Doing the Math: Addressing Social Determinants in Pediatric Obesity

Family & Community Health

Date Posted:

Jan 23, 2019

If you've ever tried to monitor your weight, you are likely familiar with the concept of trying to balance your "energy in" and "energy out." Using this logic, if your "energy in" is less than your "energy out," your weight will go down. In our day-to-day lives, however, achieving and maintaining a healthy weight is so much more complicated than simple arithmetic.

The math gets even more intricate when the equation involves a growing child. If a child begins to gain weight too quickly it is often due to a variety of factors, sometimes as small as an individual's behavior and biology and sometimes as large as our global food system. A child's local environment also notably influences the quality of foods that may be available to them, as well as their ability to be physically active. For instance, making healthy choices may be easier in a neighborhood with ample access to grocery stores and parks, as opposed to those with more fast food options and unsafe streets.

This variability makes the math behind weight gain in early childhood often too convoluted to make sense, creating a difficult situation for families to manage. This is particularly true for those grappling with additional social and environmental challenges. As medical providers in the Healthy Weight Program at Children's Hospital of Philadelphia (CHOP), which focuses on the care of children who are overweight or obese, we see that there are groups of children who have an increased risk of weight gain for reasons far beyond our "energy balance" equation. In order to address childhood weight concerns, we need to look not only at a child's physical health, but at all of the contextual factors that may be impacting a child's life and the lives of their family members.

The rise of childhood obesity

Alarmingly, more and more children are being diagnosed with severe obesity, meaning that their Body Mass Index (BMI) falls significantly above the growth charts that the Centers for Disease Control and Prevention (CDC) developed based on average child height and weight data between 1960 and 1990.

Currently about 14 percent of children two to five years of age have a BMI that is above the 95th percentile—falling into the classification of obesity—with nearly two percent of children younger than age five having severe obesity. Not surprisingly, these rates disproportionally affect our most vulnerable populations. The higher rate of severe obesity in preschool-aged children aligns with race and ethnicity, and several social determinants of health, including:

- Lower educational attainment in a caregiver,
- Living in a single-parent household
- And living below the poverty line.

Observing Healthy Weight Week reminds us that weight issues in childhood can have consequences far down the road. Children who grow up at an unhealthy weight are more likely to become teens and adults with high weight. In turn, high weight is associated with increased risk of cardiovascular issues, diabetes, cancer and many other serious health problems, ultimately lessening a person's quality of life and negatively impacting their overall well-being. That's why my colleagues at the Healthy Weight Program and at PolicyLab have made an effort to look more broadly at the tools caregivers need to help their children reach and maintain a healthy weight.

Looking at the full social & environmental picture to support family health

At the Healthy Weight Program at CHOP, we care for children who are gaining weight too quickly in the most comprehensive way possible. Our program uses a methodical, family-focused approach, incorporating the pediatric obesity management expertise of a multidisciplinary team composed of medical providers, registered dieticians, behavioral health specialists and physical activity specialists.

Prioritizing a family's social needs in the context of weight management is also critical. The program has a dedicated social worker who is committed to addressing these issues, helping to find support related to housing, parental well-being, educational concerns and other resource needs. One such factor we look at is food insecurity, one of the underlying social determinants of health that impacts a child's nutritional intake. We've seen that across the country, high-calorie, low-nutrient diets are more common, and families who don't live in a place with reliable access to healthy food may need to rely on this type of diet even more frequently. In light of this fact, the American Academy of Pediatrics recommends systematic assessment of whether a family has reliable access to food. This is especially important in the context of weight, where inconsistent access to healthy foods has been associated with disordered eating behaviors such as secretive and night-time eating.

Our work within the Healthy Weight Program expands on previous PolicyLab research showing it is both feasible to implement and acceptable to screen for food insecurity as part of pediatric care. Given the impact this issues has on children's health, we now screen every family at every visit, ensuring each family who screens positive receives additional counseling and help at the time of their visit.

Encouraging healthy eating through innovation

A promising new initiative launching today at CHOP will aim to bolster these efforts. A partnership with Giant has allowed us to create a "Food Pharmacy" within the Healthy Weight Program, enabling families identified at their appointment as food insecure to receive healthy foods that same day. This novel program expands upon our ability to acknowledge food insecurity from within our clinic walls, even though this issue may have previously been looked at as outside of our scope of practice. Our program is then able to reinforce the concept of "healthy food as medicine," identifying food insecurity as not only a social issue, but a medical one, too.

Providing access to healthy foods is one way to address health for both children and their caregivers, and we know that together with specialty clinics such as ours, the pediatric primary care setting offers an opportunity to provide these critical intergenerational family services. It is not until we meet the basic needs of a family that we can tackle the complicated health behaviors necessary for managing and maintaining a healthy weight—along with an array of other health concerns facing children and adolescents.

The math may not always be clear, but we are hopeful that programs like the "Food Pharmacy" will help us address some of the underlying factors impacting child health. By improving the clinical care we provide in a way that is truly family-centered, we can meet families where they are and balance out the healthy weight equation to make it a bit more fair for all children.

Jennifer Robbins, MD, MPH, is a former faculty member at PolicyLab at Children's Hospital of Philadelphia.

Saba Khan, MD, is an attending physician with the Healthy Weight Program at Children's Hospital of Philadelphia and the CHOP Care Network, and Director of CHOP's Food Pharmacy.

Saba Khan
Saba Khan
MBBS
Faculty Scholar