hunger
THE GATEWAY TO OTHER ILLS

presented by:
The University of Pittsburgh
Institute of Politics
Greater Pittsburgh
Community Food Bank
The Pittsburgh Foundation
UNIVERSITY OF PITTSBURGH
INSTITUTE OF POLITICS

GREATER PITTSBURGH COMMUNITY FOOD BANK

THE PITTSBURGH FOUNDATION

welcome you to the

hunger

The Gateway to Other Ills

Thursday, November 9, 2017
8:00 am to 12:00 pm

The Rivertowne Brewing
Hall of Fame Club
PNC Park
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Program Agenda

University of Pittsburgh
Institute of Politics,
Greater Pittsburgh Community Food Bank, and
The Pittsburgh Foundation
Present

Hunger – the Gateway to Other Ills
Thursday, November 9, 2017

8:00 – 8:30 am
Registration and Continental Breakfast

8:30 – 8:40
Welcome by Frank Coonelly, President, Pittsburgh Pirates

8:40 – 8:50
Overview and Introductions by Terry Miller, Director, University of Pittsburgh Institute of Politics and Elsie Hillman Civic Forum

8:50 – 9:20
Food Insecurity in America: By the Numbers by Craig Gundersen, Soybean Industry Endowed Professor of Agricultural Strategy, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, and Member, Technical Advisory Group, Feeding America

9:20 – 9:50
Closing the Gap: Food Security in Pennsylvania by Teresa Miller, Secretary, Pennsylvania Department of Human Services

9:50 – 10:20
Open Discussion moderated by Maxwell King, President and CEO, The Pittsburgh Foundation

10:20 – 10:30
Break

10:30 – 11:30
Local Impacts of Food Insecurity: Health, Education, and Workforce Development
- A.J. Harper, President and CEO, Healthcare Council of Western PA
- Laura Karet, CEO, Giant Eagle
- Catherine Lobaugh, Assistant Executive Director, Early Childhood, Family and Community Services Division, Allegheny Intermediate Unit
- Rebecca Lucore, Director of Sustainability and Corporate Social Responsibility, Covestro
- Terry Miller

11:30 – 11:50
Open Discussion

11:50 – 12:00 pm
Closing Remarks by Lisa Scales, CEO, Greater Pittsburgh Community Food Bank
Speaker Bios

Frank Coonelly
Frank Coonelly is responsible for the day-to-day operations of the organization. Frank leads the Pirates' senior management team and is accountable for the organization's success on and off the field.

Prior to joining the Pirates on September 13, 2007, Frank served as Senior Vice President and General Counsel of Labor in the Commissioner's Office where he negotiated and administered collective bargaining agreements with the Major League Baseball Players Association and the World Umpires Association. Frank led a staff of attorneys who represented the Commissioner and the 30 Clubs in the litigation and arbitration of labor matters and provided contract and economic advice to the 30 Clubs.

Prior to joining the Commissioner's Office in 1998, Coonelly practiced labor and employment law as a Partner in the Washington, D.C. office of Morgan, Lewis & Bockius. A large part of Frank's practice at Morgan Lewis consisted of the representation of Major League Baseball as outside labor counsel. In that role, Frank assisted the Commissioner in collective bargaining and other litigation matters. He also represented several individual Clubs in salary arbitration matters.

Craig Gundersen
Craig Gundersen is the Soybean Industry Endowed Professor in Agricultural Strategy in the Department of Agricultural and Consumer Economics at the University of Illinois, is on the Technical Advisory Group for Feeding America, is the lead researcher on Feeding America’s Map the Meal Gap project, and is the Managing Editor for *Applied Economic Perspectives and Policy*. He is also a Round Table Member of the Farm Foundation, a Non-Resident Senior Fellow at the Chicago Council on Global Affairs, and a Faculty Affiliate of the Wilson Sheehan Lab for Economic Opportunities (LEO) at the University of Notre Dame. His research concentrates on the causes and consequences of food insecurity and on the evaluation of food assistance programs, with an emphasis on SNAP.

A. J. Harper

During his 25-year career in Cleveland, Ohio, Mr. Harper worked in the community and tertiary setting. His operations experience includes serving as administrative director of Medical Operations at the Cleveland Clinic Foundation; vice president, Care Management at Marymount Hospital; a member of the Cleveland Clinic Health System; and, administrator for the Lake/University Ireland Cancer Center, a freestanding comprehensive cancer center.

Mr. Harper gained association experience while serving as vice president, Professional Services at the Greater Cleveland Hospital Association.

Mr. Harper earned a bachelor’s of science in Health Information Management, School of Allied Health, College of Medicine at The Ohio State University, and a master’s in Business Administration from Baldwin-Wallace College in Berea, Ohio.
Laura Karet
Laura Karet leads and oversees Giant Eagle, Inc., one of the nation’s largest multi-format food, fuel and pharmacy retailers with approximately 34,000 Team Members and approximately $9.5 billion in annual sales. Karet was appointed Chief Executive Officer on January 9, 2012.

Giant Eagle is on Forbes magazine’s largest private corporations list. Founded in 1931, Giant Eagle has grown to be the number one supermarket retailer in the region with more than 420 corporate and independently-owned and operated supermarkets and fuel and convenience stores throughout western Pennsylvania, Ohio, north central West Virginia, western Maryland and Indiana.

Prior to leading the company’s day-to-day operations, Karet served as Chief Strategy Officer and Senior Executive Vice President. In that role, Karet developed and managed Giant Eagle’s short and long-term strategic business plans, set the direction for the Company’s corporate priorities and was also directly responsible for the manufacturing ventures, including its fresh food production facilities.

Karet joined Giant Eagle in 2000 as Vice President of Marketing, and was later promoted to Sr. Vice President of Marketing and President of New Formats. During that time, Karet led the development, branding and implementation efforts behind the launch of the new innovative Market District format in 2006, which has grown to 13 locations, including five in the Pittsburgh area, seven in Ohio, and one in Greater Indianapolis.

For her numerous leadership roles in food retailing, marketing and manufacturing, Laura received the 2011 Ernst & Young Entrepreneur Of The Year Western Pennsylvania and West Virginia Award. She was also recognized as one of Progressive Grocer magazine’s 2010 Top Women in Grocery. Prior to joining Giant Eagle, Karet held marketing executive positions at Sara Lee from 1997 to 2000, including Director of Branded Marketing for the bakery division. Karet also served in several brand management roles at Procter and Gamble from 1990 to 1997 for household name products such as Crisco shortening, Folgers coffee, Giorgio Beverly Hills fragrances and Secret antiperspirant.

Karet is currently an active member on the board of directors for various organizations, some of which include: The Allegheny Conference on Community Development; United Way of Allegheny County; Allegheny County Parks Foundation; and, Holy Family Foundation.

A native of Pittsburgh, Karet graduated from Amherst College with a Bachelor’s degree in English, and now resides in the Pittsburgh area with her husband and three children.

Maxwell King
Maxwell King’s four-decade career includes the presidencies of two of the country’s largest philanthropies and the editorship of one of its most influential daily newspapers.

King joined The Pittsburgh Foundation, with assets of more than $1 billion, in 2014 as president and CEO.

His strong advocacy for including vulnerable groups – at least 30 percent of the region’s population – in the benefit streams of a resurgent Pittsburgh anchors a signature organizing principle, 100 Percent
Pittsburgh. In addition, King is expanding the Foundation’s investment in its Center for Philanthropy, which combines the charitable passions of donors with expert program staff and grantees to improve lives in the Pittsburgh region.

Before that, King served for two years as director of the Fred Rogers Center for Early Learning and Children’s Media at Saint Vincent College in Latrobe, Westmoreland County.

As president of the Pittsburgh-based Heinz Endowments from 1999 to 2008, he led the disbursement of about $500 million in grants to projects, organizations and initiatives primarily in western Pennsylvania.

From 1990 to 1998, King was editor of the Philadelphia Inquirer. During that period, the Inquirer was recognized by Time magazine as one of the five best newspapers in America.

King has served on boards and committees for many national and regional organizations, including the national Council on Foundations which he led as the first chair of its Ethics and Practices Committee and then as chair of the full board from 2006 to 2008.

Catherine Lobaugh

Dr. Catherine Lobaugh is the AIU’s Assistant Executive Director for Early Childhood, Family and Community Services. She is a member of the AIU’s Executive Leadership Team and is responsible for the implementation of high-quality, cost-effective, and meaningful early childhood and community programs that serve learners in Allegheny County. Dr. Lobaugh oversees a division that includes AIU’s Head Start, Early Head Start, Pre-K Counts, Alternative Education, Adult Education and Workforce Development, and Family and Community Education Programs.

Dr. Lobaugh holds a doctorate in administrative and policy studies, as well as a master’s degree in education from the University of Pittsburgh. She earned her bachelor’s degree from Clarion State University. She began her career in education as an elementary classroom teacher and also served as an elementary school principal. She served as the Coordinator of Early Childhood Education and later the Director of Early Childhood Education and Elementary Curriculum at the McKeesport Area School District.

A dedicated educator, Dr. Lobaugh was named one of the Mon River Fleet 2012 Women of Achievement and was recognized for her efforts with an Educational Leader Award. In addition to her duties in public and community education, Dr. Lobaugh also serves as an adjunct professor at California University of Pennsylvania, and is an instructor at the University of Pittsburgh. She was appointed to the Pennsylvania Early Learning Council in 2010.

Rebecca Lucore

Rebecca L. Lucore is Head of Sustainability and CSR for Covestro LLC’s America’s region, responsible for innovating new approaches to social programs, philanthropy and donations, community relations and partnerships and sustainability initiatives in North and South America.

Lucore oversees i3 (ignite, imagine, innovate) Covestro’s companywide CSR program that aims to spark curiosity, to envision what could be and to help create it. Its three focus areas, i3 STEM, i3 Engage and i3 Give, leverage the company’s current and future workforce, the communities in which it operates, and its partners and collaborators – all to create sustainable and lasting impacts.
Lucore is a leading voice in Corporate America for the transformation of traditional corporate volunteerism to next gen Skills-Based Volunteerism (SBV) in which teams of employees working on short-term consulting projects with nonprofit organizations to help them address organizational issues and build capacity. In 2015, she was instrumental in the establishment of the Covestro Employee Engagement Institute at Robert Morris University in Pittsburgh which trains employees in SBV and how to share their expertise and knowledge to assist nonprofit organizations in meeting needs ranging from IT, accounting, marketing, systems and communications, among others.

Prior to this, Lucore worked for 20 years in various capacities in corporate citizenship, philanthropy, environment/sustainability and STEM education and diversity. From 2012 to 2015 she served as Chief of Staff at Bayer MaterialScience (BMS) LLC where she was responsible for leading and streamlining organizational initiatives, including talent management; donations; and community, executive and employee engagement.

Before that, for more than a decade, Lucore served as Executive Director of the Bayer USA Foundation and Head of U.S. CSR for Bayer Corporation. In these dual roles, she was responsible for directing all CSR initiatives including the company’s STEM education partnerships with the United Nations Environment Programme, the National Governor’s Association and the National Science Teachers Association, among others, and was a lead architect of Bayer’s flagship CSR program, Making Science Make Sense. Led by national spokesperson, Dr. Mae Jemison, the first woman of color to orbit the Earth, Making Science Sense was one of the first corporate initiatives to advocate for science literacy and science education reform.

As part of this work, Lucore helped introduce and then drive the national conversation about the issue of gender and racial equity in the nation’s STEM fields through annual research and periodic summits and reports on the issue. In recognition, Bayer was awarded two Presidential Awards – President’s Service Award (President William J. Clinton) and the Ron Brown Award (President George W. Bush) – as well as the National Science Board’s highest honor – the National Public Service Award.

A leader in the Pittsburgh community, she was instrumental in Pittsburgh being named World Environment Day North American Host City in 2010 and host of One Young World in 2012. She is currently on the Board of Directors of Sustainable Pittsburgh, the Three Rivers Workforce Investment Board and is Advisory Board President for the Bayer Center for Nonprofit Management at Robert Morris University where she also co-chairs the Center’s 74% Project which examines women and leadership in the nonprofit sector.

Ms. Lucore has spoken widely at national CSR conferences including the Social Innovation Forum, CGI America, National Governor’s Association, U.S. Chamber of Commerce and Conference Board and is a regular contributor to the Huffington Post on CSR and employee engagement issues.

She resides in Pittsburgh with her husband and three boys.

Teresa Miller

Teresa D. Miller assumed duties as acting secretary of the Pennsylvania Department of Human Services on August 21, 2017. Previously, Miller served as Pennsylvania’s insurance commissioner since January 2015, where she worked on a range of issues, including the administration’s top priorities – fighting the heroin and opioid epidemic and helping seniors.
Under her leadership, Miller made it clear that one of her top priorities at the Insurance Department was enforcing mental health parity laws, ensuring consumers have access to the mental health and substance use disorder treatments they need.

Teresa has been a leader in the Wolf Administration’s efforts to protect seniors. Her work to ensure seniors in Western Pennsylvania were protected and would not lose access to their doctors helped prevent disruption in care for 180,000 by ensuring UPMC providers continued participation in Highmark’s Medicare networks through the end of the consent decrees, which expire in 2019.

In 2017, Teresa was named chair of the National Association of Insurance Commissioners (NAIC) Senior Issues Task Force. Also at the NAIC, Teresa has been a leader in taking on the current challenges of the long term care insurance markets. At her request, the NAIC created the Long Term Care Innovation Subgroup, which she chaired, to work to increase long-term care funding options for consumers, including increasing the number of affordable asset protection options available.

Prior to coming to Pennsylvania, Miller served as acting director of the State Exchanges Group, the Oversight Group, and the Insurance Programs Group in the federal government’s Centers for Medicare and Medicaid Services.

Before going to Washington, Miller worked in Oregon where she fought for state adoption of mental health parity legislation, representing drug and alcohol treatment providers, social workers, the Arc of Oregon and other advocates for people with disabilities. Then, as the insurance regulator in Oregon, she worked to ensure consumers received the benefits of that law.

Miller received her J.D. from Willamette University College of Law, and her B.A., magna cum laude, from Pacific Lutheran University.

**Terry Miller**

In September 2005, Chancellor Emeritus Mark A. Nordenberg named Terry Miller director of the University of Pittsburgh Institute of Politics.

The Institute delivers timely information about the great issues affecting our region to elected officials and community leaders, and provides a neutral forum where that knowledge and associated diverse viewpoints are debated and consensus built to improve the quality of lives of the citizens of our home region.

In 2014, Miller received a special honor to also serve as director of the Institute’s newly established Elsie H. Hillman Civic Forum. Supported by a generous endowment from Mr. Henry Hillman, the Elsie Forum brings community leaders and young people together for educational programs, research projects, and mentoring opportunities designed to foster student interest and involvement in fueling civic progress in the Pittsburgh region.

Miller also has served as a consultant on special initiatives to The Pittsburgh Foundation, Allegheny County Department of Human Services, the Power of 32 Regional Visioning Initiative, and has served as an adjunct faculty member at the University of Pittsburgh School of Social Work and Graduate School of Public and International Affairs.
Miller serves on a number of boards and advisory councils including: Advisory Board of BehAlvior, a technology start-up that is developing predictive-modeling artificial intelligence designed to prevent relapse in individuals living with Opioid Use Disorder by forecasting stress and craving responses; Greater Pittsburgh Chapter, Albert Schweitzer Fellowship Program; The Grace Ann Geibel Institute of Justice and Social Responsibility, the Hazelwood Center of Life Community Empowerment Organization, POWER, and Allegheny County Health Department Community Health Improvement Plan Advisory Committee. Miller also is a member of the United Way of Allegheny County Women’s Leadership Council.

Prior to her tenure at the Institute of Politics, Miller was founder and first executive director of POWER, the Pennsylvania Organization for Women in Early Recovery, a non-profit organization she established in Allegheny County to provide gender- and culturally-specific treatment & support services to women who are changing their lives through recovery from addiction to alcohol and other drugs. In 1995 Miller won the J. C. Penney Golden Rule Award for her work to create POWER, and in 1998 she received a letter of commendation from President Bill Clinton for her work to establish POWER.

Miller also has been the recipient of a number of other awards, including the League of Women Voter’s Good Government Award in 2001 for her work on a three-year national welfare-to-work research project with The Pittsburgh Foundation, and again in 2003 for her work at the Institute of Politics. In 2004 she received the Racial Justice Award from the Urban League of Greater Pittsburgh for her overall work with at-risk and vulnerable populations, was a 2004 “Strong, Smart, Successful Woman” Honoree of the University of Pittsburgh Alumnae Council, the 2012 recipient of the POWER Window of Hope Award, and is a 2017 recipient of the Moe Coleman Award for Excellence in Community Service. Miller has presented at national and local conferences on issues of race, gender and public policy, community organizing, addictions counseling, and gender-specific substance use disorder treatment.

Lisa Scales

Lisa Scales, who earned a Juris Doctor (J.D.) degree from Boston University School of Law and Bachelor of Arts degree in Social Sciences from Seton Hill University, began her career as assistant corporation counsel for the City of Chicago and worked as an associate in a Greensburg law firm before joining Just Harvest and then Greater Pittsburgh Community Food Bank. Throughout her career, Ms. Scales has held many positions on boards and committees for organizations such as the Community Food Security Coalition, Hunger-Free Pennsylvania, Bayer Center for Nonprofit Management at Robert Morris University and the Joint State Government Commission Obesity Study Advisory Committee. In her current role as president and CEO at the Food Bank, Ms. Scales leads the organization in distributing more than 31 million meals annually throughout 11 counties of southwestern Pennsylvania.
For Further Reading


Greater Pittsburgh Community Food Bank, “Child Hunger Hurts Pennsylvania.”

Greater Pittsburgh Community Food Bank, “Hunger Costs Pennsylvanians.”
Food Insecurity and Health Outcomes

By Craig Gundersen and James P. Ziliak

ABSTRACT Almost fifty million people are food insecure in the United States, which makes food insecurity one of the nation’s leading health and nutrition issues. We examine recent research evidence of the health consequences of food insecurity for children, nonsenior adults, and seniors in the United States. For context, we first provide an overview of how food insecurity is measured in the country, followed by a presentation of recent trends in the prevalence of food insecurity. Then we present a survey of selected recent research that examined the association between food insecurity and health outcomes. We show that the literature has consistently found food insecurity to be negatively associated with health. For example, after confounding risk factors were controlled for, studies found that food-insecure children are at least twice as likely to report being in fair or poor health and at least 1.4 times more likely to have asthma, compared to food-secure children; and food-insecure seniors have limitations in activities of daily living comparable to those of food-secure seniors fourteen years older. The Supplemental Nutrition Assistance Program (SNAP) substantially reduces the prevalence of food insecurity and thus is critical to reducing negative health outcomes.

Food insecurity, a condition in which households lack access to adequate food because of limited money or other resources, is a leading health and nutrition issue in the United States. In 2013 almost fifty million Americans (14.3 percent) were food insecure.1 About one-third of these were at a more serious level known as “very low food security.” The fact that so many people are food insecure is important in and of itself, but potentially more concerning are the possible negative health consequences of food insecurity. In this article we focus on recent research that examined the association of food insecurity and health.

We begin with an overview of how food insecurity is measured in the United States, followed by a presentation of recent trends in the prevalence of food insecurity. We then provide a selected review of the literature that has examined the impacts of food insecurity on health outcomes for children, nonsenior adults, and seniors.

Research on food insecurity and health emanates from a broad cross-section of disciplines in both the social and health sciences, and space limitations prohibit a meta-analysis. We therefore concentrate on papers that reflect the most recent work in this area, especially in the fields of economics, internal medicine, nutrition, public health, and social work. Within these areas, we emphasize research that reflects the central findings of the literature and that, in many cases, uses state-of-the-art methods.

Although the literature has grown considerably in the past few years, there are still some important gaps in our knowledge base. We there-
fore suggest future research directions. We conclude with policy recommendations for alleviating food insecurity, with a particular emphasis on the current and potential roles of the federally funded Supplemental Nutrition Assistance Program (SNAP, formerly known as the Food Stamp Program) in reducing food insecurity and with recommendations for health care professionals.

**Defining Food Insecurity**

The Department of Agriculture (USDA) measures food insecurity through responses to a series of eighteen survey questions and statements fielded to roughly 45,000 households in the Food Security Supplement of the Census Bureau’s Current Population Survey (CPS-FSS). The first item addresses worries about food running out, while the remaining items address possible reductions in food intakes because of financial constraints. Eight of the items are focused on children and thus are not used with households that contain no children under age eighteen. The items include: “I worried whether our food would run out before we got money to buy more” (the least severe), “Did you or the other adults in your household ever cut the size of your meals or skip meals because there wasn’t enough money for food?,” “Did you ever cut the size of any of the children’s meals because there wasn’t enough money for food?,” and “Did any of the children ever not eat for a whole day because there wasn’t enough money for food?” (the most severe for households with children).

Based on the responses to the survey, the USDA divides households into the following categories: high food secure (all household members had access at all times to enough food for an active, healthy life), with no affirmative responses to any of the eighteen items; marginal food secure (some members reported anxiety about food sufficiency or shortage of food in the house, but there was no indication of changes in diet or food intake), 1–2 affirmative responses; low food secure (at least some household members reported reduced quality, variety, or desirability of diet but not necessarily reduced food intake), 3–7 affirmative responses; and very low food secure (one or more household members reported multiple indications of disrupted eating patterns and reduced food intake), 8 or more affirmative responses. For households without children, low food security is 3–5 affirmative responses, and very low food security is 6 or more affirmative responses.

In most research and policy discussions, the categories of low and very low food secure are combined into a category called food insecure. In some applications, however, a broader measure of marginal food insecurity is used, which combines marginal, low, and very low food secure. In nearly all cases, researchers report a rate or percentage of those who are food insecure by dividing the number of food-insecure people or households in a given population or subpopulation by the relevant population or subpopulation of interest. For example, the household food insecurity rate is found by totaling the number of households that are low or very low food secure and dividing by the total number of households in the population.

**Food Insecurity In The United States**

From 2001 to 2007 the food insecurity rate for US households was relatively steady, at about 11 percent for all households and almost 18 percent for those with children (Exhibit 1). The rates for both groups increased more than 30 percent after the onset of the Great Recession in December 2007, from 11.1 percent in 2007 to 14.6 percent in 2008 for all households and from 16.9 percent to 22.5 percent for households with children. Despite the official end of the Great Recession in June 2009, rates of food insecurity have remained at these elevated levels.

Within the US population there is a great deal of heterogeneity in the probability of food insecurity. For example, before other factors are controlled for, households with lower incomes and households headed by an African American or Hispanic person, a never-married person, a divorced or separated person, a renter, a younger person, or a less-educated person are all more likely to be food insecure than their respective counterparts. In addition, households with children are more likely to be food insecure than those without. Research using multivariate methods has generally found that the characteristics listed above are positively associated with food insecurity, even after other factors are controlled for. This general set of findings holds whether the sample is households with or without children, including households headed by a senior.

**Food Insecurity And Negative Health Outcomes**

The USDA, in consultation with other federal agencies, academics, and members of the policy community, developed the food insecurity measure used in the United States in part because of the myriad negative health outcomes that were thought to be associated with food insecurity. Understanding the existence of certain negative health outcomes that stem from food insecurity is of direct importance to health care profession-
Food insecure
Even after the Great Recession ended in 2009, 22.5 percent of US households with children remain food insecure.

Study Data And Methods
In what follows, we review some of the major findings from the literature examining food insecurity and health that takes into account both self-reports of health and clinical outcomes. We break the major findings down into three broad age categories: children, nonsenior adults, and seniors. Within each of these categories, we highlight work that illustrates salient points regarding the relationship between food insecurity and health.

Our review is confined to research on food insecurity and health in the United States and, to a limited extent, in Canada, since these two countries measure food insecurity in a similar fashion. A parallel literature has examined this topic in non-high-income countries, but that is beyond the scope of this article.

Along with this geographical concentration, our review concentrates on research that with few exceptions has appeared in peer-reviewed journals since 2001. While most of the papers use the USDA’s measure of food insecurity (defined above) as the key variable of interest, in some cases we include papers that used variants on this measure of food insecurity. To reflect the interdisciplinary nature of food insecurity research, we include papers in journals in disciplines that reflect the most recent work in this area, especially in the fields of economics, agricultural economics, internal medicine, pediatrics, nutrition, public health, and social work. Because different disciplines focus on different aspects of food insecurity and health, our key search terms included food insecurity and health and food insufficiency and health. We also conducted more refined searches in which we replaced the word health with well-being, depression, child (or senior) health, and so on.

Because of space limitations, we were unable to include all papers that examined the relationship between food insecurity and health outcomes. Thus, ours was not a meta-analysis. Instead, we cite at least one paper for each health outcome that has been found to be associated with food insecurity. When multiple papers found similar results, we restricted our coverage to more recent papers that used state-of-the-art methods and the standard food insecurity measure. As a result, most of the work we cite has been published in the past seven years.

Study Results
Children
The majority of research examining food insecurity in general and its effects on health outcomes has concentrated on children. This research has found that food insecurity is associated with increased risks of some birth defects, anemia, lower nutrient intakes, cognitive problems, and aggression and anxiety. It is also associated with higher risks of being hospitalized and poorer general health and with having asthma, behavioral problems, depression, suicide ideation, and worse oral health. Exhibit 2 gives details about the data sets and methods used in a subset of these papers and, in some cases, the magnitude of the effects reported. For example, compared to children in food-secure households, children in food-insecure households had 2.0–3.0 times higher odds of having anemia, 2.0 times higher odds of being in fair or poor health, and 1.4–2.6 times higher odds of having asthma, depending on the age of the child.

Most of these papers used binary comparisons of children in food-insecure households (those with three or more affirmative responses to items in the CPS-FSS) with children in food-secure households (those with zero, one, or two affirmative responses). However, households with one or two affirmative responses (those in the category of marginal food secure) may be more similar to the food-insecure households than to the food-secure households and may also be at risk of suffering from negative

Study Data And Methods
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### Summary Of Research On Food Insecurity And Health Among Children In The United States And Canada Published During 2006-14

<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Data source</th>
<th>Central findings</th>
</tr>
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<tbody>
<tr>
<td>Eicher-Miller et al. (Note 6)</td>
<td>Food insecurity is associated with iron deficiency anemia in US adolescents.</td>
<td>1999–2004 NHANES</td>
<td>Odds of having iron deficiency anemia among 12–15-year-old children in households with food insecurity were 2.95 times higher ($p = 0.02$) than among children in households without food insecurity.</td>
</tr>
<tr>
<td>Cook et al. (Note 8)</td>
<td>Child food insecurity increases risks posed by household food insecurity to young children’s health.</td>
<td>1998–2004 Children’s HealthWatch, various cities</td>
<td>Odds of fair or poor health among children ≤36 months old with household and child food insecurity were 2.14 (95% CI: 1.81, 2.54) times higher than among children in food-secure households. The odds among nonrecipients of food stamps were 1.72 (95% CI: 1.34, 2.21) times higher than among food stamp recipients.</td>
</tr>
<tr>
<td>Howard (Note 9)</td>
<td>Does food insecurity at home affect non-cognitive performance at school? A longitudinal analysis of elementary student classroom behavior.</td>
<td>1999–2003 ECLS-K</td>
<td>Noncognitive performance among children in grades 1, 3, and 5 was about 0.060 (SE: 0.039) to 0.079 (SE: 0.039) units lower for children with any food insecurity, compared to food-secure children.</td>
</tr>
<tr>
<td>Whitaker et al. (Note 10)</td>
<td>Food insecurity and the risks of depression and anxiety in mothers and behavior problems in their preschool-aged children.</td>
<td>1998–2000 Fragile Families and Child Wellbeing Study</td>
<td>Food-insecure mothers had 2.2 (95% CI: 1.6, 2.9) times higher rates of mental health issues than fully food-secure mothers. The odds of behavioral problems among children with food-insecure mothers were 2.1 (95% CI: 1.6, 2.7) times higher than among children with food-secure mothers.</td>
</tr>
<tr>
<td>Kirkpatrick et al. (Note 13)</td>
<td>Child hunger and long-term adverse consequences for health.</td>
<td>1994–2005 Canadian NLSCY</td>
<td>Odds of asthma among children ages 10–15 in households ever experiencing hunger were 1.41 (95% CI: 0.79, 2.51) times higher than among children in households never experiencing hunger. Odds of asthma among youth ages 16–21 were 2.66 (95% CI: 0.93, 7.63) times higher for those ever experiencing hunger.</td>
</tr>
<tr>
<td>Melchior et al. (Note 15)</td>
<td>Food insecurity and children’s mental health: a prospective birth cohort study.</td>
<td>1997–2005 Québec Longitudinal Study of Child Development</td>
<td>Odds of having high depression or anxiety among children ages 4–8 in food-insecure households were 1.79 (95% CI: 1.15, 2.79) times higher than among children in food-secure households.</td>
</tr>
<tr>
<td>McIntyre et al. (Note 16)</td>
<td>Depression and suicide ideation in late adolescence and early adulthood are an outcome of child hunger.</td>
<td>1994–2009 Canadian NLSCY</td>
<td>Odds of depression or suicide ideation among youth ages 14–25 in households experiencing hunger were 2.3 times higher ($p = 0.01$) than among youth in households without hunger.</td>
</tr>
<tr>
<td>Chi et al. (Note 17)</td>
<td>Socioeconomic status, food security, and dental carries in US children: Mediation analyses of data from the National Health and Nutrition Examination Survey, 2007–2008.</td>
<td>2007–2008 NHANES</td>
<td>Odds of tooth decay among children with low food security were 2.00 times higher ($p = 0.03$) than among children with full food security when socioeconomic status was held constant.</td>
</tr>
</tbody>
</table>

**Source** Authors' summary of information from articles cited in the text. **Notes** If no mention is made of $p$ values, standard errors, or confidence intervals, they were not reported or the results in the article were not statistically different from zero. CI is confidence interval. SE is standard error. NHANES is the National Health and Nutrition Examination Survey. ECLS-K is Early Child Longitudinal Study–Kindergarten Class. NLSC is National Longitudinal Survey of Children. NLSCY is National Longitudinal Survey of Children and Youth.

Health outcomes.

For example, data from Children’s HealthWatch—a sentinel study of over 40,000 children younger than age four in five large urban hospitals, which began in 1998—indicate that compared to children in fully food-secure households, those in marginal-food-secure households are more likely to be in fair or poor health and more likely to have a mother who reported one or two substantial concerns about the child’s development on the Parent’s Evaluation of Developmental Status. One implication is that some research examining the impact of food insecurity on health outcomes might have underestimated the consequences by ignoring households that are marginally food secure.

**Nonsenior Adults** There has been less research on the impacts of food insecurity on health outcomes among nonsenior adults. However, some of the studies in this limited set have shown that food insecurity is associated with decreased nutrient intakes; increased rates...
## EXHIBIT 3

### Summary Of Research On Food Insecurity And Health Among Nonsenior Adults In The United States And Canada Published During 2004-14

<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Data source</th>
<th>Central findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whitaker et al.</td>
<td>Food insecurity and the risks of depression and anxiety in mothers and behavior problems in their preschool-aged children.</td>
<td>1998-2000 Fragile Families and Child Wellbeing Study</td>
<td>Food-insecure mothers had 2.2 (95% CI: 1.6, 2.9) times higher rates of mental health issues than fully food-secure mothers. The odds of behavioral problems among children with food-insecure mothers were 2.7 (95% CI: 1.6, 2.7) times higher than among children with food-secure mothers.</td>
</tr>
<tr>
<td>Muirhead et al.</td>
<td>Oral health disparities and food insecurity in working poor Canadians.</td>
<td>2007 nationally representative stratified random sample of working poor Canadians ages 18-64</td>
<td>Odds of oral health problems among the working poor with food insecurity were 3.1 times higher (p &lt; 0.001) than among those with food-secure households.</td>
</tr>
<tr>
<td>Park et al.</td>
<td>Iron deficiency is associated with food insecurity in pregnant females in the United States. National Health and Nutrition Examination Survey 1999-2010.</td>
<td>1999-2010 NHANES</td>
<td>Odds of iron deficiency (classified by ferritin status) among pregnant women ages 13-54 with food insecurity were 2.90 times higher (p &lt; 0.05) than among pregnant women who were food secure.</td>
</tr>
<tr>
<td>Heflin et al.</td>
<td>Food insufficiency and women's mental health findings from a 3-year panel of welfare recipients.</td>
<td>Women's Employment Study, 1997-99</td>
<td>Women's changing food insufficiency status was positively associated with a change in major depression status (p &lt; 0.01). No apparent results were found for the association of food-insufficiency status and a woman's sense of mastery, or being a causal agent in her environment.</td>
</tr>
<tr>
<td>Casey et al.</td>
<td>Maternal depression, changing public assistance, food security, and child health status.</td>
<td>Children's Sentinel Nutritional Assessment Program household-level survey, 1998-2001 (at emergency departments and primary care clinics)</td>
<td>Self-report of maternal depression was associated with loss or reduction of welfare support (50% [95% CI 3, 125]) as well as being two times more likely to experience household food insecurity.</td>
</tr>
</tbody>
</table>
| Seligman et al.       | Food insecurity is associated with diabetes mellitus: results from the National Health Examination and Nutritional Examination Survey (NHANES) 1999-2002. | 1999-2002 NHANES                                                             | Food-insecure individuals have approximately twice the odds of experiencing diabetes (95% CI: 1.1, 4.0), compared to food-secure individuals. Diabetes was reported in 10% of individuals with mild, and 16% of individuals with severe, food insecurity.                                                                |^Source: Authors’ summary of information from articles cited in the text. Notes: If no mention is made of values, standard errors, or confidence intervals, they were not reported or the results in the article were not statistically different from zero. CI is confidence interval. NHANES is National Health and Nutrition Examination Survey.

### Food & Health: An Overview

In general, there has been a great deal of research on the health status of seniors but surprisingly little work on food insecurity and health. The work that has been done has found, for example, that compared food-insecure seniors report lower nutrient intakes, are more likely to be in poor or fair health and to be depressed, and are more likely to have limitations in activities of daily living, compared to their food-secure peers.

**Seniors** In general, there has been a great deal of research on the health status of seniors but surprisingly little work on food insecurity and health. The work that has been done has found, for example, that compared food-insecure seniors report lower nutrient intakes, are more likely to be in poor or fair health and to be depressed, and are more likely to have limitations in activities of daily living, compared to their food-secure peers.

In terms of effect sizes, food-insecure seniors were 2.33 times more likely to report being in poor or fair health, compared to food-secure seniors. Moreover, a senior who is marginally food insecure compared to one who is fully food secure has reduced nutrient intakes roughly...
equivalent to having $15,000 less income. Similarly, the effect of being marginally food insecure on having a limitation in an activity of daily living (ADL) is roughly equivalent to being fourteen years older. Unfortunately, most of the other papers covered in our review did not report the full set of coefficients in the multivariate models, so we cannot make similar comparisons in those cases.

Possible Mechanisms

Researchers do not always carefully articulate the mechanisms by which food insecurity causes negative health outcomes. A good counterexample is the work of Hilary Seligman and co-authors, who considered why food insecurity is more likely to increase a person’s odds of developing diabetes than hypertension. They argued that diabetes is more affected than hypertension by limitations in diet, while hypertension is more affected than diabetes by medication adherence. Peripheral insulin resistance, a precursor to diabetes, may emerge as a result of food scarcity, and the stress associated with food insecurity may lead to increases in cortisol and, hence, central adiposity, which is often associated with diabetes.

Another mechanism whereby food insecurity can influence health outcomes is through its effect on adherence to medical recommendations. Again considering diabetes, Seligman and co-authors showed that food-insecure adults reported more difficulties affording a diabetic diet and lower abilities to address issues pertaining to diabetes, compared to those who are food secure. Some of the mechanisms by which food insecurity adversely affects health outcomes are indirect. For example, there has been an interest in whether or not food insecurity is associated with obesity, which in turn is associated with other negative health outcomes, including diabetes.

A recent review by Nicole Larson and Mary Story examined the literature looking at food insecurity and obesity across various categories. For men and children, the consensus in the literature is that there is no association between food insecurity and obesity status, after relevant confounding factors are controlled for. For women, however, there is some limited evidence that food insecurity is associated with obesity, at least in the short run. One study found that women who are very low food secure are 10.8 percentage points more likely than women who are fully food secure to be obese. However, after one year those who were persistently food insecure were found to be no more or less likely than food-secure women to be obese.

Discussion

Although our review of the literature was necessarily limited to more recent studies, a compelling picture of food insecurity’s association with negative health outcomes has emerged based on...
a wide array of data sets and empirical methods. However, this literature has not always effectively addressed the issues of causality and endogeneity.

**Causality** In many of the cases discussed above, the causal relationship between food insecurity and health is clear. For example, it would be difficult to construct a scenario in which limited nutrient intake was a cause of food insecurity instead of the other way around. However, in other cases, the causality is not as clear.

Consider depression. In several studies, food insecurity is seen as leading to depression—that is, in the multivariate regression model, depression is the dependent variable and food insecurity is one of the independent variables. From our perspective, this is plausible—the inability, say, of parents to feed their children could lead to depression. In contrast, others have used depression as a predictor of food insecurity, treating food insecurity as the dependent variable and depression as one of the independent variables.

Future research using longitudinal data with the appropriate econometric techniques should address these causality issues. A recent example of researchers who considered this issue in a convincing manner is Kelly Noonan and co-authors. They used data from the Early Childhood Longitudinal Study Birth Cohort, which conducted four interviews of the parents and caregivers (including early childhood teachers) of 14,000 children born in 2001 between birth and the start of kindergarten. The researchers found that when mothers are moderately to severely depressed, the risk of child and household food insecurity rises by 50–80 percent, depending on the measure of food insecurity.

**Endogeneity** In virtually all of the work mentioned above, the authors implicitly assumed that the effect of food insecurity was properly identified after other observed characteristics from the data set were controlled for. In other words, they assumed that there were no unobserved characteristics that led a household both to be more (or less) likely to be food insecure and to be more (or less) likely to suffer from a negative health outcome. This assumption is unlikely to hold, since we expect that multiple factors are not included as covariates in any given model. As a consequence, the results found in these papers are subject to some level of bias. The extent of this bias and its direction are unclear.

To address this issue, we make a suggestion. A number of econometric techniques could be used to reduce or eliminate endogeneity bias. For example, Craig Gundersen (one of the authors of this article) and Brent Kreider used an econometric method that establishes bounds regarding the potential impact of food insecurity on health in the presence of unobserved characteristics that would lead one to be food insecure and in poor health. This approach does not allow, in general, for point estimates of the impact. However, the bounds are more reasonable insofar as they do not explicitly ignore unobserved characteristics. In some cases, there may be variables that influence food insecurity but not health outcomes, and in those cases, standard instrumental variable techniques could be used to derive point estimates of the impact of food insecurity on health outcomes.

**Recommendations**

Food insecurity and its health consequences present a serious challenge to policy makers, program administrators, and health care providers in the United States. In this section we emphasize one central policy mechanism that is used to alleviate food insecurity in the United States, and we make two suggestions for health care providers.

Obviously, the most direct way to ameliorate the health consequences associated with food insecurity is to reduce food insecurity. In the United States, SNAP has been used successfully for over fifty years to reduce food insecurity. The scope of SNAP is reflected in both its reach and the size of its benefits. In 2014 over forty-six million people participated in the program, which had total expenditures of over $74 billion. The maximum monthly SNAP benefit is $649 for a family of four; the average benefit per recipient is about 60 percent of this level.

Households are eligible for SNAP if they meet three criteria. First, their gross monthly income must be less than 130 percent of the federal poverty level. In recent years some states have opted to use a cutoff that is above 130 percent of poverty. Second, a household’s net monthly income must be below poverty. Net income is defined as...
Recent proposals to change the fundamental structure of SNAP could diminish its role in alleviating food insecurity.

gross income minus certain deductions, such as a 20 percent earned income deduction, a medical costs deduction for elderly and disabled people, and an excess shelter cost deduction. The net income test is the same in all states. Third, SNAP applicants need to have assets of less than $2,000, except that households with at least one senior and households that include at least one person with a disability can have more assets. In recent years, however, most states have requested and received waivers to eliminate the asset test in their states.

A number of studies have demonstrated SNAP’s success in achieving its central goal of alleviating food insecurity. In addition, the program has been found to reduce poverty.

However, recent proposals to change the fundamental structure of SNAP, such as the call by House Budget Committee Chairman Rep. Paul Ryan (R-WI) to make SNAP a block-grant program, could diminish its role in alleviating food insecurity. SNAP is now an entitlement program, which means that federal spending on benefits increases and decreases along with a household’s need. If it became a block-grant program, a fixed annual appropriation would be allotted to states, thereby reducing the program’s potential responsiveness to changes in need, such as those resulting from a midyear economic recession. In addition, the experience of the Temporary Assistance for Needy Families program (TANF)—a federal block-grant program to states targeted to low-income families with dependent children under age eighteen that replaced an entitlement program, Aid to Families with Dependent Children, as part of the 1996 welfare reform—suggests that changing the financial structure of SNAP by making it a block-grant program would likely lead to the cutting of significant numbers of currently eligible families from the program.

Other members of Congress and the public health community have argued for imposing further restrictions on the types of items that SNAP benefits can be used to purchase. SNAP benefits must be redeemed on food to be prepared in the home, and hot prepared food is the only ineligible food item.

Imposing additional restrictions would likely lead to reductions in participation in SNAP because of increases in stigma (for example, by being refused purchases when paying for food items) and transaction costs (such as the higher costs associated with having to ascertain which foods are eligible for SNAP), both of which can be seen in the recent experience of TANF. Since SNAP participants are less likely to be food insecure than nonparticipants who are eligible for SNAP, a fall in SNAP participation could lead to an increase in food insecurity and its resulting health consequences. Simply put, SNAP should be viewed as an important health care intervention for low-income Americans.

That said, many SNAP recipients remain food insecure even after receiving benefits. Furthermore, many people who are eligible for SNAP do not receive benefits. This is especially true among seniors, a population in which over 60 percent of those eligible do not receive assistance. These facts suggest that there is room for modifications to the current SNAP program.

First, for some SNAP recipients, benefit levels are not high enough to remove them from food insecurity. Consistent with the recommendations of an expert panel of the Institute of Medicine, it may be worthwhile to increase benefit levels for at least a subset of participants, especially those in high-cost urban areas.

Second, reducing the barriers to applying for SNAP and recertifying eligibility for the program—including the barriers related to stigma and transactions costs—would further reduce food insecurity.

Third, a substantial portion of food-insecure households have incomes above the gross income limit of 130 percent of poverty, which makes them ineligible for SNAP in many states. This suggests that setting a higher gross-income test for eligibility could reduce food insecurity of the so-called near-poor and, in turn, improve their health outcomes.

Conclusion
We conclude with two suggestions for how health care professionals might use the central findings of this review in their work. First, they should recognize the possibility that food insecurity may be one determinant, among others, of a patient’s health challenges. Other nutrition-related health determinants, such as obesity,
Food & Health: An Overview

The authors thank the editors and three anonymous reviewers for many helpful comments on earlier versions of this article. They also gratefully acknowledge the Economic Research Service and the Food and Nutrition Service in the Department of Agriculture for financial support while this article was being written. The opinions and conclusions are solely those of the authors and do not reflect those of any sponsoring agency.

NOTES


The number of families and individuals who live in hunger in the United States is on the rise. Many come from our most vulnerable populations — children and seniors. Every day thousands of neighbors in our region are making tough choices. Seniors are choosing between buying groceries or medicine. Parents are skipping meals so their children can eat. Working families are juggling utility bills, costs to get work or school, rent or mortgage payments and providing healthy meals to feed their families.

In southwestern Pennsylvania, no one has to face those tough choices alone.

Greater Pittsburgh Community Food Bank was formed in 1980 by a group of community leaders who made a commitment to provide emergency food to our neighbors in need. Today in addition to providing food and other essential items to member hunger-relief programs, the Food Bank enrolls neighbors in SNAP (Food Stamps), builds connections to healthcare and employment, strengthens Summer Feeding programs and encourages full participation in school meals.

Providing nutritious food through a network of nearly 400 food pantries, hot meal sites, shelters and other hunger-relief programs is the core of our work. It is also essential that we do more to stabilize lives and communities.

We may never see a day where no one among us is hungry, but we can be a community that is there for you when you find yourself in need. Where you know your neighbors are there to help because you step up to help.
Donate.

When you donate to Greater Pittsburgh Community Food Bank, you are helping the one in eight of our neighbors who struggle to put enough food on the table. The Food Bank is effective and efficient—94% of donations go directly to our hunger-relief activities. With your help, we’re building healthy, food secure communities. Every dollar you give helps provide five meals in our community.

Volunteer.

Your time is a gift to kids, seniors and others who may not have enough to eat. Volunteers produce the equivalent of a meal a minute while helping the Food Bank sort, process and pack food. And it’s fun! You can repackage food in our warehouse, distribute fresh food, share cooking tips and produce samples, harvest crops at local farms, help out in our offices, lend a hand at events and more.

Speak Out.

When you join our advocacy efforts and speak out to your elected officials, you help us build a powerful movement. Through the concerted efforts of people like you, we can ensure that legislators get the message: helping our neighbors in need is a priority today, and addressing hunger’s root causes is vital to reducing hunger tomorrow.

For Our Neighbors. For All of Us.

Think of the impact you make for neighbors like Pat. She started volunteering for us a few years ago when the company she worked with for 33 years let her go. At 62, she was not prepared financially or emotionally to retire. The stress was too much and she began volunteering to keep busy.

“Realistically you have people making decisions about what they can afford in their monthly budget, and it isn’t fresh food,” says Pat. “They’re making choices about buying food or medicine. The Food Bank removes the worry of being able to afford fresh fruit and vegetables. It’s just amazing.”

Pat has now found herself in need of a little extra help too. Pete, her husband of 42 years was diagnosed with dementia a few years ago. Then his health took an even worse turn with an ALS diagnosis. His need for constant care and wheelchair upgrades for their home has put an incredible strain on their finances.

When Pat finishes her volunteer shift our Produce to People distribution, she gets in line. “To be able to bring a huge box of produce home every month—it means everything to us.”

Whether it’s by advocating and raising awareness, making donations or volunteering, we can help you find the way that is right for you to make a difference.

Email us: info@pittsburghfoodbank.org
Call us: (412) 460-3663
Find us: 1 North Linden Street, Duquesne, PA 15110

Our Mission
Feed people in need and mobilize our community to eliminate hunger.

Our Vision
A hunger-free southwestern Pennsylvania.

Greater Pittsburgh Community Food Bank
Lifelong Consequences of Child Hunger

Child hunger causes HEALTH PROBLEMS

Undernourished children are at risk of serious health, social, and educational problems carrying into adulthood.

Hungry children are sick more often, frequently experiencing headaches, stomachaches, colds, and fatigue.

→ 2.9x more likely to suffer from poor health.³
→ 1.4x more likely to be iron deficient.⁴
→ 1.3x more likely to be hospitalized and require longer in-patient stays.⁵

Child hunger causes POOR JOB READINESS

Adults who experienced hunger as children are ill-prepared mentally, emotionally, and physically for the work environment, leading to greater absenteeism and turnover.⁶

Child hunger causes BEHAVIOR PROBLEMS

Studies link hunger with social, behavioral, and mental health problems.

→ 1.9x more likely to suffer from ADHD.⁷
→ 3x more likely to be suspended from school.⁸
→ 5x more likely to commit suicide as a teen.⁹

Child hunger causes EDUCATION PROBLEMS

For emotional, cognitive, and physical reasons, a hungry child faces significant educational challenges.

→ 1.6x more likely to miss days of school.¹⁰
→ 2x more likely to repeat a grade.¹¹
→ 2x more likely to require special education.¹²

LONG-TERM COSTS

Hunger causes a chain reaction of negative impacts.

Compared to their food secure peers, children experiencing 4 years of food insecurity have a:

209% increase in their likelihood of lower health status.¹³

Pennsylvania’s Children

→ 521,750 (19.3%) children are food insecure.¹
→ 47% of households receiving SNAP benefits (food stamps) have children.²
Food assistance programs reduce food insecurity and its negative impacts:

WIC enrollment from birth increases iron levels and lowers iron-deficiency anemia.\(^\text{14}\) Families at risk of hunger who participate in SNAP are twice as likely to be healthy than those who do not.\(^\text{15}\)

The Child and Adult Care Food Program provided nearly 70 million nutritious meals and snacks at child care centers and homes in Pennsylvania during 2014-2015, improving the overall quality of care.\(^\text{16}\)

Over 109 million free or reduced-price lunches were served to PA children during the 2014-15 school year - frequently their only meal.\(^\text{17}\)

Only 51 million breakfasts were served to the same eligible children that school year.\(^\text{18}\) Breakfast has been shown to stave off obesity.\(^\text{19}\)

Even fewer meals - just under 7 million - were served through the Summer Food Service Program, designed to fill the nutrition gap left when school ends.\(^\text{20}\)

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Born into Poverty

Serenity has big blue eyes and giggles with a grin so wide that it takes up most of her tiny face. She and her mother wait in line with hundreds of other families. They’ve come to one of the Food Bank’s Produce to People distribution locations, where they can take home fresh produce and groceries.

At only 10 months old, Serenity doesn’t know where dinner comes from, but she knows what hunger feels like. Even though she’s very young, she has experienced times when her parents have had to choose between paying the heating bill and buying groceries. Serenity hasn’t lived long enough to make mistakes or wrong decisions; she was simply born into poverty.

Serenity’s parents moved from Houston, Texas when her father got work in construction. Despite his new job, they’re still struggling to get reestablished. “It’s hard,” her mother confesses. “Serenity’s father is working, but it’s hard to pay all of those bills and buy diapers and formula. You just can’t do it all.”

For more information on hunger and food insecurity visit www.pittsburghfoodbank.org

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Revised May 2016
Bibliography


4. Ibid.


7. Ibid.

8. Ibid.


11 Ibid.

12 Ibid.


18 Ibid.


Pennsylvania’s Hunger Bill: $6.12 Billion

*does not include administration costs of key food and nutrition programs. 1

Growing Hunger, Growing Costs

As hunger grows, so does the economic cost. Pennsylvania is 1 of 12 states whose hunger costs rose more than $1 billion since 2007. 8

Health Costs: $4.77 billion 9

- Malnutrition compromises the immune system, making the hungry more vulnerable to disease. 10
- Hungry individuals are 1.3X more likely to be hospitalized. 11
- Healthcare for malnourished patients costs 3X more compared to healthy patients. 12
- Hospital stays are 3X longer for malnourished patients. 13

Education Costs: $704 million 14

- 3 out of 5 K-8 public school teachers in the U.S. report seeing children regularly coming to school hungry. 15
- Children from food insecure households are more likely to struggle in school, fail, be held back, or drop out altogether. 16
- Earning capacity is largely determined by an individual’s educational achievement. When hunger interferes, a lifetime of earning capacity is impacted. A high school graduate earns, on average, $8,915 more each year than someone who never graduated. 17

Hunger’s Consequences

**TO HEALTH & EDUCATION**

- 3X more likely to suffer from **POOR HEALTH** 2
- 2.5X more likely for women to be **OBSESE** 3
- 2X more likely to develop **DIABETES** 4
- 3X more likely to be **SUSPENDED** from school 5
- 2X more likely to **REPEAT A GRADE** 6
- 2X more likely to require **SPECIAL EDUCATION** 7
Food assistance programs reduce food insecurity and its negative impacts:

• For every $5 of SNAP benefits used for food, up to $9 in economic activity is generated.\(^{18}\)

• SNAP helped 1.89 million Pennsylvanians avoid hunger by supplementing the family’s monthly food budget.\(^{19}\)

• WIC saves between $1.77 and $3.13 for every dollar spent in Medicaid costs.\(^{20}\)

• Research shows that the National School Breakfast Program helps children perform better in school, concentrate in class, and visit the school nurse less often.\(^{21}\)

• Commodity Supplemental Nutrition Program (CSFP) helps low-income seniors maintain the proper nutrition needed to reduce the risk of chronic illness.\(^{22}\)

Hunger: A Loss For All

It is Laura’s first time at a food pantry and she’s a bit nervous. Since losing her job two months ago, her family—including her husband and seven year old son—have struggled to make ends meet. “My husband has worked at the same place, full time, for eight years, but doesn’t earn enough to support our family. I need to work, too,” said Laura.

Since losing her job, Laura and her husband were forced to file for bankruptcy on their home and now face tough choices between basic necessities like food and heat. “We want to pay our bills, but we also need to eat,” said Laura, who is seated shoulder to shoulder with others waiting for food. Her son, Max, receives a free lunch at school, which he qualified for even before Laura lost her job. “We are hard working people, but that doesn’t seem to be enough to make ends meet; it’s tough,” said Laura. Laura is not alone; over two hundred people were served at the food pantry that day.
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<td>6</td>
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Bibliography continued

13 Ibid.


