Early childhood health depends on consistent access to an adequate and nutritious diet. Unfortunately, one in five U.S. families with children under age six struggles to provide enough food to lead active, healthy lives (are food insecure). Research from Children’s HealthWatch has shown that young children under age four in food insecure households are at increased risk for hospitalizations, at risk of developmental delays, iron deficiency, and poor health. Among other interventions, governmental nutrition assistance programs, emergency food assistance networks, and hospital-based food pantries can help food-insecure families with young children obtain the food they need.

To identify young children living in households at risk for food insecurity, Children’s HealthWatch validated the Hunger Vital Sign, a 2-question food insecurity screening tool based on the US Household Food Security Scale. The Hunger Vital Sign measures families’ concerns about and access to food, much the way health care providers check other key vital signs, such as pulse and blood pressure. Healthcare providers, social service providers, community-based outreach workers, teachers, and anyone who works with young children can use the Hunger Vital Sign to identify young children and families who may need assistance.

The Children’s HealthWatch Hunger Vital Sign

Children’s HealthWatch validated the Hunger Vital Sign, a 2-question screening tool, suitable for clinical or community outreach use, that identifies families with young children as being at risk for food insecurity if they answer that either or both of the following two statements is ‘often true’ or ‘sometimes true’ (vs. ‘never true’):

• “Within the past 12 months we worried whether our food would run out before we got money to buy more.”

• “Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.”

* These two statements are the first two items in the US Food Security Scale.
Children at risk of food insecurity had worse health outcomes.

Mothers at risk of food insecurity were in worse mental and physical health.

How Does the Hunger Vital Sign Work?
The US Household Food Security Scale (HFSS) serves as the ‘gold standard’ in assessment and identification of food security. The Hunger Vital Sign is based on two questions from the HFSS. The Hunger Vital Sign was validated with a sample of 30,000 caregivers who sought pediatric care for their young children at one of five urban hospitals. It has a sensitivity of 97% (meaning that 97% of families identified as food insecure using the Hunger Vital Sign were identified as food insecure using the HFSS) and a specificity of 83% (meaning that 83% of families identified as food secure using the Hunger Vital Sign were identified as food secure using the HFSS). These rates of sensitivity and specificity are considered excellent in scientific publications.

What Does the Hunger Vital Sign Tell Us?
When compared to children under the age of four who screened as food secure using the Hunger Vital Sign, young children screening as at risk of food insecurity using the Hunger Vital Sign were:

- 56 percent more likely to be in fair or poor health
- 17 percent more likely to have been hospitalized
- 60 percent more likely to be at risk for developmental delays

Compared to mothers screened as food-secure, mothers screening as at risk of food insecurity were:

- Almost twice as likely to be in fair or poor health
- Almost three times as likely to report depressive symptoms

Apart from the harm to mothers themselves, poor maternal mental health affects mothers’ ability to provide care for their children, and can impede children’s development.

Putting the Hunger Vital Sign Into Action – Health Care Settings and Beyond
Health care providers can use the Hunger Vital Sign during routine primary or acute care visits as well as visits to the emergency room, treating food security as a vital sign just like temperature, blood pressure or pulse, all essential measurements for understanding a child’s health and prognosis. The screening tool is also very useful when incorporated into electronic medical records, so that it becomes part of the child’s medical history. The Hunger Vital Sign may also be used by emergency food assistance programs, community outreach workers, advocates, and social workers, among others.

Conclusion
The validated Children’s HealthWatch Hunger Vital Sign is a 2-item screening tool that provides a straightforward means of identifying families who struggle to access food and whose children are therefore at greater risk of fair or poor health, hospitalizations and developmental delays, and whose mothers are at greater risk of fair or poor physical and mental health. By routinely screening for food insecurity as a vital sign, healthcare providers and others who work directly with families of young children can connect families at risk of food insecurity with effective resources to sustain and improve their mental and physical health, reducing health care costs for the families and society as a whole.
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