Hunger and Health Over the Life Course*

Launching Off Point

A food insecure woman gives birth to a premature, underweight baby. The undernourished infant is more susceptible to infections, requires more medical care, is more likely to be hospitalized, and faces delays in growth and development that may haunt her for the rest of her life. Growing up poor, she has markedly different experiences than her peers in higher-income households: no high-quality preschool or center-based child care, parents who are overwhelmed with trying to earn enough to keep a roof over their heads, siblings competing for whatever food there is in the home.

In school, she struggles to catch up. She is chronically hungry and relies on the free lunch and free breakfast (if offered) programs for most of her nutrients. Growing up impoverished in a food insecure household exposes her to toxic levels of stress that contribute to early onset of chronic diseases. Toxic stress also makes her more vulnerable to depression and thoughts of suicide, substance abuse, and dropping out of school and consequently severely limited employment opportunities in adulthood.

“The poor get sick more than anyone else in the society… When they become sick, they are sick longer than any other group in the society… At any given point in the circle, particularly when there is a major illness, their prospect is to move to an even lower level and to begin the cycle, round and round, toward even more suffering.”

— Michael Harrington, The Other America (1962)

KEY POINTS

- Maternal and child health outcomes are worse in the United States than all other high-income countries, and this is due in part to our tolerance, as a nation, for higher levels of poverty and hunger.
- The Hunger VitalSign™, a two-item food-security screen, is an efficient tool to use in clinical settings to identify patients at risk of hunger.
- Investments in early childhood development, including good nutrition, are essential to giving children growing up in poverty the best chance of achieving a healthy, productive life.
- Many working-age adults with disabilities who can work and want to work are deterred from seeking employment due to the fact they could lose their healthcare benefits.
- Hospitals can reduce the rate of Medicare readmissions by ensuring at discharge that seniors have access to healthy food and are aware of available nutrition services.
- Home-delivered meal programs provide frail seniors and people with severe disabilities some measure of independence and can help delay the need for expensive long-term care.

*“Life course perspective refers to how health status at any given age, for a given birth cohort, reflects not only contemporary conditions but embodiment of prior living circumstances, in utero onwards.”

— Michael Harrington, The Other America (1962)
The food insecurity she experienced early in life makes her more prone to overweight and obesity. She is more at risk of becoming disabled early in adulthood, due to the likelihood that her job requires more physical labor than the work of someone with more education. By the time she reaches her senior years, she may well have multiple chronic conditions that are expensive to treat. With limited healthcare options when she was younger, she rarely invested in routine checkups to help diagnose and treat these problems earlier on.

**Underweight at Birth**

The early years of life are the most critical period in human development. There is nothing controversial about this statement; it is universally understood that what happens to children during this time will influence their physical and cognitive development for the rest of their lives. The Heckman Curve, named for the economist and Nobel laureate James Heckman, shows the practical value of investing in early childhood development, not only for the children themselves and their families, but also for society. See Figure 1.1. Children whose physical and cognitive development is harmed as a result of food insecurity and malnutrition have diminished human capital, and that has ramifications for everyone. The economy is less productive and less innovative than it could be, affecting everyone’s standard of living.

Food insecurity and malnutrition increase the likelihood of preterm birth and/or low birth weight. In 2013, 8 percent of babies in the United States were born at low birth weight (less than 5.5 pounds). Babies born prematurely with low birth weight have a much higher risk of experiencing long-term development delays. Among 17 of the richest countries in the world, only Japan has a higher maternal mortality rate in the United States has DOUBLED in the past 25 years.
percentage of babies born with low birth weight than the United States. Among African American babies, 13.08 percent have low birth weight, nearly double the rate of U.S. whites (6.98) and Hispanics (7.09), and on par with the rates in many developing countries.

“While high-quality schools have the potential to improve the outcomes of all children, they do not reduce the gaps generated by poor neonatal health,” says David Figlio, coauthor of a study on neonatal health and its effects on children’s cognitive development. Figlio and colleagues found that birth weight had noticeable effects on scholastic outcomes for children in every income group. The earliest, smallest babies are the most at risk, but even children born just weeks shy of full term face a higher risk of complications than children who reach full term.

Premature birth and low birth weight are also leading causes of infant mortality. In 2013, the United States ranked 51st internationally in infant mortality rates—comparable to countries with one-third its Gross Domestic Product (GDP) per capita. The United States has the highest rate of infant mortality among high-income countries. Japan makes a stunning turnaround from its dismal last-place performance on low birth weight: its infant mortality rate is second lowest among high-income countries. Authors of a study for the American Academy of Pediatrics suggest that Japan’s healthcare system is one reason low birth weight babies survive at such high rates. In Japan, all children have access to medical care, regardless of their family income or their region of the country.

Nutritional status during pregnancy is directly related to the mother’s own survival as well. The United States has the highest maternal mortality rate among high-income countries, double...
the rate of Canada and triple that of the United Kingdom.\textsuperscript{12} One contributing factor is the rising number of pregnant women with diet-related health conditions, such as hypertension and diabetes, which increases their risk during pregnancy and childbirth. The United States is one of only eight countries in the entire world where maternal mortality rates have risen since 1990.\textsuperscript{13} African American women are nearly four times as likely as white women to die in childbirth or as a result of pregnancy complications.\textsuperscript{14}

Participation in the Special Supplemental Nutrition Assistance Program for Women, Infants, and Children (WIC) has been shown to reduce the risk of low birth weight by 29 percent.\textsuperscript{15} The Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program) has also been shown to reduce low birth weight, strengthening its association with good health care.\textsuperscript{16} During the late 1960s and early 1970s, as the Food Stamp Program was being rolled out county-by-county, researchers found evidence that the program was making a significant difference in birth outcomes. “In particular,” they wrote, “we find increases in mean birth weight for whites and blacks, with larger impacts estimated at the bottom of the birth weight distribution (that is, low birth weight and very low birth weight).”\textsuperscript{17}

By increasing the number of women with access to public and private health insurance, the Affordable Care Act (ACA) of 2010 could have a significant impact on reducing preterm births and maternal mortality. The ACA makes it much easier for women to get prenatal and postnatal care. In addition, small group and indi-
individual health plans are required to include a set of specific essential health benefits, including maternity care. Also, insurers are no longer allowed to deny coverage based on a pre-existing condition. Under some insurance plans in the past, pre-existing conditions were defined as including pregnancy, a past C-section, plans to become pregnant, being a victim of intimate partner violence, and sexual assault.18 The largest impact of the ACA reforms will be in states that are expanding Medicaid to adults with incomes up to 138 percent of the federal poverty level. It is still too early to know the effects of the expansion on birth outcomes, since full implementation only began in 2013.

Policymakers could take advantage of healthcare reform to improve coordination between Medicaid and SNAP. In the states that expanded Medicaid, 97 percent of SNAP recipients will be income eligible for Medicaid.19 SNAP recipients have already gone through a rigorous comprehensive application process to qualify for benefits. Using SNAP participation to determine automatic eligibility could speed the process of applying for Medicaid, reducing costs and improving efficiency. Families participating in Medicaid are able to enroll automatically in WIC.20 In interviews with heads of SNAP households who have also used WIC, people say that they appreciate the fact that WIC requires them and their children to get health checkups and treats them more like patients than welfare recipients.21

At-risk Families with Children Ages 0-2

For some families, WIC or SNAP may be all they need to cope with the economic adjustment following the birth of a child. For others, these nutrition programs may be one ingredient in the recipe for a successful coping strategy. The most disadvantaged families require more support than just nutrition programs. We do these families—and society—no favors by oversimplifying and minimizing the challenges the parents face, and it is simply not wise or realistic to assume that society can provide for children while ignoring the challenges of parenting. This is especially true for first-time parents, often mothers having to raise children alone without the support of the father or other family members.

Home visitation programs, such as the Federal Home Visiting Program, are unique in that they adopt a two-generation approach to meeting the needs of families, providing both parents and children with the focused attention and care they need during this critical period. First-time parents who are low-income and high-risk receive one-on-one support during monthly nurse-home visits that begin during pregnancy and continue through the child’s
second birthday. In 2014, 115,000 families in 787 counties were served. This program is one aspect of the ACA that appears to have bipartisan support. The Federal Home Visiting Program existed before the new health law but was funded at a fraction of its current level. In FY2009, the program received just $13.9 million. The ACA increased funding to $1.5 billion for five years over 2010-2014. In 2015, Congress authorized $800 million over two years for the Federal Home Visiting Program.

There are 17 federally approved models of home visitation programs, but the most well-known and the most rigorously evaluated is the longstanding Nurse-Family Partnership (NFP). Founded in 1977, NFP has now been studying its impact on families for decades. Randomized controlled trials show that NFP reduces maternal and child mortality rates. Other proven achievements are higher rates of employment among the mothers, fewer unwanted pregnancies, decreases in child abuse and visits to the emergency room, reductions in behavioral and intellectual problems in children by age six, and fewer arrests of children by age 15. A 2005 study by the RAND Corporation found that for high-risk families, every $1 invested in NFPs yields a $5.70 social return. Government receives the bulk of these savings—for example, through lower expenditures on public assistance to the families. See Figure 1.3

One reason home visits succeed is that the nurse—or social worker, paraprofessional, or other trained provider, depending on the model—goes to the patient. Transportation is one of the costliest items in any household budget, and there is virtually no public assistance to

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**Figure 1.3 Monetary Benefits to Society of Nurse-Family Partnership Program**

### LOWER-RISK FAMILIES
- Increased participant income (net of welfare loss): $7,271
- Reduction in tangible crime losses: $9,151

### HIGHER-RISK FAMILIES
- Increased participant income (net of welfare loss): $7,271
- Savings to government: $41,419
help low-income families with transportation costs. For these families, transportation is a major barrier to accessing services. Lack of transportation is often why families miss doctor’s appointments, and it helps explain the drop-off in WIC participation after age 1.

Nutrition and feeding practices are an integral part of what home visitation programs focus on with parents. The visitor checks on what the mother and child are eating. She talks with the mother about the importance of breastfeeding, why young children should not be given sugary beverages, and other key points. Healthy Beginnings, a home visitation program based in Australia and similar in concept to U.S. programs, conducted a randomized control trial from 2007-2010 to evaluate the effect of the program on efforts to prevent childhood obesity. At age 2, a statistically significant greater share of the intervention group had a body mass index score within the normal range than in a control group.26

Infant feeding patterns influence childhood eating habits, which are then carried over into adulthood. Infancy is a critical time to learn various food tastes. “There is substantial research to suggest that if you consistently offer foods with a particular taste to infants, they will show a preference for these foods later in life,” says Xiaozhong Wen, lead author of a 2014 study published in *Pediatrics*. “So if you tend to offer healthy foods, even those with a somewhat bitter taste to infants, such as pureed vegetables, they will develop a liking for them. But if you always offer sweet or fatty foods, infants will develop a stronger preference for them or even an addiction to them.”27

Home visitation programs that last up to two years are an invaluable opportunity to influence healthy eating patterns. Understanding what works best requires investing in evidence-based research and using the findings to inform policymaking. Home visitation programs have been shown to work. Not all families need this kind of intensive focus, but when we know what works, we should not hesitate to allocate enough resources upstream in order to avoid costly downstream consequences—both financial and human.

**When Children “Fail to Thrive”**

Psychologist Abraham Maslow developed a well-known “hierarchy of human needs.” See Figure 1.4. Few would argue that food, shelter, and warmth are basic human needs. These are building blocks of good health. Infants and toddlers growing up in poverty show us why.

Food insecurity and malnutrition compromise children’s immune systems, making them more vulnerable to infections. Substandard housing compounds the challenges of keeping
children healthy. Cold, damp, and moldy conditions are associated with asthma and other respiratory ailments. Heat or eat is a catch phrase that speaks for itself: pay the energy bill, or pay for groceries. Winter challenges the resourcefulness of even those parents who are most adept at shielding their children from hunger at other times of the year. One study found that children living in poverty consumed an average of 11 percent fewer calories during the winter because of heating costs.

Rapidly developing infants and toddlers in these conditions often “fail to thrive,” that is, they don’t grow properly, don’t gain weight at the same rate as healthy children. Clinicians define this in terms of primary or secondary malnutrition. Primary malnutrition describes children who would have grown normally and been healthy if they had the same amount to eat as economically secure children of their age; secondary malnutrition describes children with a condition (ranging from food allergies to congenital heart disease to neurological disability) that increases their nutritional needs to the extent that these needs exceed the capacity of their environment without specialized interventions.

The Grow Clinic at the Boston Medical Center sees children up to the age of 6 diagnosed with “failure to thrive.” Pediatrician Deborah Frank is the head of the Grow Clinic, and, with colleagues from around the nation, one of the founders of Children’s HealthWatch. Children’s HealthWatch established an ongoing multi-site clinical research program focused on young children in hospital emergency rooms and clinics in low-income areas with high levels of food insecurity. The research Children’s HealthWatch has produced since 1998 demonstrates how insecurity in food, housing, and energy are all interrelated and together affect child health outcomes. See Figure 1.5. Children’s HealthWatch includes clinicians and public health researchers at urban hospitals in Baltimore, Boston, Little Rock, Minneapolis, and Philadelphia. These are sentinel sites where the child health and developmental consequences of food insecurity and associated hardships become readily apparent before they are noticed in the population at large. They could also be considered the tip of the iceberg: in the 71 largest U.S. cities, child poverty rates average 30 percent.

In 2014, leaders in Congress appointed Frank and her public health colleague Mariana Chilton of Children’s HealthWatch’s Philadelphia site to a 10-member National Hunger Commission. Frank and Chilton are regularly asked to testify at hearings when Congress...
is debating domestic anti-hunger legislation. In a 2012 interview with Greg Kaufmann of *The Nation*, Chilton recalled the time in 2007 that she was testifying before Congress on the importance of the Food Stamp Program for the health and well-being of young children. She was there to talk about the research she and her colleagues at other Children’s HealthWatch sites had been doing. “I literally watched the Congress people’s eyes glaze over, and I thought, “Well, this isn’t doing it.”

As her clinical colleagues had found, Chilton realized that policy makers demand numbers, but will not act unless constantly reminded that numbers all have names and faces. When Chilton got back to Philadelphia, she developed a project called *Witnesses to Hunger*, where she provided cameras to mothers living in poverty and asked them to create a visual diary of what hunger looks like in their communities. The images were published on the Internet, where they went viral, and eventually the mothers were invited to display their photographs and discuss them at an exhibition in the halls of Congress. The *Witnesses to Hunger* project is designed to keep eyes from glazing over, and it’s been quite successful in doing so.

In the mid-2000s, Children’s HealthWatch sites began piloting the use of a 2-item food security screening tool. The tool is based on a longer food security survey the U.S. Census Bureau administers annually to the population at large (see more on the U.S. food security survey on pages 16-19 of the Introduction). The objective is to efficiently identify households at risk of food insecurity, so that the research approach of the 18-item USDA Food Security Scale can be translated into a clinically useful tool. The survey asks the parent or caregiver to rate two statements as “often true,” “sometimes true,” or “never true”: “Within the past 12 months, we worried whether our food would run out before we got money to buy more,” and “Within the past 12 months, the food we bought just didn’t last and we didn’t have money to get more.”

This tool, the Hunger VitalSign™, has been validated with a sample of 30,000 caregivers. Responses can be recorded in electronic medical records along with other vital signs. Today,
it has been widely adopted as a routine activity in pediatric and other healthcare settings, including newly established electronic health records. The American Academy of Pediatrics (AAP), representing more than 60,000 pediatrician and pediatric medical subspecialists, encourages all its members to promote the use of the Hunger VitalSign™. In 2013, AAP made reducing child poverty one of its strategic priorities as an organization. With half of all babies in the United States born into families with low enough incomes to be eligible for WIC, the AAP could not afford not to take a stand on poverty and hunger.

Children’s HealthWatch collects information about household food security, child health and development, parental health, federal assistance program utilization, employment, income, financial literacy, housing, utilities, and child care. At the Boston Medical Center, if children are referred for primary or secondary malnutrition, a clinical team ("the GROW team") conducts a comprehensive evaluation of each child and family. The team includes nutritionists, social workers, and multilingual community outreach workers along with consultants from child development and child psychiatry. Once children are referred to Frank and her colleagues in the Grow Clinic their progress is tracked at least monthly. Most parents know how to shop on a limited budget—but a major problem is they can’t afford the better foods.

Boston Medical Center (and another Children’s HealthWatch hospital, the Hennepin County Medical Center) maintains a food pantry to help, partnering with the local food bank, philanthropic donors, schools, and religious groups to keep it stocked. Decades ago, Dr. Frank started keeping a small pantry because she could not endure the mothers breaking into tears when she told them what their child should be eating and hearing them tell her they couldn’t afford those kinds of foods. At Boston Medical Center, the pantry has become a hospital-wide initiative, since the health of patients of all ages is known to be jeopardized by poor diets.

Outside of a hospital setting, few pediatricians can afford to keep an on-site social worker or other staff trained to address nutritional risks and other social determinants of health. At the very least, pediatricians should know how to direct eligible families to WIC, and they should have information available about local food source hotlines, school meals and summer feeding, and how to get assistance in applying for SNAP. The most important thing every provider needs to do to address food insecurity is to begin screening for it.
Columbia St. Mary’s Hospital in Milwaukee is a member of Ascension Health, the nation’s largest nonprofit health system and its largest Catholic health system. Ascension’s call to action is “to provide health care that leaves no one behind.” Milwaukee is one of the poorest cities in the nation. With poverty rates higher than 40 percent in parts of the city, many of Milwaukee’s neighborhoods have been left behind.36

Columbia St. Mary’s sponsors a community-based, chronic disease management program (CCDM) located at food pantries operated by churches around the city. Because disease management is so heavily influenced by dietary choices, it made sense to locate the program in food pantries so that it is easy to incorporate nutrition counseling into the health screenings. “The cyclical in control/out of control management of chronic diseases cried out for a model of care different from the office-based, doctor-centric approach,” says Bill Solberg, Director of Community Services at Columbia St Mary’s.

The program employs two parish nurses who work with churches in some of the city’s most disadvantaged African American and Hispanic communities. A parish nurse is a registered nurse who works within a faith community to respond to the health issues of the members and the broader community or neighborhood. What distinguishes a parish nurse is the spiritual side of her work. “We’re not just our heart or our liver or our kidneys,” says Maureen Daniels of the International Parish Nurse Resource Center. “Part of being a person is that whole dimension of spirit that makes us who we are.”37

Columbia St. Mary’s is a Catholic institution, but parish nursing is not a distinctly Catholic vocation—many prefer the term faith-community nurse. There are approximately 15,000 parish/faith-community nurses in the United States, and it is one of the fastest growing specialty practices recognized by the American Nurses Association.38

Julia Means, one of the nurses employed by the hospital, is a member of Ebenezer Church of God in Christ, the site of one of the pantries. Solid partnerships with the churches have been the key to ensuring that the program is sustainable. Charles McClelland, Bishop of the Northwest Wisconsin Jurisdiction of the Church of God in Christ (COGIC), was so impressed with the CCDM program that he invited Means to coordinate the health ministries of all 42 churches that report to him.

The pantries stock the healthiest foods they can get. Healthy items such as chicken breasts, fresh fruit, and vegetables can be purchased from the Feeding America network food bank for a modest fee per pound, which allows the food bank to cover its maintenance costs for transportation and storage. Solberg estimates it costs Columbia St. Mary’s about $1,500 per year to support one pantry. That is less than the cost of one overnight hospital stay.
The Lasting Effects of a Hungry Childhood

Childhood hunger, especially early childhood hunger, is capable of rewiring the brain. It affects behavioral, educational, economic, and health outcomes for decades. Some people manage to transcend their experience of childhood hunger. Others do not—exposure to hunger in childhood haunts them for the rest of their lives.

When we discuss ways of helping adults at risk of hunger, it seems shortsighted not to consider whether they experienced hunger as a child. The legacy of adverse childhood experiences adds to the load that adults carry while struggling to pull themselves and their own children out of poverty. The term “adverse childhood experience” barely begins to describe the intensity of what some people experience, sometimes for years and years. Jocelyn, a 20-year-old mother of one, experienced hunger so severely as a child that she resorted to eating paint chips off the wall—until it put her in the hospital with lead poisoning. Neglected by her mother, a drug abuser, Jocelyn moved in with her father and stepfamily. Her stepbrother raped her repeatedly starting when she was 10. She endured this abuse initially because it was the first time in her life she was getting enough to eat.

The developing brain of a child is highly sensitive to stress. Toxic levels of stress, such as what is caused by repeated exposure to violence, set off a physiological chain of events that limits the ability of the body’s immune system to fight off illness. Adverse childhood experiences are associated with early onset of diseases such as diabetes, cardiovascular disease, and depression. See Figure 1.6. The body is literally aging at an accelerated rate.

Half of all substance abuse disorders start by the time the person is 14. At least two-thirds of the patients in drug abuse treatment centers report being physically or sexually abused as children. Adolescents with depression who do not receive help are one and a half times more likely to have depressive symptoms in adulthood than their peers who do get help.

Children whose mothers are coping with the legacy of these experiences must cope with it also. Childhood hunger is more prevalent in households where the mother has symptoms of post-traumatic stress disorder. One study found that households where the mother had been sexually abused as a child were more than four times as likely to be food insecure as those where the mother had not been abused. In Chilton’s work in Philadelphia with low-income
parents, the mothers she interviewed for *Witnesses to Hunger* described exposure to violence as “the most profound experiences shaping the participants’ physical and mental health, earning potential, and food security status.”

By age 13, Jocelyn had already been hospitalized for depression, an illness she continues to battle. A substantial body of research has documented an association between maternal depression and household food insecurity. A study of 14,000 children, using data collected at intervals between birth and the start of kindergarten, found that when mothers are moderately to severely depressed, the risk of child and household food insecurity increases by 50 percent to 80 percent. A mother’s mental health is a crucial factor in keeping her family from falling into very low food security—where people must skip meals or even not eat for a whole day. Maternal depression has also been linked to failure to thrive by inhibiting mother-infant bonding.

All of this focus on mothers does not mean we are less concerned about fathers. Those who were exposed to hunger in childhood or have physical or mental health problems often face struggles that can profoundly affect their children as well. But it is mothers who are typically the caregivers and gatekeepers to health services in their families. In a 2013 survey, 10 times as many working mothers as men reported taking time off to care for a sick child. Mothers control the dietary quality of food in the home. Most often, they purchase the food and prepare the meals served at home. A study based in England found that depressed mothers lacked the energy to shop for groceries or cook family meals. A mother’s mental and physical health also affects food security by compromising her ability to hold down a job and/or navigate the welfare system. Maternal depression may be one explanation of why some households eligible for SNAP or WIC do not apply.

Because mental health and household food security are so closely connected, AAP recommends that pediatricians screen mothers for depression. Some WIC clinics already do this. Community health centers, which serve one in five low-income women of childbearing age, have stepped up their efforts on mental health. In 2013, 76 percent of such centers provided mental health services, a strong improvement from the 42 percent of 2000. Federally funded community health centers provide care to more than 21 million patients at 9,170 service sites in medically underserved areas across the country. More than 70 percent of patients have incomes below the federal poverty level. See Figure 1.7.
Most states are making efforts to integrate physical and mental health services, recognizing that poorly managed mental healthcare services compromise the effectiveness of treating patients’ physical problems. The patient-centered “medical home” is one model of integrated care that Medicare and Medicaid are using. The idea is that a team of providers coordinates the care of a single patient. A nurse who conducts home visits may be one member of a team, led by the patient’s primary care physician, which shares information to provide the best care possible. In addition to home visits, other components may include mental health care, pediatric care, and family services to address issues such as domestic violence and custody disputes. The medical-home model attempts to reduce the fragmentation in the health system that contributes to making health care so much more costly in the United States than in other countries.

**Countering Toxic Stress**

Among adults who have spent more than half their childhood years living in poverty, one-third to half will also be poor throughout their early and middle adulthood. Statistics like these underscore the value of investments proven to be effective in breaking the cycle of intergenerational poverty. Early education is one of the best investments of all. For children from disadvantaged backgrounds, high-quality child care and preschool have been shown to lead to better health and educational outcomes in adulthood. Society benefits as well—every dollar invested in high-quality early education yields $8 to $9 in later productivity gains for the nation’s economy.

Head Start and Early Head Start provide some low-income children with access to high-quality preschool programs. Despite growing awareness of the importance of preschool, less than 50 percent of income-eligible children are enrolled in a Head Start program, and less than 10 percent in Early Head Start. See Figure 1.8. In a nationally representative sample of preschool children, researchers found that compared with children cared for exclusively by their parents, low-income preschoolers attending a childcare center had lower levels of both low food security and of very low food security. The authors suggest that this may be due partly to parents being able to work more since their children were cared for at the center. Another reason is that children receive nutritious meals at the centers. A Children’s Health-Watch study of children in licensed childcare centers found that those receiving meals were more likely to have healthy weight and height for their age. They were also 26 percent less
likely to be hospitalized than a similar group of children who were in child care but not receiving meals there.\textsuperscript{63}

In policy debates about child nutrition programs, the Child and Adult Care Food Program (CACFP) rarely receives the attention that WIC or the National School Lunch Program does. That may change as national investments increase in early childhood development, which many policymakers recognize are becoming more necessary for the United States to remain competitive in a global economy. CACFP currently serves 3.3 million low-income children every day in early care and education programs.\textsuperscript{64} All of the children’s meals and snacks must meet strict nutritional requirements. CACFP allows licensed childcare centers, family childcare providers, after-school programs, and Head Start and Early Head Start programs to be reimbursed for the foods they serve.\textsuperscript{65}

**Like food, shelter is such a basic need that it is little wonder it becomes the all-encompassing focus of a homeless parent’s life, crowding out other concerns.**

Bright Beginnings, an early education and childcare center in Washington, DC, uses CACFP to provide for the children it serves in its Early Head Start program. Bright Beginnings opened in 1994. It is unique among early education programs because the families it serves are homeless. All Head Start and Early Head Start programs are required to provide parent education and outreach activities related to health and other issues. At Bright Beginnings, the wrap-around services provided take this to a higher level. This is the quintessential two-generation approach to fighting poverty. The families at Bright Beginnings are among

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Figure 1.8  
Children Enrolled in a Head Start Program as a Percentage of All Children in Poverty, ** by Race, Program Year 2013-2014

*Head Start includes Migrant Head Start

**Children in poverty, ages 0-3 for Early Head Start and ages 3 to 5 for Head Start

Growing recognition about the benefits of early education to children and society has not been accompanied by a significant increase in new resources.

Todd Post/Bread for the World

the most vulnerable in our society. They are headed predominantly by single mothers who grew up in poverty. A great many were homeless themselves as children.

Like food, shelter is such a basic need that it is little wonder it becomes the all-encompassing focus of a homeless parent’s life, crowding out other concerns. Researchers studying the effects of stress on decision-making in the context of poverty describe this in terms of “bandwidth.” The more impoverished and disadvantaged people are, the less bandwidth they have available to deal with anything beyond meeting basic needs. “Figuring out how to survive in poverty takes up a huge amount of cognitive capacity,” says Princeton psychologist Eldar Shafir, whose research focuses on decision-making among people of all income levels. “When so many moments of the day require your full attention, there’s very little of it left to worry about things that are not right in front of your eyes ... and then you start doing things you wish you hadn’t done. You don’t anticipate things that are going to happen tomorrow.”

Bright Beginnings helps expand bandwidth for parents with a range of support services. Every parent with a child at the center develops a family-partner-ship agreement, where she or he establishes goals and a plan for how to achieve them, whether that means going back to school for a GED, enrolling in college, or getting a job. It may be the first job for some. “No one ever talked to them about setting goals,” says Tamara Perez, one of the social workers on staff. “Growing up they never dreamed of saying I want a career.”

Sherry Watkins, Family and Health Services Specialist, says that what mothers value above all else about Bright Beginnings is the security of knowing their children are in a stable, structured environment—five days a week, up to 12 hours a day if necessary. Structure is what they cannot provide for their children at this point in their lives. Watkins means “security” in a quite literal sense. Almost every child at Bright Beginnings has witnessed domestic violence. One of the main reasons that families are homeless is that a mother’s “choices” are either homelessness, or exposing herself and her children to an abusive partner.
HealthCorps Coordinators Empower Youth at Their Schools

by Karen Wilkinson, HealthCorps

“It’s a very complicated situation and there’s a lot of embarrassment around it,” said Alice Curchin, HealthCorps Coordinator at Health Professions High School (HPHS) in Sacramento, California.

At a school where more than 85 percent of the students qualify for the National School Lunch Program, healthy eating seems unrealistic to some. There is simply not enough money for that.

When Curchin discusses incorporating more fruit, vegetables, and whole foods into their diets, many students explain that they’re not staples at home, and besides, they’re too expensive.

Curchin and 43 other HealthCorps coordinators—recent college graduates with a passion for health—are anchored at high-needs high schools across the country. They work in classrooms and the cafeteria. They lead after-school clubs that incorporate nutrition, fitness, and mental resilience into a comprehensive health education.

The coordinators’ mission is to empower youth to make informed, mindful decisions about their lives through peer mentoring and sharing skills such as “Grocery Shopping on a Budget.”

At HPHS and many other schools in California and across the country, students’ access to fresh produce is limited and the convenient options are fast-food restaurants and corner store markets.

“Living in food deserts can leave young adults with the impression that leading a healthy lifestyle is unattainable, something reserved only for those with more income and resources,” said Karen Buonocore, Vice President of HealthCorps Programs. “We believe everyone should have the tools and knowledge to create such a lifestyle for themselves, and it’s through our HealthCorps Coordinators’ teachings and one-on-one mentorship that those seeds are planted.”

These lessons are incorporated into students’ physical education classes at HPHS, where Curchin interacts with the freshman and senior classes—nearly half the student population. Using a virtual shopping cart on a popular grocery chain’s website, students can shop and choose which foods give them the most “bang for their buck.”

Simply comparing the price per unit is one element of the challenge. For example, buying rice and beans in bulk proves to be a cheaper price per unit than purchasing such items boxed. Students also learn that shopping for produce that’s in season is more affordable, especially when found through farmers’ markets. And of course, empty calories found in soda, chips, and alcohol is part of the discussion.

Being a critical consumer is also an element of the lesson, which encourages students to cut through advertising jargon that’s meant to entice them into buying into brands before quality.

Students leave with more tools to share with their families, and skills to use when they’re out of the house and on their own, Curchin said.

“Even if they don’t use this information right now, I’m hoping that everything I teach—remaining active, choosing more fruits and vegetables and less processed food, learning to calm the mind—will be filed away in their brains and pulled out to use down the road when they have the opportunity to make a change,” she said.

Founded in 2003 by Dr. Mehmet Oz and his wife Lisa to reverse the childhood obesity crisis, HealthCorps educates teens to take their health into their own hands. The organization works with schools where at least half the students qualify for the National School Lunch Program.

Karen Wilkinson is a HealthCorps communications consultant.
Living with Disability

The poverty rate for people with disabilities is higher than for any other major demographic group: whites, blacks, Hispanics, Native Americans, seniors, children, or female-headed households. Among people who experience persistent poverty (continuous poverty over a 24-month period), nearly two-thirds have a disability. Children who live with a disabled adult are almost three times as likely to experience very low food security (the most severe form of food insecurity—the kind that may mean that one or more family members does not eat for a whole day) as other children.

In 2013, the poverty rate for non-institutionalized working-age adults (ages 18-64) with disabilities was 28.8 percent, compared to 12.3 percent for working-age adults without disabilities. The Census Bureau began reporting the poverty rate among people with disabilities only recently, and USDA still does not report annually on the food insecurity rates of households or individuals with disabilities. In a one-time study in 2013, the agency found that nearly one-third of food-insecure households included a working-age adult with a disability. Among households with very low food security, 38 percent had a working-age adult with a disability. Working-age adults with severe disabilities are more than twice as likely to experience persistent poverty as those with non-severe disabilities.

Despite their large numbers and persistent hardships, people with disabilities are largely missing in discussions of why food insecurity is still so common in the United States. But in a report like this one, about the relationship between hunger and health, it is impossible to ignore them.

The Americans with Disabilities Act (ADA) defines disability broadly as “a physical or mental impairment that substantially limits one or more major life activities.” About 57 million people—19 percent of the population—had a disability in 2010, according to the decennial census, with more than half reporting their disability as severe. “Disability” is often not as straightforward or clear-cut as one might assume. For example, 12 percent of U.S. working-age men and 13 percent of women live with what is called a complex activity limitation, meaning that they have a limited ability to function at work, maintain a household, live independently, or participate in community activities.
The South and Appalachia have higher disability rates than the rest of the country. See Figure 1.9. People in these regions have more risk factors for disability: as a group, they are poorer, older, less educated, and more likely to work in blue-collar jobs. The South and Appalachia are also where we find significant health disparities, including higher rates of food insecurity.

Working-age people with disabilities can apply for income support from two federal programs: Social Security Disability Insurance (DI) or Supplemental Security Income (SSI). In 2014, 9 million people who had become disabled during employment received DI, and another 4.9 million with severe physical or mental disabilities received SSI. The Social Security Act is the law that authorizes these programs, and it defines disability far more narrowly than the ADA: “[The] inability to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment which can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than 12 months.”

The typical DI beneficiary is in his or her late 50s—70 percent are over 50, and 30 percent are 60 or older. People are twice as likely to be receiving DI at age 50 as at age 40—and twice as likely at 60 as at 50. See Figure 1.10. Mortality among older DI recipients is three
to six times the average for their age group, and many die within a few years of qualifying for assistance.\(^{81}\) To qualify, applicants must be suffering from a severe, medically determinable physical or mental impairment based on clinical findings from acceptable medical sources. Essentially, the person must be unable to do any job.

The stereotypical image of someone with a disability remains a person in a wheelchair. USDA’s 2013 report, *Food Insecurity Among Households With Working-Age Adults With Disabilities*, reinforces the stereotype by picturing a man in a wheelchair on the cover.\(^{82}\) In reality, six in 10 people who receive SSI have a mental disability.\(^{83}\) DI and SSI dominate the policy debates about assistance to people with disabilities, although there are millions of other people living with mental and physical disabilities that aren’t severe enough to qualify for benefits under these programs. One place people with a mental disability often turn up is in the nation’s jails and prisons. There are more than three times as many mentally ill people in jails and prisons as there are in hospitals. In Nevada and Arizona, it is nearly 10 times as many.\(^{84}\)

Overall, about one-fifth of all families with a disabled worker are poor; without DI, nearly half would be.\(^{85}\) In 2015, the average monthly DI payment was $1,165.\(^{86}\) In 2015, the basic monthly benefit for SSI was $733 for an individual and $1,100 for a couple, or about three-fourths of the poverty level for a single person and slightly over 80 percent for a couple.\(^{87}\) Most SSI recipients have no other source of income. A Social Security Administration study in 2010 reported that the poverty rate of SSI recipients, with SSI income included, was 43 percent. Without SSI, the poverty rate would have been 65 percent.\(^{88}\)

Fewer people are joining the ranks of DI beneficiaries. In fact, the number of people enrolled is growing at the slowest rate in 25 years. The growth rate will continue to slow as baby boomers who receive DI get older and transition to Social Security retirement benefits. There is a common misperception that both DI and SSI are growing out of control. This is simply not true. Most applicants for DI are denied benefits, a fact often conveniently overlooked by people who claim that the program is growing out of control. The rate of growth in SSI has been stable since the mid-1990s. See Figure 1.11. The number of recipients continues to rise because the U.S. population continues to rise, but the rate of growth of the SSI population is slower than the rate of growth of the U.S. population as a whole.\(^{89}\)
DI benefits are financed primarily through the Social Security payroll tax, the same mechanism that finances the retirement program. And like retirement benefits, DI payments are based on how much an individual worker has paid in. The DI trust fund is presently projected to become insolvent in 2016. A simple solution would be to shift money temporarily from the retirement fund to the DI fund as needed to keep it solvent. This is what Congress did the last time that insolvency was imminent, in 1994. So far, the current Congress has rejected a similar fix. The optimal solution would be to shore up funding so that both the DI and retirement programs can pay out benefits in full indefinitely. If Congress fails to act on either option, DI benefits will be cut by 20 percent across the board starting in 2016, with dire consequences for people who are already food insecure or nearly so.

**Working-age Adults with Disabilities**

The best anti-poverty program is a good job—one that pays a living wage. This is no less true for people with disabilities as for people without disabilities. Unfortunately, people with disabilities are too often the last hired and first fired. In 2013, the labor force participation rate of working-age people with disabilities was 31.4 percent, compared with 76.2 percent for those without disabilities. This is not because people with disabilities prefer not to work; in surveys, they say that they would like to be employed, just the same as people without disabilities.

Government policy itself may be contributing to employers’ lowered expectations of what workers with disabilities can accomplish. According to the Fair Labor Standards Act, it is legal for some employers to pay workers with disabilities subminimum wages. Workers with disabilities earn on average just 63 cents for every dollar earned by their nondisabled peers, even when they have equal levels of education and postsecondary training.

For a 2014 report for the U.S. Senate Committee on Health, Education, Labor, and Pensions (HELP), committee staff interviewed more than 400 people with disabilities, letting them speak for themselves about the barriers they face to employment. A middle-aged man with autism said, “I have had more 15-minute interviews than I can count with people who were impressed with my credentials on paper but were crestfallen to find they belonged to me. Most recently, I failed in a group interview process even though the director personally recruited
Accessible transportation options are crucial to ensuring that people with disabilities are able to participate in the workforce.

me.” A woman with a psychiatric disability said, “It is impossible to disclose to a potential employer a need for a reasonable accommodation without revealing that one also lives with a mental health condition. Yet, to do so almost inevitably means we will not get the job.”

Many people with disabilities who want to work are deterred by the fact that they could lose their healthcare benefits. In most states, anyone who receives SSI benefits is automatically eligible for Medicaid. DI recipients can get Medicare benefits after a two-year waiting period. Medicare and Medicaid enable people with disabilities to receive health support services that would otherwise be unaffordable. Individuals receiving DI payments are permitted to earn up to $12,840 a year ($21,600 per year for those who are blind) without losing their eligibility for disability benefits or facing reductions in their monthly benefits. SSI benefits are far less generous: each dollar of earned income, from the first dollar on, reduces one’s SSI benefit by 50 cents. Children with disabilities are also eligible for SSI since a child’s disability often imposes additional costs on his or her caregiver. Personal care attendant services can cost as much as $60,000 a year.95 When health insurance won’t cover these costs, parents of disabled children have little choice but to sacrifice employment to provide the care their children need—but, of course, this can easily plunge the whole family into poverty.

In the 25 years since the ADA was passed, society has adapted in many ways to recognize the rights of people with disabilities. Government is responsible for holding employers accountable for respecting the rights of people with disabilities, and it has done an admirable job in many respects. But government also needs to ensure that its policies are not counterproductive. When people with disabilities want to work, be independent, and contribute to society and the economy, the system should not pit these goals against the need to keep the government medical benefits that are essential to their lives and health.

Out-of-pocket medical costs are a significant burden for people with disabilities, regardless of their health insurance coverage. They are nearly twice as likely as people without disabilities to have unpaid medical bills.96 In a 2014 survey by the National Disability Institute, 70 percent of respondents with disabilities reported that if they had an unexpected $2,000 expense, they would not be able to come up with the money.97 One major reason: people who receive SSI payments are not allowed to hold more than $2,000 in a savings, checking, or retirement account.98
Trapped in a safety net that limits their prospects of finding employment, often isolated in their homes, perhaps it is not surprising that people with disabilities have higher rates of major depression than people without.\textsuperscript{99} A woman interviewed for the congressional HELP committee report explained the situation she and others with disabilities are forced to accept: “You cannot try to elevate yourself. If you try then you risk losing services. You would have to start the application all over again. Mine took 6-7 years! I will never go through that again, ever.”\textsuperscript{100}

The Medicare Years

In 1960, one-third of all seniors lived in poverty,\textsuperscript{101} and two-thirds had no health insurance.\textsuperscript{102} Today, less than one-tenth live in poverty. Nearly all seniors qualify for Medicare, and 4.6 million low-income seniors are eligible for Medicaid as well.\textsuperscript{103} Social Security deserves the credit for much of this improvement. Although its retirement benefits are modest compared to public pension programs in other high-income countries,\textsuperscript{104} the senior poverty rate would be five times as high without them. That means that half of all seniors would be living in poverty today.\textsuperscript{105}

Today, social welfare policies that worked to reduce economic hardship among seniors for the past half-century are coming under increasing stress. Between 2001 and 2013, the threat of hunger among seniors increased by 45 percent, according to James Ziliak and Craig Gundersen.
Community Servings provides medically tailored, home-delivered meals to people with acute life-threatening illnesses. Medically tailored meals are at the very top level of food assistance. While less specialized efforts such as the national nutrition programs and emergency food assistance are determined to provide the most nutritious foods they can, the quality of medically tailored meals can be a matter of life and death. Community Servings and other organizations that provide meals tailored to their clients’ medical conditions could be considered a nexus between nutrition programs and health care.

Medically tailored meals are carefully constructed by dieticians and created by specially trained chefs, whose challenge is not only to meet the specific dietary guidelines required for each disease or condition, but also to make the meals tasty. This is vital since a common side effect of the medications that people with life-threatening illnesses are taking is loss of appetite. Chefs also do their best to take into account the unique characteristics of their clients/patients, such as cultural backgrounds, using comforting flavors to remind them of pleasant times spent with family and friends, when none of these may now be within reach.

Community Servings operates a state-of-the-art nutrition facility in Jamaica Plain, a neighborhood outside Boston, producing and delivering 9,600 lunches and dinners per week to individuals and families across 300 square miles in Massachusetts. Clients are enrolled through physician referral. More than 90 percent are living in poverty. All are critically ill, too weak to leave their homes or stand at the stove to cook. Without these meals, they could literally starve to death in their homes.106

Community Servings was founded in 1990 while the HIV/AIDS pandemic was raging in the United States. The first generation of antiretroviral drugs had recently arrived, but they were less effective than the ones available today, and they required strict compliance with complicated medication protocols. And, as it turned out, lack of proper nutrition and food insecurity posed a major barrier to metabolizing them. Community Servings was launched by AIDS activists, faith groups, and community organizations to deliver dinners to patients who were too weak to shop or cook for themselves. Other organizations soon formed to do the same. All got a boost when the Ryan White CARE Act was passed in 1990 since it set aside funds for home delivery of medically tailored meals.

Now, more than 25 years after it started, Community Servings has expanded its operations to provide 25 different meal regimens based on clients’ medical conditions. The largest share of meals still goes to people with HIV/AIDS, followed by meals for people with cancer, renal failure, diabetes, cardio and lung diseases, and multiple sclerosis.

Studies show that patients receiving medically tailored meals adhere more closely to their medication regimens, miss fewer medical appointments, and are readmitted to the hospital at lower rates.
“In the continuing debate about how to control soaring healthcare costs, poor nutrition and lack of access to healthy food are routinely ignored,” write David Waters, CEO of Community Servings, and Robert Greenwald, director of the Center for Health Law and Policy Innovation at Harvard Law School. Public and private insurers spend millions of dollars on health care for critically ill patients, but if the patients do not have the right food, there is much less chance of a lasting recovery.

Today the demand for medically tailored meals far outstrips the supply of service providers. Community Servings is one of fewer than a dozen nonprofit organizations across the country that are able to deliver complex, medically tailored meals to critically ill patients. Nursing homes and hospitals can and do provide such meals, but organizations like Community Servings can produce and deliver them at a fraction of the cost. Yet nursing homes, hospital stays, and prescriptions are covered by insurance, while medically tailored meals are not.

As part of healthcare reform, state Medicaid programs could seek permission to experiment with medically tailored meals. As noted above, the vast majority of Community Servings’ clients are income-eligible for Medicaid. The cost savings alone should be enough to grab policymakers’ attention. Researchers found that the monthly healthcare spending on patients who were receiving medically tailored meals was 37 percent lower than the expenditures for those with comparable conditions who were not receiving these kinds of meals. Studies also show that patients receiving medically tailored meals adhere more closely to their medication regimens, miss fewer medical appointments, and are readmitted to the hospital at lower rates. Ninety-six percent of the healthcare workers surveyed by Community Servings reported that the home-delivered meals improved patients’ health.
in the most recent edition of the annual report *The State of Senior Hunger in America*. See Figure 1.12. The report relies on the 18-item food security survey administered by the Census Bureau, and its findings are consistent with USDA’s annual report, *Household Food Security in the United States*. But Ziliak and Gundersen include a category—“marginal food insecurity”—that USDA does not. Although they do not appear in USDA’s data on the prevalence of food insecurity, marginally food insecure people have more in common with food insecure people, both in terms of socio-demographic characteristics and food purchasing patterns, than they do with those who are food secure. When marginal food insecurity is included in the analysis, the percentage of seniors threatened by hunger jumps from 8.7 to 15.5 percent.

Economic security in old age used to be described in terms of a three-legged stool: an employee pension, personal savings, and Social Security. The savings and pensions legs are wobblier than ever. For the most part, employee pensions have been replaced by 401(k)/IRA accounts. But the typical household with 401(k)/IRA holdings is projected to receive post-retirement monthly payments of less than $500 from these sources. Nearly one in five adults ages 55-64 has no retirement savings, according to a 2013 Federal Reserve survey. That leaves Social Security. For 20 percent of retired men and 30 percent of retired women, Social Security provides at least 90 percent of their total income. The average Social Security benefit for men 65 and older is about $17,600 per year, and for women only $13,500. These seniors are over the poverty line, if not by much, but another complication is that as people get older, healthcare costs consume a greater share of their incomes. See Figure 1.13.
Thus, not surprisingly, the risk of food insecurity among older adults increases as medical expenses increase.\textsuperscript{116} Out-of-pocket costs rise with age for everyone, but at a faster rate for women because they live longer than men. From 2000 to 2010, average out-of-pocket costs increased 44 percent for Medicare beneficiaries.\textsuperscript{117} In a national survey of cancer patients, one in four reported using up all their savings to pay for treatment, and one in 10 said they had to cut back on food and other basic necessities.\textsuperscript{118} This is a senior issue because most cancer patients are over the age of 65. Like heat or eat, “treat or eat” is an expression that speaks for itself. Cutting back on food to pay for medical treatment is clearly at odds with successful treatment of disease.

Hunger and malnutrition are debilitating conditions at any age, but in older adults, 92 percent of whom have at least one chronic disease,\textsuperscript{119} hunger is potentially deadly.

SNAP participation rates among seniors are low: three out of five who qualify do not apply for SNAP.\textsuperscript{120} One of several reasons is misinformation about the amount of the benefit they would receive. Program rules allow seniors to deduct monthly medical expenses over $35 from their gross income. For seniors with high medical expenses, this can significantly increase their monthly SNAP allotment. Fifty-five percent of SNAP participants who are seniors qualify for the medical deduction, yet only 14 percent use it.\textsuperscript{121}

Nutrition programs, particularly SNAP, look like a bargain compared to the cost of a hospital stay. Among seniors eligible for both Medicare and Medicaid, an estimated 25 percent of hospitalizations are potentially preventable.\textsuperscript{122} People 65 years and older are hospitalized at much higher rates than younger adults or children.\textsuperscript{123} One in three seniors admitted to a hospital in the United States is malnourished.\textsuperscript{124} Malnourished patients have longer hospital stays and respond less well to treatment, their risk of developing surgical-site infections is three times as high as those who are not malnourished, and 45 percent of the patients who fall while in the hospital are malnourished.\textsuperscript{125} When a child or younger adult falls, the result may be nothing more than a bruise. But when seniors fall, they may break bones, and a fall may even prove fatal. The costs associated with falls during hospital stays amount to nearly $7 billion a year,\textsuperscript{126} and under the ACA, hospitals can no longer bill Medicare and Medicaid for the costs of treating conditions that were acquired in the hospital.\textsuperscript{127} Hospitals should make sure at discharge that patients are aware of available nutrition services and have access to healthy food. They have a financial as well as a moral incentive to do so. Under the ACA, hospitals with high rates of Medicare readmissions are penalized—they receive lower reimbursements. Nearly 20 percent of Medicare patients discharged from a hospital are readmitted within one month.\textsuperscript{128}
Old Age and Disability

Senior participation in SNAP may also be low because of mobility constraints. Unfortunately, the research literature has not addressed the subject—but it is not hard to imagine an older person living alone with no transportation to the grocery store. We saw earlier how disability rates climb with age. A 2011 study by the Government Accountability Office (GAO) on the unmet needs of seniors “found that people who were age 80 or older, female, or living below the poverty threshold were more likely to need services than people without these characteristics.” And approximately 62 percent of local agencies surveyed by GAO reported transportation to be among the most requested of all support services.

In 2011, the first wave of “baby boomers” reached retirement age. From now until 2030, an estimated 10,000 people in the United States will turn 65 every day. The number of older people with a disability is expected to double during this period. A large share of these seniors will become “dual eligibles” in Medicare and Medicaid. Seniors currently make up 9 percent of Medicaid beneficiaries, but they account for 21 percent of program costs. Close to 7 million seniors need long-term care, services, and supports. Unpaid family members shoulder most of this responsibility. Based on 2011 and 2012 data, a team of economists at the RAND Corporation estimated at $522 billion the wages lost because workers were instead doing unpaid elder care during those hours.

Medicare does not cover the long-term care of seniors. “Middle-class families just aren’t prepared for these costs,” says Joe Caldwell, director of long-term services at the National Council on Aging. See Figure 1.14. Thirty-five percent of people over 65 will have a stay in a nursing home at some point. Seniors who are not poor at the time they enter a nursing home normally have to liquidate their assets and pay for their care until they run out of money altogether. At that point, they will qualify for Medicaid, which picks up the cost of their long-term care. Long-term nursing home care is largely paid for by state Medicaid programs. Nearly 30 percent of Medicaid’s combined federal and state spending—$123 billion in FY2013—goes toward long-term care for seniors and people with disabilities.

States that increase the resources they devote to home-delivered meals can potentially reduce their spending on residents of nursing homes with low-care needs, or people whose needs could be met in the community instead of a nursing home if services were provided. Anywhere from 5 percent to 30 percent of the patients in nursing homes are low-care residents. Under
the Older Americans Act (OAA), seniors are provided with nutritious home-delivered meals. In 2009, only 3 percent of adults 65 and older received home-delivered meals.\textsuperscript{139} Kali Thomas and Vincent Mor estimated that a 1 percent increase in the number of adults receiving home-delivered meals through the OAA would have saved state Medicaid programs $109 million.\textsuperscript{140}

Kali Thomas saw the benefits of home-delivered meals in her own family. Her 98-year-old grandmother wanted to continue to live at home rather than spending her remaining time in a nursing home, but the closest family members were four hours away. The daily meals Thomas’s grandmother received from Meals on Wheels America (MOWA) made it possible for her to maintain some independence until the end of her life.\textsuperscript{141}

Between winter 2013 and spring 2013, MOWA conducted a randomized control trial of home-delivered meal programs at eight locations around the country. An analysis published in 2015 showed that home-delivered meals, more specifically meals that were delivered daily, led to improvements in clients’ physical and mental health and decreased their anxieties about whether they would be able to remain in their homes.\textsuperscript{142} The study, which had hundreds of participants, was designed to compare three groups: one receiving meals delivered daily, one receiving packages of frozen meals delivered weekly, and the control group, who were eligible to participate but were on the waiting list. MOWA gives priority to seniors with the greatest economic and social needs in all its programs.

Participants were interviewed at the beginning and end of the 15-week trial. All of those who received meals fared better than people in the control group, but the group whose meals were delivered daily reported the best results. The analysis found statistically significant reductions in feelings of anxiety, loneliness, and depression. Perhaps not surprisingly, people living alone reported the greatest gains. Not considered statistically significant, but still improvements, were participants’ reports of fewer falls and lower rates of hospitalization.\textsuperscript{143}

The value of home-delivered meal programs goes beyond their impact on hunger and malnutrition. The social contact with the volunteers who deliver the meals is a critical part of supporting the health and well-being of seniors who live alone. In situations where there is a caregiver present, frequently a spouse who may also be in poor health, the home-delivered meals and social contact with volunteers also benefit the caregiver. Caregivers’ stress is not only a risk factor for their own morbidity and mortality\textsuperscript{144} but also increases the likelihood that a patient will enter a nursing home.

To bend the cost curve on long-term care, spending has to shift from institutional to community-based care. Evidence from MOWA shows that home-delivered meals help seniors maintain the independence they desire while reducing costs to the government on long-term care. The ACA provides incentives to states to support community-based services to allow beneficiaries to remain in their home for as long as possible.\textsuperscript{145} And a study by the American Association of Retired Persons (AARP) shows that more than three-quarters of Americans over 65 say that this is what they want. The percentages are highest among those who are lower down on the income scale.\textsuperscript{146} For seniors whose health is rapidly deteriorating, staying in their home may seem like an act of defiance against the erosion of their independence. The home may also be their link to emotional attachments to family and community and, as such, excruciating to give up.
HUNGER AND FOOD INSECURITY DRIVE UP HEALTHCARE COSTS

by Todd Post, Bread for the World Institute

The research cited in this chapter leaves little room for doubt. Hunger and food insecurity are harmful to people of all ages, making them vulnerable to a variety of illnesses and medical conditions.

Hunger and food insecurity also cost the United States as a nation much more than we may realize. When policymakers cut SNAP benefits, citing the need to reduce the federal budget deficit, these “savings” evaporate as soon as the first time a former SNAP recipient with diabetes ends up in the hospital after running out of the food needed to manage her condition. Or each time a child with a respiratory ailment ends up in the hospital because his parents were forced to choose between filling the empty refrigerator and heating the apartment.

Hunger and food insecurity also cost us dearly in other ways: educational outcomes, labor productivity, crime rates, Gross Domestic Product, and much more. The overall costs of hunger and food insecurity to society may well be incalculable. But our report argues that hunger and food insecurity are a health issue, and it is possible to produce a reliable, albeit conservative, estimate of the health-related costs in particular. For the 2016 Hunger Report, we sought to update earlier calculations using recent data.

In 2014, the estimated health-related costs of hunger and food insecurity in the United States were a staggering $160.07 billion. John T. Cook of Boston Medical Center and Ana Paula Poblacion of Universidad Federal De São Paulo analyzed the costs specifically for the Hunger Report. Their full-length study, Estimating the Health-Related Costs of Food Insecurity and Hunger, is in Appendix 2, starting on page 183.

Cook and Poblacion have updated and built upon a 2011 study by a team of researchers from Brandeis University—itself an update of a 2007 study examining the costs of hunger and food insecurity. Cook and Poblacion have adjusted for the rise in healthcare costs since the Brandeis study was released. In addition, their study covers new ground, as they explain: "The pace, extent, and range of technical methods used in food security research has changed significantly over the past 5-10 years, as has the depth and nature of empirical evidence arising from that research."

Bread for the World Institute’s interest in revisiting the Brandeis estimates is motivated by other exigencies than the need for fresh data. Prior to 2008, according to federal government data, the largest number of food insecure people in any single year was 38 million. But every year since 2008, the number of food-insecure people in the country has hovered between 48 and 50 million.1 There were 49 million in 2012, 49 million in 2013, and 48 million in 2014.

Policymakers and the American public seem to share an alarming...
complacency about this leap—10 or 12 million extra food-insecure people over the previous worst-case scenario. When the Brandeis study was published in 2011, the Great Recession that had caused the soaring food insecurity numbers had only recently ended. We assumed the numbers would fall as the economy improved. But five years into the recovery, we are still waiting for the improvement in food security we had expected by now.

U.S. policymakers and the public should understand the devastating toll of hunger and food insecurity on people’s health, and they also need to know the economic costs. Individual stories of how hunger ravages bodies and souls are sometimes reported in the media, with little apparent effect on the status quo. Policymakers and the public are less likely to hear about the economic costs. We are hopeful that solid research to back up the estimate reported here, $160.7 billion of health-related costs in one year alone, will draw attention. Bread for the World and our advocacy partners will use every opportunity to make this information part of the public conversation about hunger, health care, and the federal budget.

Keep in mind that $160.7 billion is a very conservative estimate. Cook and Poblacion based the number on a survey of empirical research published in peer-reviewed academic journals between 2005 and 2015. Their findings are based on only the health conditions covered in this body of research. The number leaves out a number of costs that seem like safe bets to be associated with hunger and food insecurity because there is scarcely any empirical research that would help quantify them. One example: the effect of hunger and food insecurity on the costs of medication nonadherence, which is so commonly seen in and out of health care that it has its own catchphrase, “treat or eat.”

Even without an empirically-based estimate of these unaccounted-for costs, the wide scope of the kinds of costs not included leads us to believe that they add up to a staggering additional amount. The large gaps in the research literature indicate how much more work needs to be done.

At a conservative $160.7 billion in 2014—or nearly a trillion dollars since 2008—hunger and food insecurity are clearly driving up healthcare costs in a significant way. To the average worker, rising healthcare costs mean lower wages as employers struggle to cover the costs of providing insurance. And to elected leaders at any level of government, reining in the growth of healthcare costs is the biggest fiscal challenge they face. By 2040, health care is expected to consume 25 percent of the U.S. Gross Domestic Product, up from the current 17 percent. Compared to other options to help control this growth, ensuring that every person in the country has enough food to be healthy should be relatively simple.

Todd Post is editor of Bread for the World Institute’s 2016 Hunger Report.

Table 1.1 Estimated Costs Attributable to Food Insecurity and Hunger in the United States, 2014

<table>
<thead>
<tr>
<th>Source of Cost</th>
<th>Costs ($Billion 2014 Dollars)</th>
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<tr>
<td>Direct health-related costs in 2014 based on new research evidence</td>
<td>$29.68</td>
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<tr>
<td>Non-overlapping direct health-related costs reported by Brandeis researchers in 2011, continued in 2014 and expressed in 2014 dollars</td>
<td>$124.92</td>
</tr>
<tr>
<td>Indirect costs of lost work time due to workers’ illnesses or workers providing care for sick family members based on new research evidence</td>
<td>$5.48</td>
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<tr>
<td>Total direct and indirect 2014 health-related costs</td>
<td>$160.07</td>
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<tr>
<td>Indirect costs of special education in public primary and secondary schools, based on new research evidence</td>
<td>$5.91</td>
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<tr>
<td>Total costs of dropouts reported by Brandeis researchers in 2011, continued in 2014 and expressed in 2014 dollars</td>
<td>$12.94</td>
</tr>
<tr>
<td>TOTAL ESTIMATED COSTS</td>
<td>$178.93</td>
</tr>
</tbody>
</table>

Source: John T. Cook and Anna Paula Poblacion (November 2015), *Estimating the Health-Related Costs of Food Insecurity and Hunger.*