



Position paper

Promoting Food Security Among Adolescents and Young Adults:
A Position Paper of the Society for Adolescent Health and Medicine

Society for Adolescent Health and Medicine

*Article history:* Received September 27, 2024; Accepted September 27, 2024

A B S T R A C T

Food security exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs for an active and healthy life. While there is a lengthy body of literature examining food insecurity among children, food insecurity among adolescents and young adults (AYAs) has been relatively understudied. The literature demonstrates that AYAs experiencing food insecurity have poorer physical, mental, and psychosocial health outcomes than their peers, which may persist into adulthood. As AYAs reach reproductive maturity, those experiencing food insecurity are more likely to have children who are also poorly nourished, perpetuating intergenerational poor nutrition and its associated health and socioeconomic costs. In this position paper, Society for Adolescent Health and Medicine (SAHM) recommends actions that healthcare professionals can take to achieve a goal of universal food security among AYAs. As SAHM strives to promote the optimal health of AYAs around the world, the positions in this paper affirm SAHM's commitment to promoting food security for all AYAs.

© 2024 Society for Adolescent Health and Medicine. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Society for Adolescent Health and Medicine Positions

1. Healthcare professionals should provide nonstigmatizing universal screening regarding food insecurity for all adolescents and young adults (AYAs).
2. AYAs experiencing food insecurity should be connected with clinic-based and community-based interprofessional support.
3. Healthcare professionals should consider multifactorial contributors when developing and implementing strategies for addressing food insecurity for AYAs.
4. Interventions developed to promote food security for AYAs should be culturally and locally relevant.

Statement of the problem

Food security exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life [1]. Food security is a multidimensional concept dependent on four key components [1].

Conflicts of interest: The authors have no conflicts of interest to declare. Address correspondence to: Maya Michelle Kumar, MD, Associate Professor of Pediatrics, University of California San Diego, 7910 Frost Street, Suite 450, San Diego, CA 92123. E-mail address: m8kumar@health.ucsd.edu (M.M. Kumar)

- Availability (the reliability and consistency of the food supply)
- Access (economic and physical factors that allow food to be obtained)
- Utilization (healthful cooking and eating practices, dietary diversity, and equitable distribution of food within a household)
- Stability (sustainability of food availability, access, and utilization over time)

The United Nations' Sustainability Development Goal of ending global food insecurity by 2030 was adopted by all United Nations Member States in 2015. Our ability to reach this goal was already tenuous [2], and recent global disruptions including war, natural disasters, climate change, and pandemics have posed additional challenges [3]. Furthermore, domestic food price inflation remains high, with many countries across the globe experiencing double-digit inflation rates, making affordable access to food even more challenging [4]. In 2022, a staggering 2.4 billion people, almost a third of the world's population, had moderate or severe food insecurity [3]. The urgency has never been greater to identify solutions to promote food security around the world.

While there is a large body of literature examining food insecurity among children as a group (0–18 years, with particular focus on children aged less than 5 years), the prevalence and

outcomes of food insecurity specifically among AYAs aged 10–25 years have been relatively understudied [5]. Data from the Global School-Based Student Health Survey found that 25%–30% of surveyed adolescents from 95 countries reported that they had experienced hunger due to insufficient availability of food in the previous 30 days [6], likely a significant underestimate as it excluded youth who were not attending school. Rapid growth and increased nutritional needs during adolescence can pose a financial strain on some families, particularly as allotted benefits from supplemental nutrition programs may not increase to meet these needs. Compared to peers who do not experience food insecurity, AYAs experiencing food insecurity have poorer diet quality, are less physically active, have poorer mental health, and have more school absences [6]. While causation cannot be determined, there is a strong association among AYAs between food insecurity and both substance use and sexual risk behaviors, including the exchange of sex for money [6,7]. These strong correlations exist even after adjustment for income, education, and other covariates associated with poverty, indicating that food insecurity is a more complex risk factor than a mere proxy for poverty [7].

Nutritional deficiency during adolescence conferred by food insecurity may lead to stunted growth and cognitive impairment that can persist into adulthood, which is associated with reduced educational attainment and productivity, leading to loss of human capital on a massive scale [8,9]. As AYAs reach reproductive maturity, those with food insecurity are more likely to have children who are also poorly nourished, perpetuating intergenerational poor nutrition and its associated health and socioeconomic costs [10].

As Society for Adolescent Health and Medicine (SAHM) strives to promote the optimal health of AYAs around the world, promoting food security for all AYAs is a critical part of our mission.

Methods

Members from the SAHM Nutrition, Eating Disorder, and Diversity Committees, encompassing disciplines in medicine, nursing, social work, and public health, and representing countries spanning North America, the Middle East, Asia, and Africa, were recruited to provide diverse and global perspectives on this complex and critical issue. Positions were developed based on a comprehensive review of the scientific literature, using search terms including “adolescent,” “young adult,” “transition age,” and “food security,” combined with “prevalence,” “risk factor,” “outcome,” “screening,” “school,” “health,” and “nutrition.” Sustainability and human rights goals along with accompanying recommendations established by the United Nations and its subsidiaries, as well as consensus opinion among the expert co-authors, were incorporated into positions.

Positions and Recommendations

Healthcare professionals should provide nonstigmatizing universal screening regarding food insecurity for all AYAs

It is critical for all nations, even those in which food insecurity is highly prevalent, to develop and implement nonstigmatizing universal screening practices. Universal screening for food security is recommended by the American Academy of Pediatrics,

the Food and Agricultural Organization, the American Diabetes Association, and the National Academy of Sciences [11–14].

More research is needed to gather global data available regarding food insecurity screening practices in general, and specifically for AYAs. A recent US survey found that only 40% of hospitals and 30% of physician practices screen patients for food insecurity despite the enormous impact of food insecurity on health outcomes [15]. One large cross-sectional study in the United States demonstrated that one-quarter of children who had been hospitalized in the last year had food insecurity, and a significant proportion were not enrolled in supplemental nutritional programs despite being eligible, demonstrating the magnitude of benefit that could be incurred from routine screening for food insecurity and subsequent connection to appropriate resources in healthcare settings [16]. Studies have shown that food insecurity screening can be conducted in a variety of healthcare settings and is acceptable to both professionals and patients [17]. Optimally, screening should be performed before making any dietary recommendations as the full context of the AYAs' accessible food resources needs to be elucidated first.

Healthcare professionals report that barriers to screening include (1) lack of time, (2) lack of knowledge of how to ask patients about food insecurity, and (3) discomfort with how to handle a positive screen [18,19]. Healthcare professionals may question the value of implementing universal screening for food insecurity in settings where food insecurity is essentially universal and/or there are few resources available to support individuals with positive screens. Concerns may be raised that universal screening in these settings may not actually confer benefit to individuals with food insecurity, and risk worsening feelings of hopelessness while increasing the professional's experience of moral distress. Despite this, the Food and Agricultural Organization continues to endorse universal measurement and monitoring of food security on a global scale [12]. Screening permits healthcare providers to identify those experiencing the most severe degree of food insecurity so they can be prioritized for resources, even in communities where food insecurity is widespread. Knowing that a patient is experiencing food insecurity permits the healthcare provider to provide emotional support, educate about appropriate coping strategies, and adjust medical treatment plans as needed (e.g., avoiding prescription of medications that must be taken with food) [20]. Even if a healthcare professional is unable to render any direct support in real time to an individual patient in front of them, “information regarding the distribution and severity of hunger and food insecurity in the population and the characteristics, circumstances, and location of those most affected can contribute to building political will, designing effective policies, and targeting allocation of resources. While information alone is clearly insufficient, it can be a powerful tool” [12]. Screening and information-gathering is a necessary first step in developing solutions to promote food security as a universal human right.

Universal screening for food security encompasses (1) implementation of screening practices in clinical settings, (2) selection of an appropriate screening tool, and (3) ensuring a compassionate and nonstigmatizing approach.

Implementation of screening. The Food Research and Action Center, in conjunction with the American Academy of Pediatrics, recommends that clinicians consider universal screening at

every healthcare encounter “including inpatient settings and subspecialty visits given the often cyclical and hidden nature of food insecurity,” but at a minimum screening should be prioritized during annual health surveillance visits, visits for nutrition-related conditions (e.g., weight concerns, eating disorders, food allergies, diabetes), emergency room visits, and hospital admissions [21]. Screening can be easily incorporated into existing clinical workflows with other routinely administered screening tools, without placing burden on the clinician to introduce the topic separately. The majority of patients believe that screening for food insecurity in healthcare settings is important and is a sign that their clinicians care about them [22].

Appropriate screening tools. The Hunger Vital Sign is a brief, highly sensitive and specific two-item questionnaire [23] that has been validated for use in AYAs [24]. This screen can be efficiently used in a variety of settings and includes the following two statements.

1. Within the past 12 months, we worried whether our food would run out before we got money to buy more (possible responses: Often True, Sometimes True, or Never True).
2. Within the past 12 months, the food we bought just didn't last and we didn't have money to get more (possible responses: Often True, Sometimes True, or Never True).

The Hunger Vital Sign is efficient and easy to use but has limitations. It does not assess the severity of food insecurity and may miss capturing individuals with more marginal food insecurity. It also only collects limited information about the respondent's experiences and behaviors related to food insecurity. In resource-poor settings, it is likely that the Hunger Vital Sign would be universally positive without providing sufficient information for next steps.

The Food and Agriculture Organization has developed and tested an eight-item questionnaire, the Food Insecurity Experience Scale (FIES), with the intent of establishing a global standard for the assessment of food insecurity [12]. While still brief, the scale assesses the degree of stress associated with procuring food and the experience of being hungry. Respondents answer “yes” or “no” to the following questions:

During the last 12 months, was there a time when, due to a lack of money or other resources,

1. You were worried you would run out of food?
2. You were unable to eat healthy and nutritious food?
3. You ate only a few kinds of foods?
4. You had to skip a meal?
5. You ate less than you thought you should?
6. Your household ran out of food?
7. You were hungry but did not eat?
8. You went without eating for a whole day?

The FIES has been piloted throughout Latin America, the Caribbean, the Middle East, Europe, Asia, and sub-Saharan Africa, and has been administered through the World Gallup Poll since 2014 [25], available in more than 200 languages. Data from the FIES are comparable across cultures and countries. The FIES is intended to provide actionable information (for healthcare professionals on a smaller scale and policymakers on a larger scale), allow identification of vulnerable groups and guidance of intervention, and monitor trends in prevalence and severity of food insecurity over time [12].

Compassionate and nonstigmatizing screening. Patients and caregivers may struggle to report or under-report food insecurity due to stigma, shame, and/or child protection concerns [18,26]. The following practices encourage caregivers to discuss food insecurity more comfortably, by building trust and conveying that the goal is to offer support; caregivers are appreciative when screening is done in this manner [18,19,21,22,27].

- Normalization of food insecurity discussions in the clinic (e.g., through universal screening practices);
- Demonstration of open body language and empathy;
- Initiation of conversations about food insecurity by a nurse or medical assistant rather than the physician;
- Establishment of a confidential setting for screening;
- Utilization of a paper or virtual screen (e.g., on a tablet) rather than verbal screening, which has been found to increase disclosure rates [27,28]; and
- Consideration of whether to conduct screening in the presence of younger children.

It is essential to respond with compassionate and nonjudgmental language when AYAs or their caregivers disclose food insecurity, acknowledging the critical role that food insecurity may be playing in physical and socioemotional health concerns.

Adolescents and young adults experiencing food insecurity should be connected with clinic-based and community-based interprofessional support

Interprofessional support is essential in healthcare and community-based agencies to address food insecurity successfully. It may be challenging to provide in busy clinical settings with variability in organizational capacity. Comprehensive support for AYAs must address living arrangements (e.g., housing insecurity, dividing time between two or more households), complex social stressors, and varying dietary needs, any of which may change food security status at any given time [24]. Healthcare professionals serving AYAs cannot provide comprehensive support in isolation; however, they can (1) partner with community-based organizations and (2) encourage optimized use and expansion of school feeding programs (SFPs).

Partner with community-based organizations. Clinical organizations may partner with community-based organizations by establishing co-located food resources. Examples include:

- food pharmacies or food pantries, in which community-based organizations and food banks can supply food to patients in clinical settings;
- farmers' markets or community gardens located on or near clinical campuses;
- “food prescriptions” for healthier eating, known globally as the “food as medicine movement;” and
- on-site assistance with applications for or referrals to food assistance programs (e.g., Supplemental Nutrition Assistance Program or the Special Supplemental Nutrition Program for Women, Infants, and Children Program in the United States) [29–31]. Many Women, Infants, and Children offices are co-located in healthcare clinics.

Availability and types of community-based assistance vary by country and healthcare system. They may include home-visiting nurses and social workers, community health workers (known in some areas as *promotores de salud*), and social health activists. Research has demonstrated that community health workers may be instrumental in improving food security and associated health outcomes [32].

Encourage optimized use and expansion of school feeding programs. Healthcare professionals can encourage AYAs to use available school-based programs that promote food security. Globally, the majority of adolescents aged 17 years and less are enrolled in school [33]; therefore, school-based interprofessional support has the potential to overcome many barriers that contribute to health disparities and can reach those at greatest risk of food insecurity. Over time, the mission of schools has broadened from solely academic achievement to include feeding students, both during and outside the school day. The importance of comprehensive SFPs is recognized by the 2006 World Food Program guidelines, which recommends that SFPs be integrated into the school environment, including nutrition education, nutrition policies, and the provision of nutritious food in schools. Similarly, the *Whole School, Whole Community, Whole Child* model, the Center for Disease Control's framework for addressing health within schools, recognizes that a collaborative approach is necessary between education and health professionals to address complex needs in school communities including food security [34]. Worldwide, the majority of countries have SFPs, most of which are publicly funded and universally provided at no cost to students [35]. In fact, SFPs have been described as “the world's most extensive social safety net,” providing a 20-fold return on investment with both immediate and long-lasting impacts [36].

Healthcare professionals can also advocate for the expansion of free and universal SFPs. Universally free SFPs have been found to be associated with increased meal participation, improved diet quality and food security, increased household income, and improved academic performance [37]. Making free SFPs universally available also serves to reduce stigma associated with their use, which can further improve access [37]. In recognition of these benefits and in an attempt to reduce health disparities, the US Department of Health and Human Services Community Preventive Services Task Force now recommends “Healthy School Meals for All” to increase the number of schools that provide universally free SFPs through the existing US Department of Agriculture programs [38].

Low-income households with school-aged children face “seasonal” worsening of food insecurity during the summer months when children are no longer receiving school meals [39–41]. One study found that less than 15% of American youth who received school meals during the school year received meals from SFPs during the summer months [41]. Comprehensive SFPs must be universally expanded to support children and youth all year long. For example, one pilot program in the United States offered a Summer Electronic Benefit Transfer Program to households with youth who qualified for free or reduced-price lunches during the school year; the program significantly reduced the incidence of very low food security and improved dietary quality over the summer months [42].

Healthcare professionals should consider multifactorial contributors when developing and implementing strategies for addressing food insecurity for AYAs

Healthcare professionals should consider developmental, socioeconomic, and intersectional identities when developing and implementing strategies for addressing food insecurity for AYAs. Adolescence and young adulthood are dynamic periods of physical, emotional, and social development with major transitions in education, economic, and social independence that impact access to food. As they grow, AYAs may have increasing control over their finances and capacity for future planning, which may lead to greater ability to budget and obtain food, make their own food choices, and prepare food. During the shift from adolescence into young adulthood, they may experience changes in the settings in which they buy, prepare, and eat food, making them vulnerable to food insecurity. They may lose access to school-based nutrition programs. They may also stop receiving support from their families' supplemental nutrition assistance programs and other public benefits including health insurance, limiting their resources for buying food. As they transition out of their family homes, they may live in dorms or other shared living spaces that may not have areas or facilities to safely prepare or store food; even if available, AYAs may lack the necessary skills to prepare food for themselves. In addition, young adults face many financial strains, including educational costs, low-paying jobs, and supporting their families, possibly including children of their own.

Certain populations of AYAs, including those experiencing social marginalization, may be at higher risk for food insecurity [5]. For examples of populations that may face unique barriers to food security and require additional support, see [Appendix A](#). Of note, these populations may face an elevated risk of physical and mental health complications, which can further exacerbate food insecurity [6]. For example, immigration status can directly limit access to public benefits or create reluctance to use available resources due to fear of placing oneself or a loved one in an exposed or compromised position [43]. Globally, child marriage is an example of a crisis that perpetuates and is perpetuated by food insecurity [44]. Children, primarily girls, may be forced into marriage to relieve the family's economic burdens, and adolescents may consent to marriage as a survival strategy and/or to escape a deprived environment. Children entering into marriage with inadequate socioeconomic capital and potential loss of their reproductive autonomy are at high risk for experiencing food insecurity. Married children also frequently drop out of school, which further compromises food security by reducing access to SFPs [45]. Climate change and global pandemics have been shown to increase both food insecurity and child marriages [44].

Healthcare providers who care for marginalized populations can use a developmental lens to support a safe transition to adulthood that includes protection of food security. AYAs require developmentally appropriate resources to keep them informed about how their access to different food resources may change as they get older. During clinical care visits, healthcare providers can adopt the following practices.

- Provision of anticipatory guidance to emerging young adults about how to independently enroll in supplemental nutrition programs when they come of age;

- Encouragement for youth to remain in school as long as possible to maintain access to SFPs and attain sufficient education to seek well-paying jobs;
- Provision of barrier-free access to contraception for youth who wish to delay childbearing, as well as nutrition resources to support pregnant, parenting, and breastfeeding youth; and
- Offering resources such as cookbooks or online resources that provide basic cooking instructions and simple recipes that can be prepared on a budget, and/or information about community cooking classes.

Healthcare providers can also advocate for

- Food resources on college campuses including food pantries, subsidized groceries and farmers' markets, cooking classes, and on-site assistance with enrollment for supplemental nutrition programs;
- Expansions of pediatric supplemental nutrition programs to include
 - Extended support for both adolescents and transitional-aged young adults;
 - Additional allocations for youth who require high-calorie diets, modified diets, or nutritional supplements due to an eating disorder or underlying medical condition;
 - Broader inclusion of noncitizens in eligibility requirements; and
- Universal access to high-speed internet to better allow a digital generation of youth to seek food resources and enroll in safety net programs.

Interventions developed to promote food security for adolescents and young adults should be culturally and locally relevant

Local and regional advocates and policymakers need to create culturally responsive interventions to promote consistent and effective delivery of nutritionally adequate diets [3,46]. This includes thoughtful development of regional food systems, promotion of culturally and regionally relevant foods and nutritional practices, and addressing associated social determinants of health.

Regional food systems. Regional food systems must secure the accessibility, availability, utilization, and stability of food resources. Transformation of regional food systems to meet these goals requires different local trade-offs and synergies, such as rebalancing regional agricultural policies and food supply chains at all stages. Healthcare providers can advocate for:

- regionally specific policies and programs with meaningful AYA engagement for making nutrient-rich and safe foods available and accessible;
- safe food storage practices including temperature control during transportation;
- public health resources to protect the food supply chain from disruption by war, economic recession from pandemics, climate change, and natural disasters [5];
- international co-operation permitting safe cross-border transportation of food, including humanitarian aid where necessary;
- targeted financial support to local agricultural industries to lower food costs for vulnerable populations [3,46]; and
- involvement from Food Policy Councils to promote inclusivity and transparency as infrastructure is developed to support

regional food supply and distribution; AYAs and AYA Health professional groups may be included on such councils [47].

Culturally and regionally relevant food and nutrition practices. Healthcare providers can support the development of country-specific dietary guidelines based on foods that are locally available, accessible, and culturally appropriate for their population [36]. These guidelines should meet energy, macronutrient, and micronutrient requirements and address the country's most relevant nutritional concerns. For example, the United Nations declared 2023 the International Year of Millets to encourage the cultivation of ancestral, climate-resilient, and nutrient-rich millet cereals to promote food security, sustainability, diversity, and economic self-reliance, especially in lower- and middle-income countries [48]. Food Policy Councils can enhance the availability of culturally significant foods through representation of consumers and racial and ethnic minority farmers and businesses [47].

Culturally and regionally relevant nutrition education, including healthful cooking and food storage practices, can be developed for AYAs and their families and disseminated through schools, community and religious groups, and healthcare providers. Healthcare providers can advocate for accurate food labeling with culturally and spiritually relevant health information (e.g., kosher, halal, vegetarian).

Addressing associated social determinants of health. In countries with high income inequality, positive effects of overall economic growth are less likely to improve food security on an individual level [49]. In nations with high income inequality, in addition to addressing health issues worsened by food insecurity, essential discussions with AYAs and their families should include broader social determinants of health. This includes employment opportunities, safe and stable housing, access to healthcare, health literacy, and expanded social support programs and public assistance [4–6,47,49].

Summary

Access to food adequate for health and well-being is a universal human right [50]. As SAHM strives to promote the optimal health of AYAs around the world, promoting food security for all AYAs is a critical part of our mission. Using the recommendations in this position paper, SAHM members can weave this goal into clinical practices, avenues of advocacy, educational activities, public health roles, and scholarly activities in every country and community. The positions in this paper affirm SAHM's unwavering commitment to promoting food security for all AYAs.

Authors.

Lead Author.

Maya Michelle Kumar, M.D.
Division of Adolescent and Young Adult Medicine,
Department of Pediatrics,
University of California San Diego,
San Diego, California

Other Authors.

Marissa Raymond-Flesch, M.D., M.P.H.
Division of Adolescent and Young Adult Medicine,
Philip R. Lee Institute for Health Policy Studies,

University of California, San Francisco,
San Francisco, California

Taylor Argo, M.D.
Assistant Professor of Pediatrics,
General Pediatrics and Adolescent Medicine,
Children's Hospital of Michigan,
Detroit, Michigan

Michele A. Kelley, Sc.D., M.S.W., M.A.
Associate Professor Emerita of Maternal and Child Health, School
of Public Health,
The University of Illinois at Chicago (UIC),
Herriman, Utah

Nuray Kanbur, M.D.
Professor of Pediatrics,
Department of Pediatrics,
University of Ottawa,
Division of Adolescent Health & Eating Disorders Program,
Children's Hospital of Eastern Ontario (CHEO),
Ottawa, Ontario, Canada

Preeti Galagali, M.D.
Director and Consultant Adolescent Health Specialist,
Bengaluru Adolescent Care and Counselling Centre,
Bengaluru, Karnataka, India

Janice Key, M.D.
Professor of Pediatrics,
The Medical University of South Carolina,
Director of the Boeing Center for Children's Wellness,
Charleston, South Carolina

Lisa Mihaly, F.N.P.-B.C.
Associate Clinical Professor,
Co-Director Family Nurse Practitioner Program,
Department of Family Health Care Nursing,
School of Nursing,
Nursing Faculty,
Division of Adolescent and Young Adult Medicine,
University of California,
San Francisco, San Francisco, California

Maria Veronica Svetaz, M.D., M.P.H.
Assistant Professor,
Family Medicine and Community Health,
University of Minnesota School of Medicine,
Minneapolis, Minnesota

Njeri Ruth Karianjahi, M.D.
Department of Paediatrics,
Gertrude's Garden Children's Hospital,
Nairobi, Kenya

References

- [1] Guiné RPF, Pato MLJ, Costa CAD, et al. Food security and sustainability: Discussing the four pillars to encompass other dimensions. *Foods* 2021; 10:2732.
- [2] United Nations. The sustainable development goals report 2023: Special edition. New York, NY: United Nations; 2023.
- [3] Food and Agricultural Organization. The state of food security and nutrition in the world 2023. Available at: <https://www.fao.org/3/cc3017en/online/cc3017en.html>. Accessed January 22, 2024.
- [4] World Bank. Food security | rising food insecurity in 2023. Available at: <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update>. Accessed January 22, 2024.
- [5] Dush JL. Adolescent food insecurity: A review of contextual and behavioral factors. *Public Health Nurs* 2020;37:327–38.
- [6] Fram MS, Nguyen HT, Frongillo EA. Food insecurity among adolescent students from 95 countries is associated with diet, behavior, and health, and associations differ by student age and sex. *Curr Dev Nutr* 2022;6:nzac024.
- [7] Nagata JM, Palar K, Gooding HC, et al. Food insecurity, sexual risk, and substance use in young adults. *J Adolesc Health* 2021;68:169–77.
- [8] Das JK, Salam RA, Thornburg KL, et al. Nutrition in adolescents: Physiology, metabolism, and nutritional needs. *Ann N Y Acad Sci* 2017;1393:21–33.
- [9] Arora A. The global strategy for Women's, Children's and adolescents' health (2016–2030). Available at: <https://www.who.int/publications-detail-redirect/A71-19>. Accessed January 22, 2024.
- [10] Victora CG, Adair L, Fall C, et al. Maternal and child undernutrition: Consequences for adult health and human capital. *Lancet* 2008;371:340–57.
- [11] Council on Community Pediatrics, Committee on Nutrition. Promoting food security for all children. *Pediatrics* 2015;136:e1431–8.
- [12] Ballard TJ, Kepple AW, Cafiero C. The food insecurity experience scale: Developing a global standard for monitoring hunger worldwide. Technical Paper. Rome: Food and Agriculture Association; 2013.
- [13] American Diabetes Association. 1. Strategies for improving care. *Diabetes Care* 2016;39:S6–12.
- [14] Committee on the Recommended Social and Behavioral Domains and Measures for Electronic Health Records, Board on Population Health and Public Health Practice, Institute of Medicine. Capturing social and behavioral domains and measures in electronic health records: Phase 2. Washington, DC: National Academies Press (US); 2015.
- [15] Frazee TK, Brewster AL, Lewis VA, et al. Prevalence of screening for food insecurity, housing instability, utility needs, transportation needs, and interpersonal violence by US physician practices and hospitals. *JAMA Netw Open* 2019;2:e1911514.
- [16] Banach LP. Hospitalization: Are we missing an opportunity to identify food insecurity in children? *Acad Pediatr* 2016;16:438–45.
- [17] De Marchis EH, Torres JM, Fichtenberg C, et al. Identifying food insecurity in health care settings: A systematic scoping review of the evidence. *Fam Community Health* 2019;42:20–9.
- [18] Barnidge E, Krupsky K, LaBarge G, et al. Food insecurity screening in pediatric clinical settings: A caregivers' perspective. *Matern Child Health J* 2020;24:101–9.
- [19] Taher S, Persell SD, Kandula NR. Six recommendations for accelerating uptake of national food security screening in primary care settings. *J Gen Intern Med* 2022;37:1531–3.
- [20] Patil SP, Craven K, Kolasa K. Food insecurity: How you can help your patients. *Am Fam Physician* 2018;98:143–5.
- [21] Ashbrook A, Essel K, Montez K, Bennet-Tejes D. Screen and intervene: A toolkit for pediatricians to address food insecurity. Washington (DC): Food and Research Action Center; 2021.
- [22] Kopparapu A, Sketas G, Swindle T. Food insecurity in primary care: Patient perception and preferences. *Fam Med* 2020;52:202–5.
- [23] Hager ER, Quigg AM, Black MM, et al. Development and validity of a 2-item screen to identify families at risk for food insecurity. *Pediatrics* 2010;126:e26–32.
- [24] Baer TE, Scherer EA, Fleegler EW, et al. Food insecurity and the burden of health-related social problems in an Urban youth population. *J Adolesc Health* 2015;57:601–7.
- [25] Food and Agricultural Organization. Food insecurity experience scale | voices of the hungry | Food and Agriculture Organization of the United Nations. Available at: <https://www.fao.org/in-action/voices-of-the-hungry/fies/en/>. Accessed January 5, 2024.
- [26] Barnidge E, Stenmark S, Seligman H. Clinic-to-community models to address food insecurity. *JAMA Pediatr* 2017;171:507–8.
- [27] Cullen D, Woodford A, Fein J. Food for thought: A randomized trial of food insecurity screening in the emergency department. *Acad Pediatr* 2019;19:646–51.
- [28] Palakshappa D, Goodpasture M, Albertini L, et al. Written versus verbal food insecurity screening in one primary care clinic. *Acad Pediatr* 2020;20:203–7.
- [29] Daly A, Sapra A, Albers CE, et al. Food insecurity and diabetes: The role of federally qualified health centers as pillars of community health. *Cureus* 2021;13:e13841.
- [30] Downer S, Berkowitz SA, Harlan TS, et al. Food is medicine: Actions to integrate food and nutrition into healthcare. *BMJ* 2020;369:m2482.

Supplementary Data

Supplementary data related to this article can be found at <https://doi.org/10.1016/j.jadohealth.2024.09.024>.

- [31] Fernald LCH, Gosliner W. Alternatives to SNAP: Global approaches to addressing childhood poverty and food insecurity. *Am J Public Health* 2019;109:1668–77.
- [32] Peretz PJ, Islam N, Matiz LA. Community health workers and Covid-19 — addressing social determinants of health in times of crisis and beyond. *N Engl J Med* 2020;383:e108.
- [33] Global Education Monitoring Report Team UI for S. New estimation confirms out-of-school population is growing in sub-Saharan Africa. France: UNESCO; 2022.
- [34] Whole School. Whole community, whole child (WSCC) | healthy schools | CDC. Available at: <https://www.cdc.gov/healthyschools/wsc/index.htm>. Accessed January 19, 2024.
- [35] Cupertino A, Ginani V, Cupertino AP, et al. School feeding programs: What happens globally? *Int J Environ Res Public Health* 2022;19:2265.
- [36] UNESCO. Ready to learn and thrive: School health and nutrition around the world; highlights. Paris, France: UNESCO; 2022.
- [37] Cohen JFW, Verguet S, Giyose BB, et al. Universal free school meals: The future of school meal programmes? *Lancet* 2023;402:831–3.
- [38] Community Preventative Services Task Force. CPSTF Finding – social determinants of health: Healthy school meals for all. Available at: <https://www.thecommunityguide.org/pages/tffrs-social-determinants-health-healthy-school-meals-all.html>. Accessed January 22, 2024.
- [39] Nord M, Romig K. Hunger in the summer: Seasonal food insecurity and the national school lunch and summer food service programs. *J Child Poverty* 2006;12:141–58.
- [40] Huang J, Barnidge E, Kim Y. Children receiving free or reduced-price school lunch have higher food insufficiency rates in summer. *J Nutr* 2015;145:2161–8.
- [41] Hayes C, Boone K, FitzSimons C. Hunger doesn't take a vacation: Summer nutrition status report. Washington, DC: Food Research & Action Center; 2023.
- [42] Collins AM, Klerman JA, Briefel R, et al. A summer nutrition benefit pilot program and low-income children's food security. *Pediatrics* 2018;141:e20171657.
- [43] Hager K, Bovell-Ammon A, Ettinger de Cuba SA, et al. Children's HealthWatch: Disparities in household food insecurity by immigration, Race, and Ethnicity. Boston, MA: Children's HealthWatch; 2018.
- [44] Gambir K, Matsika AB, Panagiotou A, et al. Associations between child marriage and food insecurity in Zimbabwe: A participatory mixed methods study. *BMC Public Health* 2024;24:13.
- [45] Kumar P, Patel SK, Debbarma S, et al. Determinants of School dropouts among adolescents: Evidence from a longitudinal study in India. *PLoS One* 2023;18:e0282468.
- [46] FAO. In: Transforming Food Systems for Affordable Healthy Diets. Rome: FAO; 2020.
- [47] Halliday J, Torres C, van Veenhuizen R. Special issue: Food policy councils. *Urban Agric Mag* 2019;36:1–51.
- [48] Food and Agricultural Organization. Unleashing the potential of millets. Rome (Italy): FAO; 2023.
- [49] Holleman C, Conti V. Role of income inequality in shaping outcomes on individual food insecurity. Rome (Italy): FAO; 2020.
- [50] United Nations DC. Universal declaration of human rights. Paris, France: United Nations; 1948.