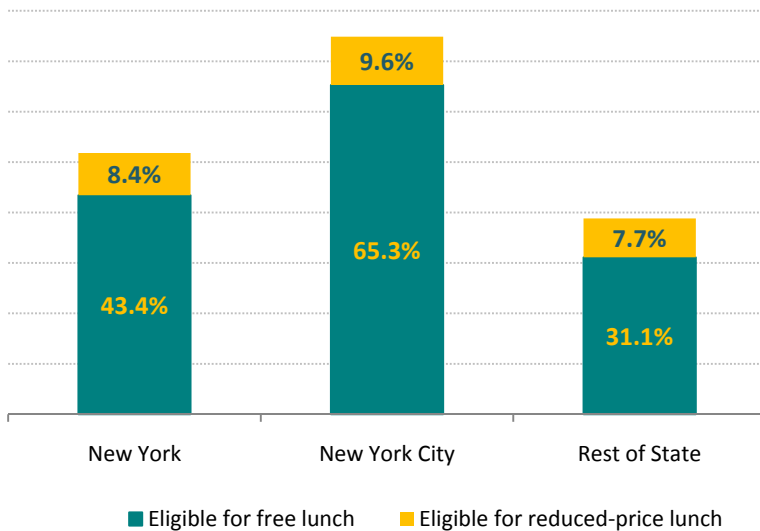
The National School Lunch Program is a federally-assisted meal program available to children throughout the school year. Children in families with incomes below 130 percent of the federal poverty level are eligible to receive a free school lunch and those with family incomes at 130 to 185 percent of the poverty level may receive lunch at a reduced price.

- During the 2009/2010 school year, 5,923 schools in New York State participated in the school lunch program (24).
- Figure 6 shows approximately 52 percent of students across the state were eligible to participate in their school lunch program, with most students receiving free meals. This differed by geographic region where about 75 percent of students in New York City and 39 percent of students in the Rest of State were eligible (25).
- The five counties with the highest percent of children eligible for free or reduced-price lunch were the urban counties of Bronx (88%), Kings (82.5%), Queens (76.9%), New York (71.1%) and the rural county of Yates (54.8%) (23). The appendix provides school lunch participation data for each county in the state.

1853	The first school lunch program in the United States was initiated in 1853 by the Children’s Aid Society of New York City.
1908	In 1908, Dr. William H. Maxwell, superintendent of schools, made a special plea in his report to the Board of Education “to establish in each school facility whereby the pupils may obtain simple wholesome food at cost price.” A school lunch committee consisting of physicians and social workers was organized to find out whether a lunch might be self-supporting at a 3-cent charge to students.
1920	Until January 1920, lunches in the elementary schools of New York City had been supported by volunteer social organizations but in the 1919-20 school year, the Board of Education assumed full responsibility for all programs in Manhattan and the Bronx, and in the following year for all the programs. Emma Smedley, the original lunch lady, was the first professionally trained director of school lunches. In 1920 she published a book that outlined the two factors important to the school lunch program: (1) meet the food requirements of the child, helping to lay a foundation of physical vigor upon which the structure of mental training can be built and (2) teach the child to develop wise food habits.
1940	During the Great Depression, Dr. Mary de Garmo Bryan, a professor at Columbia University, wrote the book <i>School Cafeteria</i> , which emphasized the importance of managing child nutrition programs. As a result, the federal government developed programs to ensure children get the food they needed and the Works Program Administration (WPA) established food standards for school lunches and created jobs for many women as dietitians, home economist and school lunch workers.
1946	On June, 4, 1946, President Truman signed The National School Lunch Act, permanently authoring federal support of school lunch programs

(26)

Figure 6. Percent of eligible students receiving free or reduced-price school lunch, 2009/2010 school year



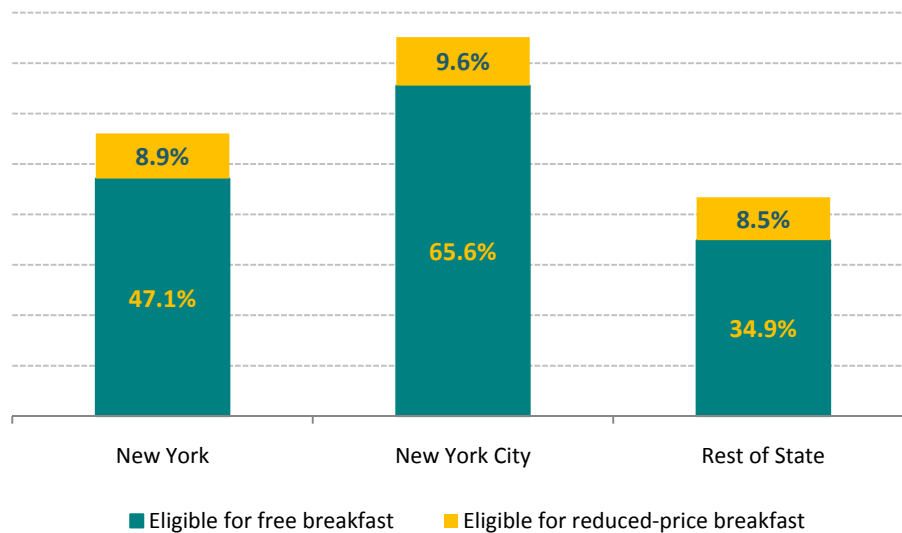
Data Source: New York State Education Department Child Nutrition Program, 2011

School Breakfast Program

The USDA's School Breakfast Program (SBP) began as a pilot project in 1966 and became a permanent program in 1975 (27). While any students can participate in the program, students who meet income guidelines are eligible for a free or reduced-price breakfast. Students in households with an income at or below 130 percent of the federal poverty level may receive a free breakfast; students in households with income levels between 130 and 185 percent of the poverty level may receive a reduced-price breakfast. In New York State, all elementary schools and 'severe need' schools that provide lunch are mandated to operate a school breakfast program. However, schools may apply for a waiver to not serve breakfast.

- During the 2009/2010 school year, 5,288 schools across the state participated in the school breakfast program. This represents 89 percent of New York schools in the school lunch program (24).
- Figure 7 depicts a regional view of students eligible for school breakfast, with students in New York City more likely to be eligible compared to their peers in the Rest of State (26).
- The percent of students eligible for breakfast is somewhat higher than the percent of students eligible for lunch. The difference is due to the fact that fewer schools participate in the school breakfast programs but the smaller set of schools has a higher portion of students who are eligible for free meals (25).

Figure 7. Percent of students eligible for free or reduced-price breakfast, 2009/2010 school year



Data Source: New York State Education Department Child Nutrition Program, 2011

Women, Infants and Children (WIC) Special Supplemental Nutrition Program

The Women, Infants and Children (WIC) Special Supplemental Nutrition Program is another federally-funded nutrition program available to women and children. Families earning less than 185 percent of the federal poverty level may be eligible to participate in the WIC program, which provides nutritious foods, milk, juice, baby formula, and other items to low-income pregnant or breastfeeding women, as well as infants and children up to age five. WIC participants also have access to nutrition education, breastfeeding support and, referrals to health care or other social services.

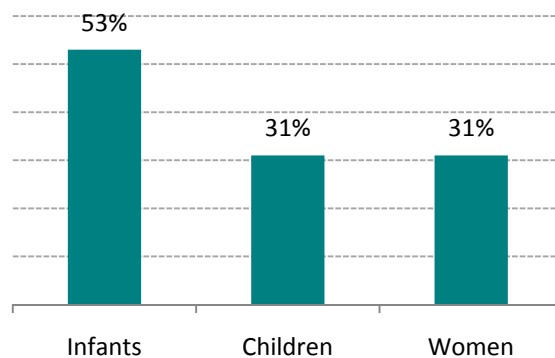
WIC participation has been shown to be associated with improved birth outcomes, including longer pregnancies, fewer infant deaths and reduced risk of low birth weight births (28).

- As shown in Figure 8, it is estimated that 35 percent of all WIC eligible individuals in New York – infants, children and women – participated in WIC programs during 2006. The highest participation rate was among eligible infants (53%).³

The body mass index (BMI) of children enrolled in the WIC program is monitored periodically to address concerns that children participating in the WIC program are at greater risk of childhood obesity than their peers who do not participate. It has been shown that the BMI of children in WIC programs is similar to peers who were income-eligible, non-participants (28).

- In 2009, 14 percent of New York State children up to age 5 participating in WIC had a body mass index that was in the 95th percentile or higher, indicating an obese weight; 14.4 percent of children ages 2 years and younger were in the same percentile range (29).

Figure 8. Participation in WIC by eligible groups, 2006



Data Source: New York State Department of Health, 2011

The Commodity Supplemental Food Programs

The Commodity Supplemental Food Programs (CSFP) also works to improve the health of low-income pregnant and breastfeeding women, other new mothers up to one year postpartum, infants, children up to age six, as well as elderly people at least 60 years of age by supplementing their diets with nutritious USDA commodity foods. The New York State Department of Health's CSFP offers free, nutritious foods to seniors aged 60 years of age and older, and to some women and children that are not eligible for the Supplemental Nutrition Program for Women, Infants, and Children (WIC) Program.

- CSFP is available in New York City and Long Island only (30).

³ These estimates may be conservative since they were based on a methodology that employed adjunctive eligibility, which expanded the number of eligible individuals by taking into account the number of individuals who were enrolled in Medicaid and SNAP.

- In 2008, the number of people participating in CSFP was approximately 31,000 monthly (30).

Other Nutrition Support Programs for Children

Fresh Fruits and Vegetable Program (FFVP) The intent of this federal program is to expose students to different fruits and vegetables, create a healthier school environment, and promote healthy eating habits to children at a young age by providing students with healthy snacks. Elementary schools with a high percentage of low-income students are eligible to apply to the New York State Education Department for a FFVP grant. Once a school has received the grant award, all students in the school must have access to the fresh produce at no charge, regardless of income.

- For the 2010/2011 school year, 169 schools across the state were awarded a grant for the FFVP (30).⁴

Summer Food Service Program (SFSP) for Children This federal program provides free, nutritious meals to children 18 years and younger in low-income neighborhoods during the months when school is not in session. Throughout the summer months, meals are provided at public and private schools, non-profit agencies, state or local governments and camps. The meals are free and in some instances no application, documentation, or sign-up is necessary for children to be able to eat.

- The State Education Department administers the largest SFSP in the nation. The agency collaborates with sponsors to increase the number of sponsors, sites and days of service so more children can easily access the meals in a safe environment (25).
- During summer 2010 approximately 385,000 free meals were served daily during July and August to children from low-income families through the SFSP (30).

Child and Adult Care Food Program (CACFP) This federal program provides meals and snacks to child care centers and family and group child care homes for preschool children. Funds for after-school program snacks and meals are also available.

- In 2009, more than 1,500 sponsoring organizations representing 14,000 licensed or registered center-based or family day care sites were participating statewide. On average, day care providers served approximately 295,000 meals to children and adults each day (30).

Eat Smart New York (ESNY) Eat Smart New York is a program where nutrition educators provide instruction on: nutrition, meal planning, healthy food shopping on a budget, cooking and food safety, weight control and physical activity, and much more. The program information is based upon the following:

- Eat fruits and vegetables, whole grains, and nonfat or low-fat milk or milk products every day.
- Be physically active every day as part of a healthy lifestyle.
- Balance calories eaten from foods and beverages with calories used when being physically active.

⁴ A listing of the schools is available at: www.nutritionconsortium.org/childnutrition/documents/WebAwardwinners10-11.pdf

The program is free to all SNAP participants and those eligible to receive SNAP benefits. Nutrition educators conduct classes for individuals and groups at area cooperative extensions, individual homes, and at agencies like food pantries, senior centers or head start locations.

Emergency Food Assistance

There are circumstances when individuals and families may need temporary food assistance. During these times, they may seek support from emergency food providers through food pantries, soup kitchens and shelters. These community resources are not the sole means of food supports for these individuals; rather they are intended to provide nutrition assistance in emergency situations (e.g., recent unemployment, unexpected healthcare costs).

A survey conducted on behalf of Feeding America (FA) – the largest organization of emergency food providers – examined characteristics and circumstances of New Yorkers who used emergency providers in the FA system (31). Survey findings indicate that FA agencies in New York serve a broad cross-section of households. FA clients reported experiencing low or very low food security and, at times, had to choose between food and other necessities (e.g., utilities rent, gas for car, medicine). A portion of the FA clients were receiving food assistance from USDA Food Nutrition Service programs at the time they sought assistance from the FA emergency food providers. Key findings of note for New York (31):

- Among all client households served by emergency food programs in New York, 31 percent of the clients had very low food security; among households with children, 27 percent had very low food security. Households with very low food security are households where food intake of some household members (usually adults) is reduced and their normal eating patterns are disrupted.
- 37 percent of the household members were children under 18 years of age.
- 36 percent of the households had at least one employed adult.
- 40 percent of the FA clients in New York reported having to choose between paying for food and paying for utilities or heating.
- 39 percent noted they had to choose between paying for food and housing (rent or mortgage).
- 80 percent of pantries, 58 percent of kitchens and 46 percent of shelters received food from the USDA Temporary Emergency Food Assistance Program.

ACCESS TO NUTRITIOUS FOOD

Programs that address food insecurity continually strive to balance access to food with the increased nutritional value of that food. The emphasis on nutritional quality is evident in many of the policies and practices that guide such programs.

- SNAP benefits can be used at farmers' markets where there is a wide range of fresh fruits and vegetables. Also, participants in WIC and CSFP are able to use Farmers' Market Nutrition Program (FMNP) checks to purchase locally grown fresh fruits and vegetables at farmers' markets. This allows participants to obtain nutritious fresh produce in addition to the foods made available through WIC and CSFP.

- In 2008 over 22,000 senior families enrolled in CSFP received benefits to purchase fresh fruits and vegetables at farmers' markets through the Senior Farmers' Market Nutrition Program (32).
- WIC has a key role in the fight against obesity as evident by the changes that have been made over time regarding the types of food permitted in the WIC food package.
 - As of 2009, whole milk is allowed only for children one year and younger, unless medical documentation is provided indicating a child older than one year requires milk with a higher fat content. All other participants are required to purchase lower fat milk choices since lower fat products are healthier for older children and women. In addition to changes noted for milk products, the WIC foods specified in the WIC package are lower in fat, higher in fiber, include vegetables and fruit, and whole grain breads and cereals. Some substitutions are available for cultural preferences.
- Healthy food choices in school lunch programs were a concern dating back to 1920 when Emma Smedley published a book highlighting two factors essential to school lunch programs: (1) meet the food requirements of children so they are prepared for physical activity and able to concentrate on academics and (2) teach children to develop proper food habits. Today, many schools have taken steps to provide children with more nutritious choices that are more aligned with children's caloric needs (26). Today's schools are attempting to eliminate less nutritious foods and beverages; these efforts are consistent with the Institute on Medicine's recommendation to increase the nutritional value of food that children can access throughout the course of their school day (33).
 - In 2002, approximately three in ten schools in New York had policies in place that did not allow children to purchase candy or salty snacks from vending machines at the school or at the school store, canteen or snack bar. This increased to about six in ten by 2008 (34).
- The Healthy, Hunger-Free Kids Act of 2010, Public Law 111-296, modified requirements for fluid milk in the National School Lunch Program and School Breakfast Program. The Act requires schools to eliminate 2 percent milk and whole milk from the child nutrition programs, as soon as possible, but not later than the beginning of school year 2011-2012.
- To complement efforts for healthier diets and lifestyles, greater emphasis is being placed on activity as a means to prevent and reduce childhood obesity.
 - *Active Families* is a program developed to increase outdoor play and decrease television viewing among preschool-aged children enrolled in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). In an effort to support these outcomes, a community resource guide with maps showing recreational venues was shared with participants during WIC nutrition counseling sessions. Compared with the children at baseline, the children at follow-up were more likely to watch television less than 2 hours per day and play outdoors for at least 60 minutes per day. Additionally, parents reported higher self-efficacy to limit children's television viewing and were more likely to meet physical activity recommendations and watch television less than 2 hours per day. Results suggest that it is feasible to foster increased outdoor play and reduced television viewing among WIC-enrolled children by incorporating a community resource guide into WIC nutrition counseling sessions (35).
 - As part of New York State's obesity prevention initiatives, the State Health Department provided approximately 3,800 elementary schools statewide (K-5) the *Actio8Kids!* Toolkit. The goal of *Actio8Kids!* is to instill in children before the age of eight, daily habits that include: eating at least five servings of vegetables and fruits; participating in at least one

hour of physical activity; and reducing time in front of television and video game screens to fewer than two hours (36).

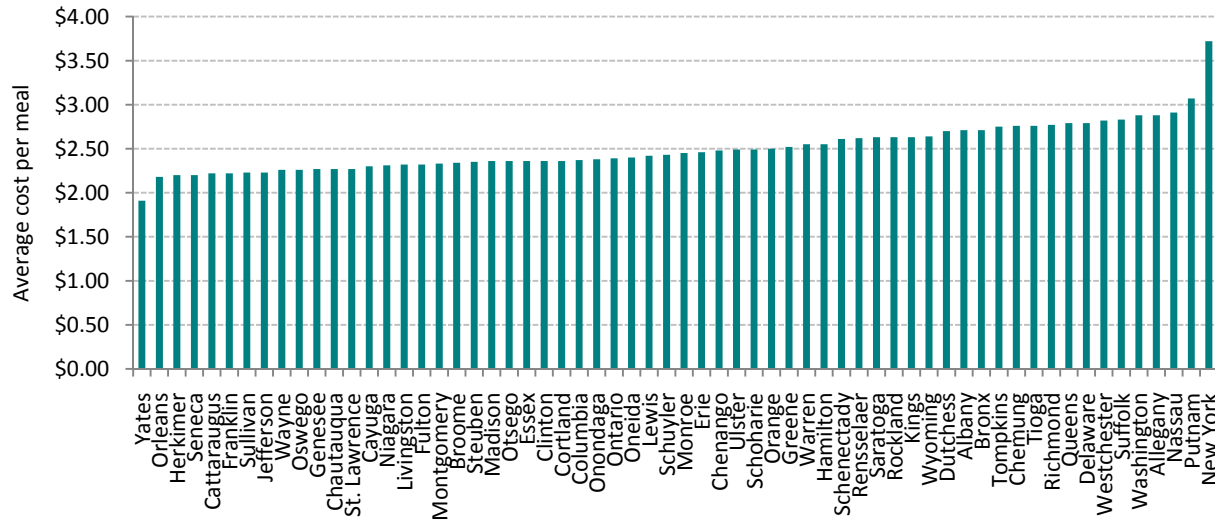
While many nutrition programs incorporate education components to help consumers plan, purchase and prepare foods that are healthy, access to nutritious food is often dependent upon the *proximity of affordable* nutritious food.

COST OF MEALS

A fundamental factor that influences whether households are food insecure is the cost of food within a community. While the cost of food varies across geographic location, programs intended to offset food insecurity (e.g., SNAP) are based on household incomes, expenses and the number of household members, regardless of the local cost of food.

- The average cost of at-home meals in New York is somewhat higher than that estimated for the U.S. An average meal in New York State –prepared at home – costs \$2.79 compared to \$2.54 nationwide (32). This estimate is based on the food expenses of food secure households⁵.
- A review of meal costs by county indicates that the average cost of a meal in New York, the highest county, was almost twice that of the average meal in Yates, the lowest county – \$3.72 and \$1.91 respectively (31).

Figure 9. Average cost of meals by county, 2009



Data Source: Feeding America Map the Meal Gap, 2011

NOTE: The five boroughs of New York City are grouped together and presented jointly as New York City
<http://feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap.aspx>

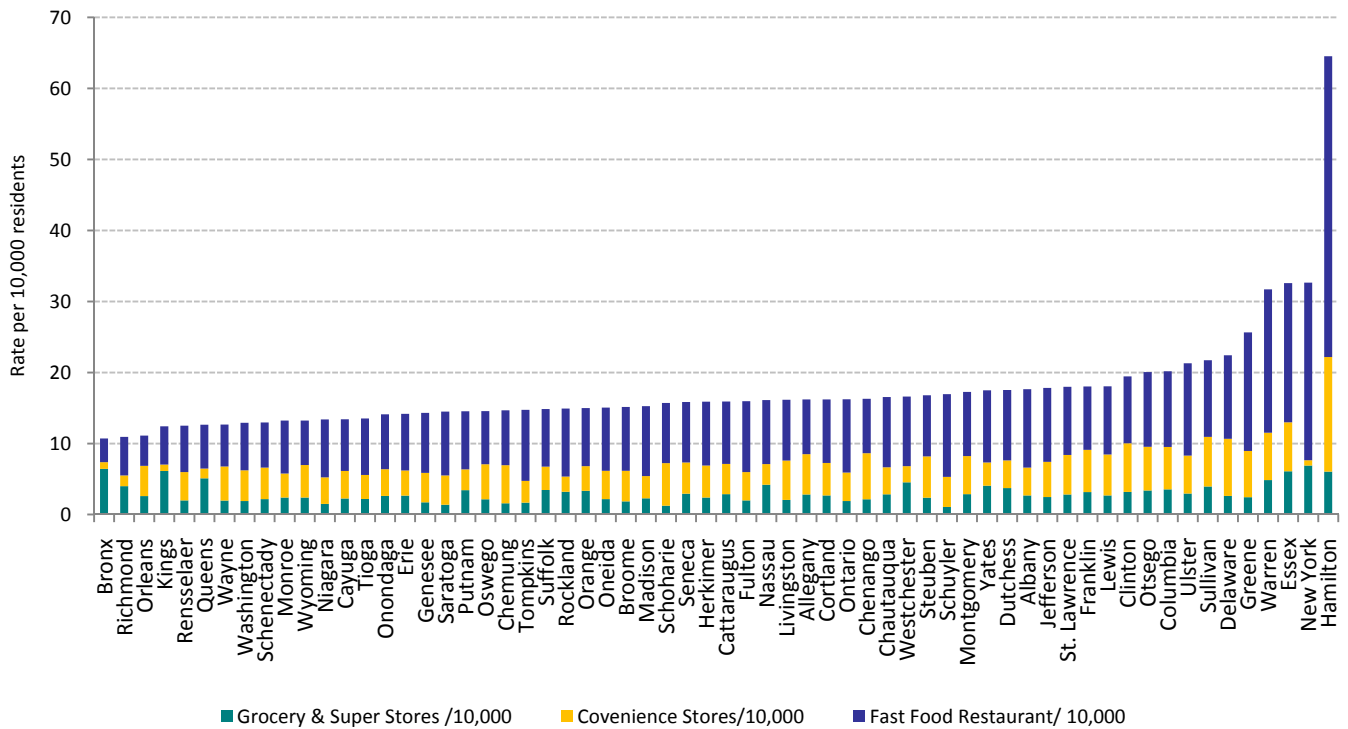
⁵ The average dollar amount spent on food per week by food secure individuals is divided by 21 (3 meals per day x 7 days per week). Food expenditures for food secure individuals were used to ensure that the result reflected the cost of an adequate diet. Then the national average cost per meal was weighted by the “cost-of-food index” to derive a localized estimate.

TYPES AND PROXIMITY OF FOOD OUTLETS

One's access to nutrition is dependent upon the extent quality food options exist within a community. Typically, grocery stores offer more options for fresh vegetables, whole grain foods and other healthy foods so they tend to be viewed as more nutritious food retailers than convenience stores, which may offer some grocery items, or fast food restaurants that tend to provide calorie-dense food choices. According to the Centers for Disease Control and Prevention, increased access to supermarkets is associated with lower prevalence of overweight and obesity, improved fruit and vegetable consumption, and better diet quality among African Americans, low-income households, and pregnant women; increased access to convenience stores is associated with increased risk of obesity (37).

Figure 10 depicts the rate of grocery stores, convenience stores and fast food restaurants within each county of the state.

Figure 10. Rate of food outlets by type, 2009



Data Source: USDA Economic Research Service (ERS) Food Environment Atlas, 2011
<http://maps.ers.usda.gov/FoodAtlas/>

STATUS OF FOOD SECURITY IN YOUR COMMUNITY

Access to food is a basic need of all individuals with considerable consequences for those unable to obtain proper nutrition. The resources required to ensure food security within one's community requires a range of safety net programs as well as an awareness of the economic and geographic characteristics within a community that can improve or impede food security (e.g., unemployment, poverty, food deserts). The appendix in this brief is intended to provide planners and advocates with county-specific data that can assist in developing plans to promote access to safety net resources and reduce food insecurity in communities across the state. The appendix provides county-specific information regarding:

- Households reporting food insecurity
- Households at poverty level
- Children living at poverty level
- Eligible households receiving SNAP benefits
- Children receiving SNAP benefits
- Students eligible for free and reduced-price school lunch
- SNAP-authorized stores
- Access to grocery and super stores
- Access to fast food restaurants
- Access to farmers' markets
- Low-income households more than a mile to store

REFERENCES

1. Alexander, M.D. (2004). Child health: Birth outcomes and infant mortality. Bethesda, MD: National Institutes of Health.
2. Whitaker, R.C., Phillips, S.M. & Orzol, S.M. (2006). Food insecurity and the risks of depression and anxiety in mothers and behavior problems in their preschool-aged children. *Pediatrics*, 118, 3, e859-e868.
3. Rose-Jacobs, R., Black, M.M., Casey, P.H., Cook, J.T., Cutts, D.B., Chilton, M. & Frank, D.A. (2008). Household food insecurity: Associations with at-risk infant and toddler development. *Pediatrics*, 121(1), 65-72.
4. Cook, J.T., Frank, D.A., Levenson, S.M., Neault, N.B., Heeren, T.C., Black, M.M., Berkowitz, C., Casey, P.H., Meyers, A.F., Cutts, D.B. & Chilton, M. (2006). Child food insecurity increases risks posed by household food insecurity to young children's health. *Journal of Nutrition*, 136, 1073-1076.
5. Casey, P. (2005). Child health-related quality of life and household food security. *Archives of Pediatric and Adolescent Medicine*, 159, 51-56.
6. Shonkoff, J.P. & Phillips, D.A. (Ed). (2000). *From neurons to neighborhoods: The science of early childhood development*. National Academy Press: Washington, D.C.
7. Bhattacharya, J., Currie, J. & Haider, S. (2004). Poverty, food insecurity, and nutritional outcomes in children and adults. *Journal of Health Economics*, 23, 839-862.
8. Skalicky, A., Meyers, A.F., Adams, W.G., Yang, Z., Cook, J.T. & Frank, D.A. (2006). Child food insecurity and iron deficiency anemia in low-income infants and toddlers in the United States. *Maternal and Child Health Journal*, 10 (2), 177-185.
9. Winicki, J. & Jemison, K. (2003). Food insecurity and hunger in the kindergarten classroom: Its effect on learning and growth. *Contemporary Economic Policy*, 21 (2), 145-157.

10. Alaimo, K., Olson, C.M. & Frongillo, E.A. (2001). Food insufficiency and American school-aged children's cognitive, academic and psychosocial development. *Pediatrics*, 108 (1), 44-53.
11. Laraia, B.A., Siega-Riz, A.M., Gundersen, G., & Dole, N. (2006). Psychosocial factors and socioeconomic indicators are associated with household food insecurity among pregnant women. *Journal of Nutrition*, 136, 177-182.
12. Cook, J.T., Frank, D.A., Berkowitz, C., Black, M.M., Casey, P.H., Cutts, D.B., Meyers, A.F., Zaldivar, N., Skalicky, A., Levenson, S., Heeren, T. & Nord, M. (2004). Food insecurity is associated with adverse health outcomes among human infants and toddlers. *Journal of Nutrition*, 134, 1432-1438.
13. Slopen, N., Fitzmaurice, G., Williams, D.R. & Gilman, S.E. (2010). Poverty, food insecurity, and the behavior for childhood internalizing and externalizing disorders. *Journal of the Academy of child and Adolescent Psychiatry*, 49 (5), 444-452.
14. Cook, J. & Jeng, K. Child food insecurity: The economic impact on our nation. A report on research on the impact of food insecurity and hunger on child health, growth and development. Commissioned by Feeding America and the ConAgra Foods Foundation. Accessed online April 22, 2011 at: <http://feedingamerica.org/our-network/the-studies/~media/Files/research/child-insecurity-economic-impact.ashx?.pdf>
15. Feeding America Map the Meal Gap website. Accessed April 22, 2011 at: <http://feedingamerica.org/hunger-in-america/hunger-studies/map-the-meal-gap.aspx>
16. Olson, C. & Lent, M. (May 2008) Food insecurity in rural New York State. Research & Policy Brief Series n7. Community and Rural Development Institute. Cornell University: Ithaca, NY.
17. Mykerezi, E. & Mills, B. (July 2008). The impact of food stamp program participation on household food insecurity. Paper presented at the American Agricultural Economics Association Annual Meeting. Orlando, FL.
18. Yen, S.T., Andres, M., Chen, Z. & Eastwood, D.B. (2008). Food stamp program participation and food insecurity: An instrumental variables approach. *American Journal of Agricultural Economics*, 90(1), 117-132.
19. Ratcliffe, C. & McKernan, S.M. (March, 2010). *How much does SNAP reduce food insecurity?* Urban Institute: Washington, DC. Accessed online April 22, 2011 at: www.urban.org/UploadedPDF/412065_reduce_food_insecurity.pdf
20. History of food stamps accessed online April 7, 2011 at: www.ehow.com/about_5434497_history-food-stamps.html
21. U.S Department of Agriculture Food and Nutrition Services (1999-2008) Reaching those in need: State supplemental nutrition assistance program participation rates. Accessed online April 22, 2011 at: <http://www.fns.usda.gov/ora/MENU/published/snap/snap.htm>
22. Food Research Action Center (January, 2010). County-by-county review of SNAP/Food Stamp Participation. Accessed online April 22, 2011 at: http://frac.org/pdf/ny_times_snap_poverty_formatted.pdf
23. Council on Children and Families Kids' Well-being Indicators Clearinghouse (KWIC) website. Accessed at www.nyskwic.org
24. Food Research and Action Center (2011). School breakfast scorecard: School year 2009-2010. Accessed online April 22, 2011 at: <http://frac.org/wp-content/uploads/2011/01/sbscorecard2010.pdf>
25. New York State Education Department Child Nutrition Knowledge Center, New York Lunch and Breakfast Participation Data. Accessed online April 22, 2011 at: http://portal.nysed.gov/portal/page/pref/CNKC/GEN_INFO_PAGE_PP/Participation%20data%202009-2010.pdf

26. History of the first school lunch program. Accessed online April 7, 2011 at: www.ilunchbox.com/articles/history-of-the-school-lunch-program.php
27. USDA Food and Nutrition Services. How WIC helps. Accessed online March 30, 2011 at: <http://www.fns.usda.gov/wic/aboutwic/howwichelps.htm>
28. Ver Ploeg, M. (April, 2009). *WIC and the battle against childhood overweight*. (Economic Brief No.13). USDA Economic Research Service. Washington: DC.
29. New York State Department of Health 2009 Pediatric Surveillance Report. Accessed online April 22, 2011 at: www.health.ny.gov/statistics/prevention/nutrition/pednss/2009/
30. New York State Child Nutrition Center
<http://www.nutritionconsortium.org/childnutritioncenter.htm>
31. Mabli, J., Cohen, R., Potter, F. & Zhao, Z. (2010). Hunger in America 2010: New York State Report. Accessed online April 22, 2010 at: www.foodlinkny.org/pdfs/HIA_State_Report.pdf
32. New York State Department of Health *What is CSFP?* Accessed online April 22, 2011 at: www.health.ny.gov/prevention/nutrition/csfp/
33. Institute of Medicine (April, 2007). Nutrition standards for foods in schools: Leading the way toward healthier youth. Accessed online April 22, 2011 at: [www.iom.edu/~media/Files/Report Files/2007/Nutrition-Standards-for-Foods-in-Schools-Leading-the-Way-toward-Healthier-Youth/FoodinSchools.pdf](http://www.iom.edu/~media/Files/Report%20Files/2007/Nutrition-Standards-for-Foods-in-Schools-Leading-the-Way-toward-Healthier-Youth/FoodinSchools.pdf)
34. Centers for Disease Control and Prevention (October 9, 2009). Availability of less nutritious snack foods and beverages in secondary schools—Selected states, 2002-2008. *Morbidity and Mortality Weekly Report (MMWR)* 58, 39, 1102-1104.
35. Davison, K.K., Edmunds, L.S., Wyker, B.A., Young, L.M., Sarfoh, V.S., & Sekhobo, J.P. (2011). Feasibility of increasing childhood outdoor play and decreasing television viewing through a family-based intervention in WIC, New York State, 2007-2008. *Preventing Chronic Disease*, 8(3). Accessed online April 22, 2011 at: http://www.cdc.gov/pcd/issues/2011/may/10_0119.htm.
36. New York State Department of Health (2006) State Health Department Releases Activ8Kids! Toolkit to Elementary Schools Statewide. Accessed online April 22, 2011 at: www.health.ny.gov/press/releases/2006/2006-03-20_activ8kids_toolkit.htm
37. Beaulac J., Kristjansson, E. & Cummins, S. A systematic review of food deserts, 1966-2007. *Preventing Chronic Disease* 2009, 6 (3). Accessed online April 22, 2011 at: www.cdc.gov/pcd/issues/2009/jul/08_0163.htm

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APPENDIX

County	Food Insecurity ^a 2009	Poverty (all ages) ^b 2009	Child Poverty ^c 2009	Average Cost of Meals ^a 2009	SNAP Benefit Recipients (all ages) ^d 2009	Children Receiving SNAP Benefits ^c 2009	Students Eligible for School Lunch ^c 2010/2011	SNAP Authorized Stores ^e 2009	Grocery & Super Stores ^e 2009	Fast Food Restaurants ^e 2009	Farmer's Markets ^e 2009	Low-income households > 1 mile from store ^e 2006
	Percent	Percent	Percent	Cost	Percent	Percent	Percent	Rate/10,000 residents	Rate/10,000 residents	Rate/10,000 residents	Rate/10,000 residents	Percent
Albany	11.8	11.8	14.3	\$2.71	9	19.8	38.9	8.41	2.7	11.0	4.69	9.41
Allegany	14.4	17.0	21.6	\$2.88	11	21.8	50.5	9.97	2.8	7.7	4.07	31.07
Bronx	21.2	28.3	39.4	\$2.71	29	33*	88	16.34	6.4	3.3	1.79	0.03
Broome	13.6	16.3	22.7	\$2.34	13	26.1	42.8	8.53	1.8	9.0	3.60	12.25
Cattaraugus	14	17.0	25.3	\$2.22	11	21.8	45.5	6.65	2.9	8.8	5.02	22.18
Cayuga	12.9	13.5	19.9	\$2.30	11	23.2	36.6	6.29	2.3	7.3	2.51	15.76
Chautauqua	13.9	17.6	25.9	\$2.27	16	31	47.9	8.39	2.8	9.9	3.75	16.55
Chemung	11.8	15.8	22.9	\$2.76	14	28.9	45.2	9.85	1.6	7.7	4.53	11.12
Chenango	13.3	15.5	21.7	\$2.48	14	25.3	51.9	9.48	2.2	7.7	1.98	25.42
Clinton	13.8	14.1	17.5	\$2.36	12	22.7	42.8	11.88	3.2	9.4	3.68	20.73
Columbia	11.2	10.3	15.9	\$2.37	7	12.9	37	7.14	3.6	10.7	8.11	20.35
Cortland	14	17.8	20.4	\$2.36	12	24.4	43.8	9.38	2.7	8.9	8.33	16.18
Delaware	13.7	15.4	23.4	\$2.79	10	21	49.3	8.57	2.6	11.8	19.77	24.86
Dutchess	10.7	8.9	11.4	\$2.70	6	11.5	27.3	4.46	3.7	9.9	3.07	9.74
Erie	13.7	13.9	20.5	\$2.46	13	26.2	44.7	8.77	2.7	8.0	1.54	6.85
Essex	13.6	11.6	16.7	\$2.36	7	16.4	47	10.88	6.1	19.6	18.57	25.6
Franklin	14.2	16.8	22.0	\$2.22	11	22.8	51.2	12.33	3.2	8.9	11.93	27.2
Fulton	15	17.3	24.4	\$2.32	14	27.9	48.1	8.72	2.0	10.0	5.45	20.91
Genesee	11.8	10.5	14.0	\$2.27	8	16.2	37.9	6.57	1.7	8.5	5.18	14.94
Greene	12.9	14.8	20.3	\$2.52	9	18.4	32.3	8.17	2.4	16.7	2.04	26.43
Hamilton	12.1	10.6	17.9	\$2.55		10.2	23.2	8.13	6.0	42.3	20.31	33.05
Herkimer	12.5	14.1	20.5	\$2.20	13	23.3	51	8.68	2.4	9.0	6.43	19.66
Jefferson	13.9	16.5	24.7	\$2.23	10	17.2	39.9	9.60	2.5	10.4	11.79	20.12
Kings	18.4	21.7	31.2	\$2.63	22	33*	82.5	15.79	6.1	5.4	1.13	0.01

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	Percent	Percent	Percent	Cost	Percent	Percent	Percent	Rate/10,000 residents	Rate/10,000 residents	Rate/10,000 residents	Rate/10,000 residents	Percent
Lewis	14.2	16.2	22.6	\$2.42	11	18.3	49.4	11.47	2.7	9.6	3.82	31.84
Livingston	12.6	11.5	13.2	\$2.32	9	17.6	35.4	7.16	2.1	8.6	7.95	16.98
Madison	11.7	11.3	15.5	\$2.36	10	21.6	34	6.86	2.3	9.8	5.72	17.02
Monroe	13.1	13.4	18.5	\$2.45	12	25.1	43.4	7.91	2.4	7.5	2.45	7.78
Montgomery	14.3	16.5	25.8	\$2.33	16	32.2	45.7	10.70	2.9	9.0	4.11	26.72
Nassau	8.6	5.5	7.6	\$2.91	3	4.9	18.7	3.40	4.2	9.0	0.66	0.68
New York	14	16.6	25.4	\$3.72	14	33*	71.1	9.68	6.9	25.0	2.58	0
Niagara	13.8	13.9	19.2	\$2.31	11	20.1	41.3	8.02	1.5	8.2	2.33	12.89
Oneida	12.8	14.4	22.1	\$2.40	13	28.7	49.2	10.78	2.2	8.9	2.60	13.1
Onondaga	12.8	13.7	19.0	\$2.38	12	24.9	40.6	8.18	2.6	7.7	1.32	6.92
Ontario	10.6	7.8	10.7	\$2.39	7	13.7	27.7	5.77	1.9	10.3	6.63	12.08
Orange	11.7	11.7	18.0	\$2.50	8	16.7	35.3	5.84	3.3	8.2	3.91	7.97
Orleans	13.9	12.8	19.1	\$2.18	12	23.3	46	6.90	2.6	4.3	4.76	17.17
Oswego	14.6	14.7	20.3	\$2.26	13	26.9	45.7	8.07	2.1	7.5	4.12	20.57
Otsego	12.9	16.4	17.8	\$2.36	8	16.4	43.7	6.66	3.4	10.5	4.87	25.19
Putnam	8.6	6.1	5.2	\$3.07	1	2	9.4	1.81	3.4	8.2	1.01	7.05
Queens	13.2	12.9	16.7	\$2.79	11	33	76.9	9.25	5.1	6.2	0.39	0.37
Rensselaer	11.6	11.0	15.1	\$2.62	10	21.2	35.7	8.17	2.0	6.5	3.21	9.27
Richmond	11.7	11.4	15.7	\$2.77	10	33*	54.7	8.24	4.0	5.4	0.20	1.68
Rockland	10.6	11.6	17.9	\$2.63	9	21.4	27.2	4.06	3.2	9.6	1.67	6.28
Saratoga	9.1	6.3	8.0	\$2.63	5	24.6	18.3	5.23	1.4	9.0	3.64	10.83
Schenectady	11.6	11.6	17.6	\$2.61	11	9.9	38.9	9.00	2.2	6.3	5.26	10.75
Schoharie	12.6	11.9	17.3	\$2.49	9	24	39.6	7.61	1.3	8.5	3.17	26.65
Schuyler	12.3	12.1	19.3	\$2.43	NA	17.8	38.5	9.08	1.1	11.7	21.37	27.34

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	Percent	Percent	Percent	Cost	Percent	Percent	Percent	Rate/10,000 residents	Rate/10,000 residents	Rate/10,000 residents	Rate/10,000 residents	Percent
Seneca	12.7	12.5	17.1	\$2.20	7	23.5	41.9	6.75	2.9	8.5	11.75	18.03
St. Lawrence	15.3	17.8	22.9	\$2.27	12	13.5	48.8	10.57	2.8	9.6	5.47	24.64
Steuben	14.3	15.1	21.5	\$2.35	10	19.4	50.2	8.60	2.4	8.6	5.18	21.09
Suffolk	9.1	5.7	7.5	\$2.83	4	8.2	23.6	3.49	3.4	8.1	0.66	5.29
Sullivan	13.8	17.4	23.7	\$2.23	11	24.1	50.7	11.87	3.9	10.8	7.91	29.48
Tioga	11.8	11.3	15.6	\$2.76	11	20.4	42.8	6.19	2.2	8.0	3.99	20.86
Tompkins	12.9	18.8	15.9	\$2.75	7	17.2	36.2	5.70	1.7	10.0	5.90	14.93
Ulster	11.9	12.5	16.2	\$2.49	8	16.4	35	7.16	3.0	13.0	5.51	19.44
Warren	11.7	10.9	16.7	\$2.55	9	17.9	29.2	8.63	4.9	20.2	7.57	12.51
Washington	12.1	14.0	19.7	\$2.88	10	19.7	39.5	7.81	1.9	6.7	11.15	20.35
Wayne	12.3	11.0	14.9	\$2.26	9	15	42	6.35	2.0	5.9	7.67	16.28
Westchester	10	9.1	11.9	\$2.82	6	11.5	29.1	5.87	4.5	9.8	1.67	1.52
Wyoming	13	11.3	14.8	\$2.64	7	14.9	35.6	6.76	2.4	6.3	7.25	20.22
Yates	11.7	13.8	23.1	\$1.91	11	19.5	54.8	9.80	4.1	10.2	8.17	24.2

Data Sources:

^a Feeding America Map the Meal Gap www.feedingamerica.org

^b U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE). Accessed April 22, 2011 at: <http://www.census.gov/did/www/saipe/county.html>

^c Council on Children and Families Kids' Well-being Indicators Clearinghouse (KWIC). Accessed April 22, 2010 at: www.nyswkic.org

^d Food Research Action Center Accessed April 22, 2011 at: http://frac.org/wp-content/uploads/2010/07/ny_times_snap_poverty_formatted.pdf

^e USDA Economic Research Service (ERS) Food Environment Atlas; accessed April 22, 2011 at: <http://maps.ers.usda.gov/FoodAtlas/>

*The data represent aggregated information from *all five boroughs* of New York City, not the single borough.