AN AVOIDABLE $2.4 BILLION COST

The Estimated Health-Related Costs of Food Insecurity and Hunger in Massachusetts

Published 2018
Hunger is a health issue.

Research clearly demonstrates that food insecurity negatively impacts the health of children and adults. Food insecurity and hunger are associated with low birth weight, impaired brain development, malnutrition, hospitalizations, mental health issues, diabetes and heart problems.\(^1\,^2\) Using modeling systems, researchers at Children’s HealthWatch simulated healthcare and educational costs of food insecurity in Massachusetts and the monetary burden it places on individuals, families, and healthcare payers. In a 2016 report,\(^3\) Children’s HealthWatch researchers estimated the health-related costs of food insecurity in the United States to be $160 billion.

### Food Insecurity in Massachusetts

Food insecurity rates increased during the Great Recession and have yet to return to pre-recession levels in Massachusetts and across the country.\(^4\) Despite nearly nine years of economic recovery, one out of every 10 households in Massachusetts still lacks the resources necessary to afford enough food for all household members to lead active, healthy lives.

#### How Much Would Massachusetts Save in Health-Related Costs If We Eliminated Food Insecurity?

Using evidence gathered through an in-depth analysis of peer-reviewed journals and reports on associations between food insecurity and adverse health conditions, Children’s HealthWatch researchers determined expenditures for diseases or conditions attributable to food insecurity. Children’s HealthWatch, with support from The Greater Boston Food Bank, estimated healthcare, special education, and lost work time costs attributable to food insecurity to be $2.4 billion in 2016. Of the $2.4 billion, about $1.9 billion were direct and indirect health-related costs, and special education accounted for $520 million in expenditures.

Direct health-related costs attributable to food insecurity included asthma in all age groups, chronic obstructive pulmonary disease, type 2 diabetes, obesity, arthritis, rheumatoid arthritis, gout, lupus, fibromyalgia in adults, and non-neonatal hospitalizations and iron-deficiency anemia in children. Indirect costs resulting from fair/poor health attributable to food insecurity were described for ambulatory visits, dental care visits, and prescription medicine in all age groups, and hospital stays for adults only.

It is notable, however, that the costs listed in this report do not represent all health-related costs attributable to food insecurity in Massachusetts for 2016. Instead, they are a conservative partial estimate, reflecting only those costs for which quantitative measures of association between food insecurity and diseases or conditions were available in the empirical literature.

This report’s cost estimates reflect expenditures by payers for treatment of some, but not nearly all, health conditions found to be connected to food insecurity in the research literature. However, for many health conditions, insufficient data were available at the state level to estimate the number of people treated or the amount of expenditures for treatment. The total cost of health-related and special education attributable to food insecurity in Massachusetts is undoubtedly far greater than the estimated $2.4 billion.
Reducing food insecurity in Massachusetts

Description of Costs Attributable to Food Insecurity by Aggregated Condition in Massachusetts, 2016.

TOTAL HEALTH AND EDUCATION COSTS

$2.4 BILLION

POLICY RECOMMENDATIONS

Given the data demonstrating the impact of food insecurity on health and the associated healthcare costs, we must take concrete steps to reduce food insecurity in Massachusetts. The Greater Boston Food Bank and Children’s HealthWatch have determined the following recommendations critical to reducing food insecurity, improving the health of food-insecure Massachusetts residents, and reducing healthcare costs for individuals, families and the Commonwealth. Circumstances and timing within the federal and state legislative calendars may alter the order of these recommendations.

HEALTHCARE SECTOR

Screen and intervene to address food insecurity in clinical settings. Healthcare providers should screen patients for food insecurity as part of the routine clinical visit using the American Academy of Pediatrics validated, simple and efficient, two-question screening tool, The Hunger Vital Sign™. Providers should refer patients who screen positive for food insecurity to resources that increase their access to healthy food, including government nutrition assistance programs, area food pantries and meal programs, and related services.

Reimburse providers for screening and intervention. Insurers should reimburse healthcare providers for Hunger Vital Sign™ screening and for intervention programs that improve access to healthy foods. In addition, accountable care organizations should include such programs in their package of reimbursable flexible services.

PUBLIC SECTOR

Federal

Maintain current funding and structure of the Supplemental Nutrition Assistance Program. The Supplemental Nutrition Assistance Program (SNAP) is our nation’s largest program in the fight against food insecurity and hunger. Research shows SNAP improves health outcomes among children and adults.5–10 Any benefit cuts, eligibility changes, work requirements, time limits or structural changes would decrease benefits or reduce or block access to the program for people who depend on this vital program, putting them at higher risk for food-insecurity-related diseases and conditions.
PUBLIC SECTOR

State

Increase Massachusetts Emergency Food Assistance Program (MEFAP) funding to $20 million annually to ensure the Commonwealth’s four food banks can purchase a consistent supply of healthy foods.

Create a common application for MassHealth and SNAP to ensure low-income individuals and families applying for health insurance also have access to food assistance. Research has shown increased access to SNAP reduces MassHealth costs.\textsuperscript{11}

Mandate high-poverty schools serve breakfast after the bell to increase participation in the federal School Breakfast program. Recent studies indicate increased access to breakfast reduces school nurse visits.\textsuperscript{12}

Improve access to federal child nutrition assistance programs administered by the state, including the Child and Adult Care Food Program and the Summer Food Service Program to address nutritional needs of children in child care and in after-school and summer programs.

Increase funding for the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) in the state budget to ensure high quality services for eligible children and mothers and increase retention of participants in the program.

FURTHER RESEARCH

Several gaps in food insecurity research were identified in the report as high priorities for future investigation. Among these gaps are:

High and rising-risk populations: Below are key groups of people for whom the existing research is insufficient and who are at great and increasing health risk.

\begin{itemize}
\item Families with children with special healthcare needs
\item Veteran and active duty military families
\item People with substance use disorders and their families
\end{itemize}

Intervention studies: We need to know who is at risk for food insecurity, what kinds of risks they face, and which infrastructures will make a difference in addressing food insecurity, such as:

\begin{itemize}
\item Test interventions, such as referrals and follow-up procedures involving both private and public food assistance systems, after screening for food insecurity.
\end{itemize}

Health outcomes and hardships: The following health outcomes and hardships are critically important to reducing health costs and population burden of poor health.

\begin{itemize}
\item Stress/depression among children younger than 18 years
\item Obesity among children younger than 18 years
\item Healthcare cost sacrifices (paying for needed healthcare and thus struggling to pay for other basic needs)
\end{itemize}

CONCLUSION

The findings in this research indicate that food insecurity costs Massachusetts at least $2.4 billion dollars per year. Fortifying current nutrition assistance programs and identifying new policy solutions to minimize food insecurity will lead to healthcare and special education cost savings. These cost savings will be reflected in the health of the population and the economy. If we make a commitment to improving food security across our Commonwealth, and follow through with sustained actions, children and their families will become healthier and perform better at school and in their workplace, seniors will be able to remain at home and maintain their well-being, the economy will experience an increase in productivity, and healthcare costs will decrease substantially. However, with one out of 10 households in Massachusetts still facing food insecurity nine years after the Great Recession, achieving this requires immediate action.
ACKNOWLEDGEMENTS

The Report and this Executive Summary were made possible through the support of The Greater Boston Food Bank and the Hunger to Health Collaboratory. Also, we would like to express our gratitude to Stephanie Nichols and Kathryn Brodowski, MD, MPH for their input on this work.

REFERENCES


AUTHORS

John T. Cook, PhD, MAEd
Ana Poblacion, PhD, MSc
Keith Chappelle
Allison Bovell-Ammon, MDiv
Stephanie Ettinger de Cuba, MPH
CHILDREN’S HEALTHWATCH
is a nonpartisan network of pediatricians and public health researchers with the mission to improve the health and development of young children by informing policies that address and alleviate economic hardships.

www.childrenshealthwatch.org

THE HUNGER TO HEALTH COLLABORATORY (H2HC) was founded in 2018 by The Greater Boston Food Bank (GBFB) with generous support from the Stop & Shop Our Family Foundation. H2HC is an innovative national model that aligns food, health, and policy through an equity lens by convening cross-sector stakeholders, advocating for policy change, and supporting innovative research.

www.h2hcollaboratory.org

THE GREATER BOSTON FOOD BANK distributes the equivalent of more than 50 million healthy meals a year in its mission to end hunger here, feeding more than 140,000 people a month through its network 530 member agencies—food pantries, meal programs and shelters across Eastern Massachusetts.

www.gbfb.org