STATE of
CHILDHOOD OBESITY

Robert Wood Johnson Foundation

A project of the Robert Wood Johnson Foundation

Meeting the Moment

Learning From Leaders at the Forefront of Change

November 2022

Contents

Find this report and interactive data features on rates of childhood obesity and food insecurity, as well as policies and recommendations for helping all children grow up healthy, at stateofchildhoodobesity.org.

Introduction

Dear Friends,

The Robert Wood Johnson Foundation has been committed to preventing childhood obesity and helping all children grow up healthy for nearly 20 years. In that time we have collectively seen important and impactful policy and systems changes. We have seen communities come together to implement strategies to prevent childhood obesity. And we have seen more elected officials and other policymakers explore and act on prioritizing the needs of children and families.

But none of us would say we're satisfied with where things are today.

Where childhood obesity rates had begun to plateau, rates are, once again, on the rise, and we continue to see deep and persistent disparities. Where the popular narrative on what creates obesity had begun to shift toward an understanding of how our health is driven by community conditions, we're now seeing rises in stigmatizing and accusatory language that perpetuates anti-fat bias and enables finger-pointing. And where we've all identified the critical need for different, more comprehensive datasets to measure obesity, we've failed to produce them.

So, while we can (and absolutely should!) applaud the advances in policymaking and systems change we have seen, we've got a lot of work still ahead of us to understand and respond to the complexities of childhood obesity.

That is why I'm so grateful for partners, advocates, and leaders like *you*. It is *you* who lead the way. It is *you* who get out there every day and innovate, renovate, and motivate the field to keep going, keep trying, keep striving. And it is *you* who we at RWJF are looking to, to help us as we evolve our work to prevent childhood obesity, better understand how to expand opportunities for health within a community, and transform our food ecosystem to support opportunities for health and wellbeing for all who live in our country.

And because it is *you* who are at the helm of this effort, this year's report: *Meeting the Moment: Learning From Leaders at the Forefront of Change,* focuses on insights from community leaders and researchers like you whose lived experiences and expertise are inspiring us and guiding our thinking. I hope the stories and thinking within this report inform and inspire your work as they have done mine.

If you'd like to share your thoughts about how we can change policies and systems to help all children grow up healthy, please email me at: ideas@stateofchildhoodobesity.org.

In partnership,

Jamie Bussel

Jamie Bussel

SENIOR PROGRAM OFFICER

Robert Wood Johnson Foundation

Improving Our Health Data

For decades, the body mass index (BMI) measure has been the primary data point used to assess both individual weight and population-level trends in obesity rates. Datasets built on BMI have shown that obesity rates are higher now than they were a generation ago and that differences persist among racial, ethnic, and socioeconomic groups.[1]

However, there has been growing recognition in recent years that BMI is an overly simplistic ratio that is not a consistently useful or accurate measure of health.[2] This recognition has led many to begin to consider what other measures might be used or even whether tracking obesity rates in this way is useful at all.

RWJF is attentive to a range of other data in shaping our strategies to help all children grow up healthy and in defining what "healthy" means. This section explores shortcomings of BMI in more detail and describes some of the ways in which we are seeking to build additional datasets.

Expert Perspective

Health Is More Than Weight

For decades, we've relied on BMI, a simple ratio of height and weight, to tell us who is healthy and who is not. Today, it's clear that our overreliance on this measure has caused harm to the children and adults we're trying to help.

Anti-fat bias is widespread. And when we use BMI to put large-bodied people, including children, into categories of "obese" or "overweight," we inadvertently activate that weight-based stigma. This can cause lasting psychological trauma in kids—manifested through low self-esteem, stress, anxiety, isolation, and eating disorders—which in turn contributes to poor health outcomes.

In recent years, the limitations of BMI[3] have become clear:

- First, **BMI is a measure of body size; it is not a measure of health**. There are many large-bodied children and adults who are healthy according to metabolic measures.
- Second, **BMI measures weight; it doesn't measure body fat**. Obesity is defined as abnormal or excess adipose tissue that results in increased health risks. Yet BMI is a poor predictor of body fat, particularly for children under nine years.[4]
- Finally, **standards for BMI are based on Western ideals and European body types.** Developed 200 years ago, BMI subtly encodes biases about the ideal body size that have racist roots,[5] and is still based primarily on data from Euro-American body types. It does not acknowledge how different cultures might approach weight differently.

From the day they are born, we monitor our kids' weight. We ask at their birth: "What did the baby weigh?" And we ask as they grow: "What percentile are they in?"

We focus on weight to the exclusion of other conditions, prescribing diet and exercise and feeding into narratives about personal responsibility.

There is no universal ideal body nor a single size for good health. We need to move beyond a weight-centered view of health and avoid shaming and blaming those living in large bodies.

Learn more about the limitations of BMI at stateofchildhoodobesity.org.

> "It's time to acknowledge the limits of BMI in assessing individual health."

Ted Fischer

CORNELIUS VANDERBILT PROFESSOR OF ANTHROPOLOGY

Vanderbilt College of Arts and Science

Tatiana Paz Lemus

PROGRAM MANAGER

Vanderbilt Cultural Contexts of Health and Wellbeing Initiative

Research Highlight

Building the Evidence

Creating New Types of Data

The body mass index (BMI) measurement is simply that—a measure of body size—but it is not a comprehensive measurement of health. A better assessment of true community health must consider the impact of important issues like nutritional adequacy, upstream factors affecting food supply, nutritional assistance, and indicators of food quality and availability on every child's health and wellbeing.

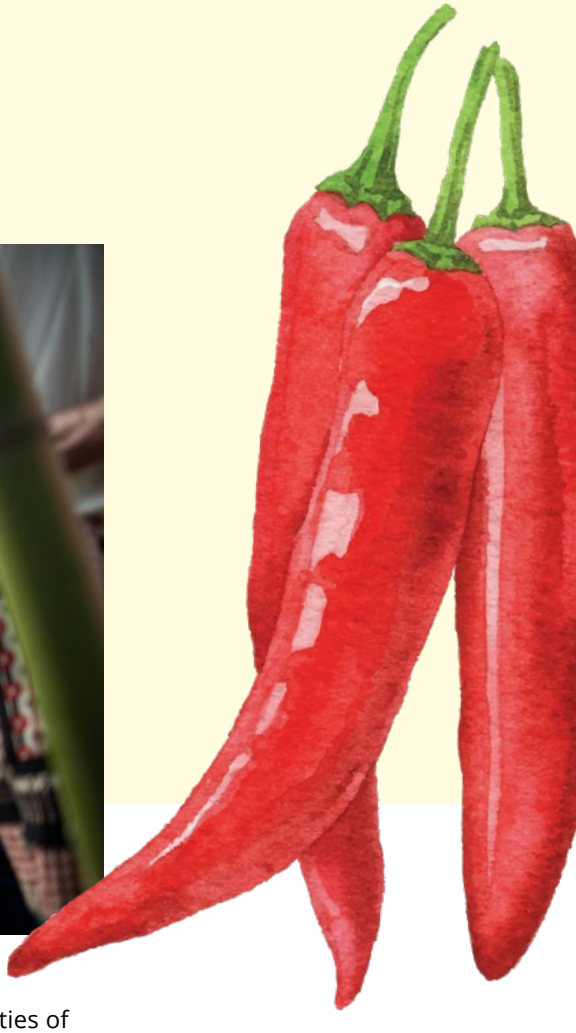
RWJF is pursuing two new research efforts that take this broader lens. The first is a partnership with the U.S. Department of Agriculture's (USDA's) Economic Research Service (ERS) to fund researchers from diverse academic disciplines and institutions to produce new science on food policy, food retail markets, consumer behaviors related to food purchases and diet, and USDA nutrition assistance programs—all of which factor into a child's health.

These grants will make ERS' valuable data on food and nutrition available to scientists, supporting research on relevant and timely evidence that informs the USDA, Congress, and the public about the food sector and about key national issues regarding food and health—such as food insecurity, obesity, diet quality, and nutrition assistance programs.

The second effort is through Healthy Eating Research (HER), a national program of RWJF. HER aims to understand how social and economic programs and policies related to poverty reduction during the COVID-19 pandemic have impacted child obesity, diet quality, food and nutrition security, and other relevant child and family health outcomes among families with low incomes and populations of color. The goal is to examine the impacts of a broader range of policy activity, including financial payments to families, income assistance programs, housing assistance or housing security programs, and increased access to social services.

By working to overcome structural barriers to equitable access to healthy food, RWJF aims to build healthier community conditions for all children and families. Learn more about these grants at stateofchildhoodobesity.org.

Creating Communities of Opportunity



Obesity is not solely a health outcome—it is an indicator of how healthy a community is or isn't. It is a key symptom of community conditions and systemic inequities.

The choices people make about their health and the health of their families are driven by the circumstances in which they live, what they have access to and can afford, and the choices and opportunities they have to thrive. Those choices and circumstances are shaped by policies and systems at all levels of government.

The COVID-19 pandemic has been a stark illustration of this, showing how disruptions to our employment, education, healthcare, food, and housing systems have profound consequences on our health and wellbeing. The consequences of these disruptions disproportionately impact communities of color and communities with low incomes, amplifying existing disparities in health for a whole generation of children. High, and rising, obesity rates are one indicator of these systemic failures.

Efforts for preventing childhood obesity must center on equity and address these systemic challenges—the social, economic, and physical factors that harm our health, including the long-standing structural racism that exists across all the systems that circumscribe our lives. This section offers insights from local leaders who are designing policies and programs to better support nutrition security, economic inclusion, racial justice, and community health.

Expert Perspective

Putting Health at the Center of Food Policy

Amy Trubek, PhD

PROFESSOR AND CHAIR
Department of Nutrition and Food Sciences, University of Vermont

Rebecca Mitchell

FOOD SYSTEMS RESEARCH AND ACTION COORDINATOR
Department of Nutrition and Food Sciences, University of Vermont

Where we live in Vermont, a rural state with a robust agricultural sector, accessing locally grown whole foods should be easy. Yet families with low incomes still struggle to afford fruits and vegetables, or even find them in their neighborhood stores.

Vermont's decision to enact free school meals for all students this year—and, hopefully, for years to come—is a crucial step to getting healthy, whole foods to all kids. But when we looked critically at inequities in food access, we realized that in order to help more families put whole foods on the table, we also have to create opportunities for local farmers.

For the most part, it is local farmers who can best feed our community, so we're working to understand their experience, and exploring possible solutions that could help them provide fruits and vegetables at an affordable price to consumers with low incomes.

These are some of the questions we're asking:

- How can we level the playing field for small farmers?
- What are the untapped markets for local farmers?
- Sugar, corn, and soybeans are all subsidized—what if we did the same for fruits and vegetables?
- What if we reframed the conversation about healthy foods to more explicitly include frozen produce?

Questions like these help us reconsider what's driving decisions about what food we grow, how we grow it, and why we are growing it in the first place: is it for nutrition or profit? And by thinking through these questions, we can work toward policy solutions that support our kids, our families, and our economy.

Learn more about how food policy can help promote health and economic inclusion at stateofchildhoodobesity.org.

> "Food is a basic human right: we all need it to survive and thrive. When we begin shaping policies with this in mind, we'll start to see meaningful progress toward a food system that not only promotes healthy foods and economic inclusion for farmers, but also benefits entire communities and future generations."

Community Story

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Healing the Land and the People

Challenged by broken food systems all around them, James and Joyce Skeet heeded the call to reconnect to Indigenous wisdom in starting Spirit Farm on the Navajo Nation—an experiential farm that recovers and reclaims traditional farming and spiritual practices through Indigenous regenerative agriculture.

James and Joyce saw how the impacts of colonization and poor health outcomes were inextricable—and how their community suffered from a commoditized and monocropped food system.[6] These food systems set out to address hunger, but create problems of their own—decreasing nutrition and plant diversity. "The obesity rate is so high… It's really difficult to get nutrient-dense foods here. So we continue to eat empty carbs, empty cardboard," James reflects.

"Our Native people have not been honored on the land. They've been dishonored on all levels," says James. "Our Indigenous economy has suffered against a dependency economy of hand-outs and governmental support just enough to survive, not to succeed.[7] Establishing local economies to regenerate local communities with an entrepreneurial spirit is crucial for our own existence and progression."

Spirit Farm was James' and Joyce's bid to reconcile with the land and teach others to grow food as medicine. At first, the farmland was degraded, exploited, and overgrazed. This affected how nutritious the foods grown could be, and in turn, how healthy the communities that consumed them could be. It was all connected.

So James and Joyce started with the soil. They composted and built bioreactors. They grazed Navajo-Churro sheep and used cover crops to improve the soil microbiome.

Every day, James and Joyce get to work on the farm—undesigning the systems that are not serving their community and returning to the ones that are most connected to the land, to Indigenous wisdom, and to adaptation.

Read the full story at stateofchildhoodobesity.org.

James and Joyce Skeet

FOUNDERS

Spirit Farm in McKinley County, New Mexico

"The counter to commodity is *culture* and *community*."

Building Equitable Food Systems

The food we eat is inextricably connected to our health. And yet, in the United States, the systems that move our food from farms and factories to our kitchen tables often do more to harm our health than support it.

Our food and nutrition policies are failing children at every level—fueling epidemics of hunger and chronic disease, and even destroying the earth from which our food is grown and cultivated. This is especially true in underserved communities and neighborhoods with low incomes, particularly those inhabited by Black, Brown, and Indigenous families. In these communities, nutritious foods are less available and less affordable, limiting children's opportunities to live a healthy life.

There has never been a more critical time for building racially just, sustainable food systems that not only improve access to healthy, affordable foods but also support leaders of color, empower communities, and address the effects of climate change.

Transforming policies and systems to achieve these advances will require working with local leaders to change food systems from the inside out—and taking into consideration not just what we're eating, but where our food comes from; how it's grown, priced, and sold; and how the workers who cultivate it are paid and treated. These efforts will help ensure that our food supply meets our nation's diverse and ever-evolving cultural and health needs.

As described in this section, redistributing decision-making power is essential for achieving these changes. We must ensure that residents who have the knowledge and lived experience to advance homegrown, sustainable solutions are engaged in shaping a food system that nourishes their health and wellbeing.

Expert Perspective

Powering Local Food Systems

Coming from a family of farmers in the Philippines, I grew up with a deep appreciation for the land. For my family and me, land represents so much more than a patch of ground that provides us with the food we need to survive; it's also a beautiful reminder of our heritage and the sense of connection created when people come together to grow food, care for, and feed their neighbors.

While my native country is rich in natural resources, I saw firsthand how the benefits and profits of growing crops—and the larger systems and policies that shape them—were not supporting the Filipino people who lived there and who nurtured the soil. The land, its resources, and its people have long been exploited, with much-needed food being exported, farmers struggling to earn a living wage or feed their families, and our communities—my fellow *kababayan*—hurting as a result.

Many families across the United States are facing similar challenges: experiencing hunger; lacking access to affordable, healthy, culturally relevant, and fresh food; and being economically excluded. These circumstances often exist because community members who are most impacted by inequities in the food system are excluded from opportunities to elevate their voices or influence where and how their food is produced, priced, or sold.

As we work to build better food systems that support health for all and economic inclusion, we must remember that those closest to the challenge are also closest to the solution.

That's why our team at Vital Village Networks is working to build capacity among emerging young leaders and empower them to lift up critical actions for creating healthy communities. We're helping people who have experienced hunger and inequity have a say in defining a food system that honors their ability to thrive. And we support solutions for investing in small farmers, including developing pathways that allow them to move from leasing their fields, gardens, and pastures to owning them.

Shifting the power structure at every level to create space and decision-making power for those who have been harmed, excluded, or marginalized by our current food systems can only create stronger, more equitable, and more sustainable communities—now, and in the years to come.

Learn more about strategies for powering local food systems at stateofchildhoodobesity.org.

Diana Rivera

PROGRAM MANAGER

Vital Village Networks

> "When we invest in redistributing the power and decision-making capacity in our food systems, we invest in health equity."

2022

Community Food Systems Fellows

Grantee Spotlight

—

Vital Village Networks

Community Food Systems Fellowship

Through its Community Food Systems Fellowship, Vital Village Networks is creating opportunities for emerging leaders who are committed to justice, equity, and improving their local food systems to promote health. Fellows engage in a peer-led space that supports them to think creatively about hunger, food insecurity, land access, and other challenges their communities are grappling with, and what it would take to achieve transformative change—not only as individual agents of change, but as a movement of grassroots leaders across the country committed to expanding agency and ownership of local food systems.

The program provides community leaders and leaders of color with the resources they need to learn from and with one another. It's designed to lift up the capacity of historically excluded groups, elevate their voices, and strengthen practices to engage their communities in building a food system that honors their ability to live a full and thriving life.

These fellows, based around the country, are building more equitable, sustainable food systems in many different ways. Fellows are forging new cross-sector partnerships and building businesses to support small farmers who have historically been denied the ability to own or access land. They are pooling resources across multiple farms to reduce costs, share equipment, and maximize purchasing power. They are building communal ties so that families are able to meet the farmers who provide the food they eat.

Some fellows are bringing gardens to schools and providing fully equipped mobile cooking carts to help food service staff turn produce into healthy meals and snacks for students. Others are passing their ancestral wisdom on to the next generation, helping young people practice sustainable ways to grow their own food and understand their traditional, cultural heritages.

While each fellow has a unique approach, a vision shared by all is honoring the dignity of every member of our food system—from our farm and factory workers to every child who eats a school lunch—and redesigning a system that meets their needs.

Learn more about the fellows at stateofchildhoodobesity.org.

Advancing Priority Policies

The coming year holds significant policy opportunities that will impact the health of millions of children and families for years to come. The Child Nutrition Reauthorization funds and guides many of the key programs that support healthy nutrition for children, including the school meal programs and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).[8] The Farm Bill guides the nation's agricultural policy and authorizes the Supplemental Nutrition Assistance Program (SNAP). This legislation has a major impact on food systems at every level, including farming and other professions that support how and where our food is grown, distributed, priced, and sold.[9]

We must maximize every opportunity to ensure that these policies and programs put the needs and health of children and families at the forefront. If we do, these policies and programs have the potential to improve access to healthy foods for all families, help prevent obesity, and transform our food ecosystem into one that advances equity.

SNAP

The Supplemental Nutrition Assistance Program (SNAP) is the nation's largest nutrition assistance program, helping roughly 40 million people afford food.[10] SNAP is proven to increase food security, improve children's health and academic performance, support economic growth, and lift people out of poverty.[11] A $1 billion increase in SNAP benefits during an economic downturn would increase GDP by $1.54 billion, support 13,560 new jobs, and create $32 million in farm income.[12]

COVID-19 Response

Legislation passed during the COVID-19 pandemic increased SNAP funding to cover millions of additional participants and provided a temporary 15 percent increase in monthly benefits.[13] Regulatory changes expanded eligibility and enabled more participants to use benefits online. Subsequent updates to the Thrifty Food Plan, which calculates food costs and uses nutrition research to determine SNAP benefit levels for all participants, provide SNAP participants with an additional $36 extra per month, on average—approximately a 27 percent increase compared with pre-pandemic benefit levels.[14] Despite these permanent increases, SNAP benefits still do not cover the cost of an average-price meal in 21 percent of U.S. counties.[15]

Recommendations

- Broaden SNAP eligibility to cover more college students, unemployed adults without children, and lawfully residing immigrants.
- Ensure the Thrifty Food Plan covers the cost of an average-price meal in every U.S. county.
- Streamline eligibility and enrollment processes and focus enrollment efforts on communities with low participation, including immigrants, people of color, and rural residents.
- Eliminate the lifetime ban on SNAP participation for convicted drug felons.
- Continue authorization and funding for the Gus Schumacher Nutrition Incentive Program (GusNIP) beyond 2023, to provide incentives for healthier SNAP purchases.

WIC

The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) serves about half of all infants born in the United States.[16] WIC benefits provide healthy foods and nutrition education to qualifying pregnant, postpartum, and breastfeeding women, infants, and children up to age 5. WIC also promotes breastfeeding, supports nursing mothers, and provides healthcare and social-service referrals.[17]

The WIC food package aligns with the latest U.S. Dietary Guidelines. In 2009, the WIC food package was updated to include more fruits, vegetables, whole grains, and lower-fat milk.[18] Following the changes, WIC participants are buying and eating more fruits, vegetables, whole grains, and low-fat dairy products.[19] Research also shows that WIC improves nutrition among both infants and young children, including by supporting healthy iron intake and reduced consumption of fat and added sugars.[20] Obesity rates among children ages 2 to 4 who participate in WIC declined from 15.9 percent in 2010 to 14.4 percent in 2018. The decline was statistically significant among racial and ethnic groups studied.[21]

COVID-19 Response

Emergency relief bills approved by Congress allocated nearly $1 billion to WIC to boost access, including via online purchases, to nutritious foods. The American Rescue Plan Act temporarily boosted the monthly fruit and vegetable benefit up to $35 per child and adult per month. The legislation allocates an additional $390 million to WIC through 2024.[22]

Recommendations

- Extend WIC eligibility to postpartum mothers through the first two years after the birth of a baby and to children through age 6. Enable infants and children to participate for two years before having to reapply.
- Make permanent the current waivers that have enabled families to access WIC services during the pandemic. These include allowing certification via phone or drive-thru clinics, extending certification periods, expanding the allowable food items for WIC shoppers, and continuing telehealth models.
- Ensure that all women who qualify for WIC based on income and nutritional risk are able to participate, regardless of citizenship or immigration status.
- Advance racial equity in WIC participation, including by making approved foods within the WIC packages more culturally relevant; providing targeted support based on health disparities; and establishing a process for equitable beneficiary participation in program design, implementation, and evaluation.
- Provide resources necessary for all states to implement WIC Electronic Benefit Transfer (EBT) and expand online purchasing options.
- Ensure updates to the WIC food package continue to be grounded in sound nutritional science and reflect the latest Dietary Guidelines for Americans.
- Increase the monthly Cash Value Benefit for purchases of fruits and vegetables.

School Meals

School meals prevent hunger and provide nutrients that kids need to learn and thrive. Before the pandemic, nearly 30 million children participated in the National School Lunch Program and nearly 15 million participated in the School Breakfast Program. Among participating students, 3 in 4 qualified for free and reduced-price meals.[23] Yet millions of kids were missing out on free meals due to the program's income eligibility guidelines and language and literacy barriers in the application process.[24]

Updated nutrition standards for school meals enacted in 2012 require more fruits, vegetables, and whole grains, and less sodium and saturated fats. School meals have become far more nutritious since the changes took effect, with student participation higher in schools offering the healthiest meals.[25] The healthier standards are also linked with lower rates of obesity among kids from families with low incomes.[26]

COVID-19 response

Relief measures passed by Congress in 2020 provided all students with access to school meals at no charge. Free school meals for all children has since expired, despite research showing that such policies reduce hunger, improve nutrition, help children succeed academically, support schools struggling financially, and eliminate school meal debt.[27]

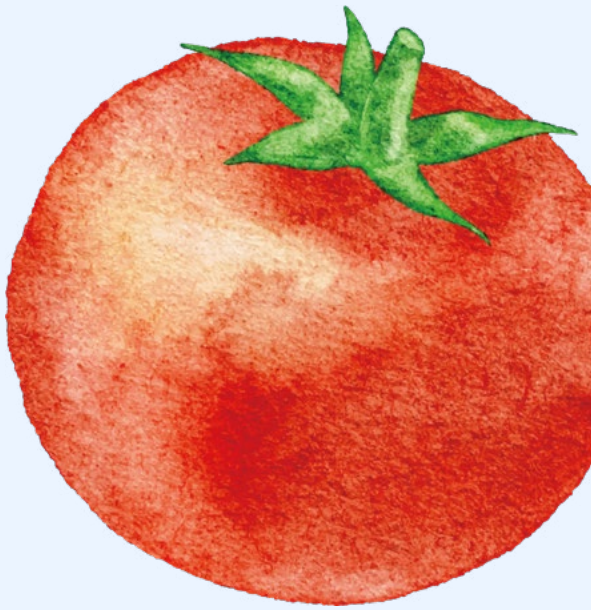
Recommendations

- Make healthy school meals for all children permanent.
- Strengthen nutrition standards for school meals to align with the current Dietary Guidelines for Americans, including a new standard for added sugars.
- Increase the reimbursement rate schools receive for serving meals that meet current nutrition standards.
- Increase funding to support schools' efforts to offer healthy meals, including resources for new school kitchen equipment, and training and technical assistance for school food service staff.
- Expand the Community Eligibility Provision that allows schools in high-poverty areas to serve free meals to all students, regardless of family income.
- Support state efforts to make school meals available to all children free of charge permanently and implement nutrition standards that go beyond the federal standards.

Appendix

The tables in this appendix provide state-by-state data on two intertwined challenges, childhood obesity and food insecurity. The food data measure factors related to food insecurity, which is when children or families lack consistent access to enough nutritious food for a healthy, active life. The childhood obesity data are based on BMI rates from federal data sources. Although those data present a limited picture of this challenge, they are the most widely available at the moment, so they can be useful in assessing the landscape.

The newest obesity prevalence data come from the National Survey of Children's Health, for youth ages 10 to 17. Nationally, there was a small increase in obesity of 1.5 percentage points from 15.5 percent in 2018-2019 (pre-COVID-19-pandemic) to 17.0 percent in 2020-2021 (pandemic). Rises in child obesity rates during the pandemic have been shown in other data sources but, to our knowledge, they have not been shown in nationally representative data sources yet.



Data Table

State-by-State Food Access

	Food Assistance for Children	Food Scarcity
National	**23.2%**	**11.5%**
Alabama	24.1	14.4
Alaska	16.6	10.9
Arizona	22.4	12.5
Arkansas	14.8	16.6
California	32.2	10.6
Colorado	22.1	9.0
Connecticut	21.3	10.4
Delaware	21.3	10.4
District of Columbia	26.8	8.6
Florida	26.8	8.6
Georgia	21.2	7.2
Hawaii	21.0	15.5
Idaho	8.2	12.9
Illinois	26.5	10.5
Indiana	20.5	15.1
Iowa	16.1	13.1
Kansas	20.6	7.6
Kentucky	21.4	10.3
Louisiana	24.4	13.3
Maine	14.6	9.5
Maryland	27.0	9.7
Massachusetts	40.0	9.5
Michigan	23.8	12.1
Minnesota	30.0	7.9
Mississippi	19.6	15.5
Missouri	8.8	10.0

Food Assistance for Children

Percentage of adults in the state who lived in households where children received food assistance in the last 7 days

Food Scarcity

Percentage of adults in households where there was either sometimes or often not enough to eat in the last 7 days

	Food Assistance for Children	Food Scarcity
National	**23.2%**	**11.5%**
Montana	14.9	15.1
Nebraska	10.5	9.2
Nevada	19.1	10.0
New Hampshire	11.9	8.1
New Jersey	10.4	11.6
New Mexico	27.3	10.9
New York	38.3	9.5
North Carolina	20.6	9.0
North Dakota	26.5	9.9
Ohio	30.7	10.1
Oklahoma	21.5	12.8
Oregon	20.2	7.3
Pennsylvania	16.2	13.3
Rhode Island	17.1	14.4
South Carolina	13.9	15.3
South Dakota	12.5	8.2
Tennessee	20.6	11.1
Texas	18.3	14.9
Utah	12.1	7.8
Vermont	17.3	9.6
Virginia	15.3	9.4
Washington	18.6	9.9
West Virginia	23.4	11.0
Wisconsin	22.1	8.2
Wyoming	18.6	11.4
SOURCE	https://www.census.gov/data-tools/demo/hhp/#/?measures=FOODFORCHLD	https://www.census.gov/data-tools/demo/hhp/#/?measures=FOODSCARCE&s_state=&areaSelector=st

Data Table

State-by-State Obesity Rates

	Youth Ages 10-17 (NSCH, 2020-2021)	WIC Participants Ages 2-4 (WICPCC, 2020)	Students in Grades 9-12 (YRBS, 2019)	Adults Ages 20+ (BRFSS, 2021)
National	**17.0%**	**14.4%**	**15.5%**	–
Alabama	22.1	15.6	17.2	39.9
Alaska	14.2	19.9	14.8	33.5
Arizona	14.4	13.1	13.3	31.3
Arkansas	19.1	13.9	22.1	38.7
California	14.4	17.0	15.9	27.6
Colorado	10.8	8.6	10.3	25.1
Connecticut	17.0	14.4	14.4	30.4
Delaware	16.8	18.5	–	33.9
District of Columbia	17.3	12.8	–	24.7
Florida	16.2	13.4	14	–
Georgia	16.8	12.9	18.3	33.9
Hawaii	17.1	10.7	16.4	25.0
Idaho	13.4	11.5	12.1	31.6
Illinois	16.1	15.1	15.2	34.2
Indiana	15.5	12.8	–	36.3
Iowa	17.6	15.8	17.0	36.4
Kansas	13.6	12.2	15.1	36.0
Kentucky	25.5	15.3	18.4	40.3
Louisiana	24.0	13.7	16.5	38.6
Maine	14.6	14.1	14.9	31.9
Maryland	20.3	17.0	12.8	34.3
Massachusetts	13.8	17.1	14.2	27.4
Michigan	17.1	13.8	15.3	34.4
Minnesota	13.4	11.6	–	32.4
Mississippi	23.1	14.4	23.4	39.1
Missouri	18.9	12.7	18.4	37.3

	Youth Ages 10-17 (NSCH, 2020-2021)	WIC Participants Ages 2-4 (WICPCC, 2020)	Students in Grades 9-12 (YRBS, 2019)	Adults Ages 20+ (BRFSS, 2021)
National	**17.0%**	**14.4%**	**15.5%**	–
Montana	10.2	10.8	11.5	31.8
Nebraska	13.6	14.6	13.3	35.9
Nevada	18.2	10.3	12.3	31.3
New Hampshire	15.2	16.1	12.7	30.6
New Jersey	16.1	15.4	11.9	28.2
New Mexico	20.9	12.7	15.2	34.6
New York	15.6	13.6	13.4	29.1
North Carolina	21.0	14.1	15.4	36.0
North Dakota	12.6	15.9	14.0	35.2
Ohio	15.8	12.5	16.8	37.7
Oklahoma	17.5	12.9	17.6	39.4
Oregon	14.5	14.7	–	30.4
Pennsylvania	16.0	13.1	15.4	33.3
Rhode Island	13.2	16.5	14.3	30.1
South Carolina	21.6	13.1	16.6	36.1
South Dakota	18.9	15.8	14.1	38.4
Tennessee	22.5	14.6	20.9	35.0
Texas	20.7	15.9	16.9	36.1
Utah	12.0	8.3	9.8	30.9
Vermont	15.7	14.6	13.1	29.0
Virginia	17.6	15.7	14.8	34.2
Washington	13.3	14.8	–	28.8
West Virginia	26.0	16.5	22.9	40.6
Wisconsin	14.9	15.2	14.5	33.9
Wyoming	11.5	11.6	–	32.0
More information:	stateofchildhoodobesity.org/demographic-data/ages-10-17	stateofchildhoodobesity.org/demographic-data/ages-2-4	stateofchildhoodobesity.org/demographic-data/high-school	stateofchildhoodobesity.org/demographic-data/adult

Descriptions of Datasets

U.S. Census Bureau Household Pulse Survey

The food scarcity and food assistance for children data come from the U.S. Census Bureau Household Pulse Survey. The Household Pulse Survey (HPS) is a 20-minute online survey studying how the coronavirus pandemic is impacting households across the country from a social and economic perspective.[28]

The HPS measures core demographic household characteristics and asks questions about COVID-19 vaccinations, education, employment, food sufficiency, household spending, household energy expenditures and consumption, housing security, physical and mental health, rental assistance from state and local governments, sexual orientation and gender identity, and transportation. The survey currently runs in a two-weeks-on, two-weeks-off pattern. The data included in this report were collected in August 2022.

National Survey of Children's Health

The National Survey of Children's Health (NSCH) collects health information for children ages 0 to 17 in the United States. Parents or caregivers are asked to report their child's height and weight, which is used to calculate body mass index (BMI) for children ages 10 to 17 years. BMI-for-age percentiles are then used to identify children who have obesity (i.e., BMI at or above the 95th percentile).

An advantage of the NSCH is that it supports both national and state-by-state estimates, so obesity rates among states can be compared. A limitation is that the survey collects parents' reports of their child's height and weight, not direct measurement. Parents may not always report accurate numbers, which impacts the assessment of obesity.[29] In addition, previous research found that parent-reported data were more reliable for children ages 10 to 17 than for younger children, which is why the survey currently does not release BMI calculations for children ages 0 to 9.

In recent years, the NSCH was significantly redesigned, and the 2016 survey was the first to reflect those changes. Due to changes in the survey's mode of data collection and sampling frame, it is not possible to directly compare results from the 2016 NSCH or later years to earlier iterations. Since 2016, the NSCH has been conducted as an annual survey and will continue to collect new data each year going forward, so that trends over time can be evaluated, with 2016 data serving as a new baseline.

In order to increase sample size and enable more reliable state-level estimates, after a large initial sample size in 2016, data are pooled for analyses across two collection years, in this case 2020 and 2021. The Health Resources and Services Administration's Maternal and Child Health Bureau (HRSA MCHB) funds and directs the NSCH and develops survey content in collaboration with a national technical expert panel and the U.S. Census Bureau,[30] which then conducts the survey on behalf of HRSA MCHB. The survey is conducted via web and mail, and data collection was not disrupted by the COVID-19 pandemic.[31]

WIC Participant and Program Characteristics

The WIC Participant and Program Characteristics (WICPPC) survey gathers data from all states on all WIC participants.[32] A strength of these data is that they are a census of all WIC participants and not just a sample of them. The data include height and weight measurements for children, which are collected by medical staff during certification visits, and then are used to calculate BMI and obesity rates among children ages 2 to 4. The data are gathered in April of even-numbered years, and analyzed by the Centers for Disease Control and Prevention (CDC).

Youth Risk Behavior Surveillance System

The Youth Risk Behavior Surveillance System (YRBSS) collects a wide range of health data on students in grades 9 through 12.[33] The survey is conducted every two years by the CDC nationally and by state departments of health and education. It is usually conducted during the spring. Results are available for most states, though Minnesota, Oregon, Washington, and Wyoming do not participate and sometimes other states are not able to collect enough responses to adequately report results.[34]

The survey asks students to self-report their height and weight and uses those data to calculate BMI rates and the percentage of students who have obesity. A limit of self-reported data is that people tend to over-report their height and under-report their weight, meaning the obesity rates may be underestimated. Because of sampling methodology, it is not possible to compare national rates with specific state-level rates.

Behavioral Risk Factor Surveillance System

The Behavioral Risk Factor Surveillance System (BRFSS) tracks adult obesity rates at the state level each year. The BRFSS is a health survey conducted via telephone, collecting health data from adults ages 18 and older from all 50 states, the District of Columbia, and participating U.S. territories.[35] The survey is administered by the states and the Division of Population Health in the National Center for Chronic Disease Prevention and Health Promotion. The survey includes questions asking respondents for their height and weight; these data are not directly measured.[36]

The self-reported height and weight data are then used to calculate obesity rates for each state, territory, and Washington, D.C. A limit of self-reported data is that people tend to over-report their height and under-report their weight, meaning the obesity rates may be underestimated.

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