2024-2025 SPECIAL COLLECTION

NOPREN
Nutrition & Obesity
POLICY RESEARCH & EVALUATION NETWORK

About the 2024-2025 NOPREN Special Collection

The NOPREN Special Collection features peer-reviewed publications authored by NOPREN members in 2024-2025. This curated collection showcases the impact of NOPREN's collaborative research and evaluation activities. It spotlights the many ways in which NOPREN member's research has informed nutrition policy and practice at the national, state, and local levels. Included in the collection are articles on early childhood, drinking water access, federal nutrition assistance programs, rural food access, and pediatric obesity.

Article Key Words

- ***Drinking Water***
- ***Early Childhood***
- ***Food Policy Councils***
- ***Food Security***
- ***Food Service Guidelines***
- ***Pediatric Obesity***
- ***Resilient Food Systems***
- ***School Wellness***
- ***WIC***

Articles

1. CHILD AND ADULT CARE FOOD PROGRAM: FAMILY CHILDCARE HOME PROVIDERS' PERCEPTIONS OF IMPACTS OF INCREASED MEAL AND SNACK REIMBURSEMENT RATES DURING THE COVID-19 PANDEMIC

Ritchie, L. D., Bacon, K. A., Felix, C., Lee, D. L., Marshall, S. K.-D., Vitale, E. H., & Matias, S. L. (2024). Child and Adult Care Food Program: Family Childcare Home Providers' Perceptions of Impacts of Increased Meal and Snack Reimbursement Rates during the COVID-19 Pandemic. Nutrients, 16(19), 3241–3241. https://doi.org/10.3390/nu16193241

Abstract:

The U.S. Child and Adult Care Food Program (CACFP) provides tiered reimbursements for healthy foods for children at participating family childcare homes (FCCH). Higher tier 1 reimbursements are for providers who operate in low-income communities or who are themselves living on a low income. All FCCHs received a higher rate to address food insecurity during the COVID-19 pandemic. Methods: A survey was administered in the spring of 2023 to a randomly selected sample of licensed California FCCHs to assess the perceived impacts of the increased reimbursement on CACFP participation and anticipated challenges with reinstated tiered rates. A total of 518 surveys (261 tier 1, 257 tier 2) were analyzed using linear or logistic regression, adjusting for confounders. Results: Among tier 1 and tier 2 providers combined, over half reported lowering out-of-pocket spending for food (59%) and serving greater variety (55%) and quality (54%) of foods. Tier 2 providers reported experiencing more benefits ($p < 0.05$) and tended to be more likely to implement optional CACFP best practices (although not significantly different between tiers). Most FCCH providers found reimbursement rates were inadequate before (83%) the pandemic; this amount decreased to 54% post-pandemic for tier 1 and tier 2 providers combined. Conclusions: The temporary CACFP reimbursement positively impacted the perceived quality and variety of foods served to children, especially among tier 2 providers. Increased reimbursements for all FCCHs may ensure children have access to the healthy meals and snacks provided by the CACFP.

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2. CHILD BEVERAGE CONSUMPTION IN US EARLY CARE AND EDUCATION SETTINGS, 2008-2020

Zaltz, D. A., Neff, R. A., Ritchie, L. D., Chriqui, J. F., & Benjamin-Neelon, S. E. (2025). Child Beverage Consumption in US Early Care and Education Settings, 2008–2020. Journal of Nutrition Education and Behavior, 57(5). https://doi.org/10.1016/j.jneb.2025.01.005

Abstract:

Objective

Describe young children's beverage intake in early care and education (ECE) settings between 2008 and 2020 across multiple states in the US.

Methods

Multivariable-adjusted, age-stratified estimates of beverage consumption among children aged 12–60 months (n = 4,457) in ECE centers and homes (n = 846).

Results

During any given day in ECE, younger children had a 79.7% per-meal probability of consuming milk, 8.9% water, 19.8% 100% juice, and 3.2% sugar-sweetened beverages (SSBs), and a per-meal mean intake of 1.5 oz milk, 1.7 oz water, 2.2 oz 100% juice, and 2.9 oz SSBs. Older children had an 87.2% probability of consuming milk, 0.6% water, 2.9% 100% juice, and 4.2% SSBs, and a mean intake of 4.2 oz milk, 2.3 oz water, 3.6 oz 100% juice, and 5.9 oz SSBs.

Conclusions and Implications

There is room to improve beverage intake in ECE, with a focus on increasing water and decreasing juice and SSB consumption. These results may justify policies to limit or prohibit juice consumption in ECE.

3. CLOSING THE GAP BETWEEN EVIDENCE AND PRACTICE FOR CHILDHOOD OBESITY TREATMENT

Button, A. M., Staiano, A. E., & Seligman, H. K. (2023). Closing the Gap Between Evidence and Practice for Childhood Obesity Treatment. Childhood Obesity, 20(6). https://doi.org/10.1089/chi.2023.0136

Abstract:

The 2023 release of the American Academy of Pediatrics' clinical practice guidelines on the treatment of child and adolescent obesity[1] highlighted a major gap between the extensive evidence on safe effective treatment and the availability of these services for the one in five U.S. children affected by obesity.[2] Also launched in 2023, the Pediatric Obesity Health Services Research Work Group of the Nutrition and Obesity Policy Research and Evaluation Network aims to study and advance implementation of equitable evidence-based practices and policies for pediatric obesity prevention and treatment.

To facilitate this aim, 183 interdisciplinary attendees joined a video conference in June 2023 to discuss the future of health services for youth with obesity and determine the critical gaps. This editorial summarizes the overarching themes identified

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4. COST-EFFECTIVENESS OF IMPROVED WIC FOOD PACKAGE FOR PREVENTING CHILDHOOD OBESITY

WIC Research Impact Award Winner

Kenney, E. L., Lee, M. M., Barrett, J. L., Ward, Z. J., Long, M. W., Cradock, A. L., Williams, D. R., & Gortmaker, S. L. (2024). Cost-effectiveness of Improved WIC Food Package for Preventing Childhood Obesity. Pediatrics, 153(2), e2023063182. https://doi.org/10.1542/peds.2023-063182

Abstract:

Background and objectives:
The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) prevents food insecurity and supports nutrition for more than 3 million low-income young children. Our objectives were to determine the cost-effectiveness of changes to WIC's nutrition standards in 2009 for preventing obesity and to estimate impacts on socioeconomic and racial/ethnic inequities.

Methods:
We conducted a cost-effectiveness analysis to estimate impacts from 2010 through 2019 of the 2009 WIC food package change on obesity risk for children aged 2 to 4 years participating in WIC. Microsimulation models estimated the cases of obesity prevented in 2019 and costs per quality-adjusted-life year gained.

Results:
An estimated 14.0 million 2- to 4-year old US children (95% uncertainty interval (UI), 13.7-14.2 million) were reached by the updated WIC nutrition standards from 2010 through 2019. In 2019, an estimated 62 700 (95% UI, 53 900-71 100) cases of childhood obesity were prevented, entirely among children from households with low incomes, leading to improved health equity. The update was estimated to cost $10 600 per quality-adjusted-life year gained (95% UI, $9760-$11 700). If WIC had reached all eligible children, more than twice as many cases of childhood obesity would have been prevented.

Conclusions:
Updates to WIC's nutrition standards for young children in 2009 were estimated to be highly cost-effective for preventing childhood obesity and contributed to reducing socioeconomic and racial/ethnic inequities in obesity prevalence. Improving nutrition policies for young children can be a sound public health investment; future research should explore how to improve access to them.

5. CROSS-SECTIONAL ASSOCIATIONS OF SPECIAL SUPPLEMENTAL NUTRITION PROGRAM FOR WOMEN, INFANTS, AND CHILDREN BENEFIT REDEMPTION AND DIET AMONG CHILDREN AGES 1-4

Anderson, C. E., & Whaley, S. E. (2024). Cross-sectional associations of Women, Infants, and Children benefit redemption and diet among children ages 1–4 years in California. American Journal of Clinical Nutrition, 120(2), 320–327. https://doi.org/10.1016/j.ajcnut.2024.06.002

Abstract:

Background: The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) provides supplemental healthy foods to children aged <5 y in low-income households.

Objectives: The objectives of this study were to characterize WIC benefit redemption, identify associations between benefit redemption and child dietary intake, and whether child age modifies these associations.

Methods: The cross-sectional 2023 California Statewide WIC Survey, conducted with caregivers of WIC-participating children aged 1-4 y, was analyzed for this study. Included children had complete benefit redemption data, a complete National Health and Nutrition Examination Survey Dietary Screener Questionnaire (DSQ), and complete covariate data (weighted n = 2244). Monthly household category-specific benefit redemption percentage was averaged across 6 and 3 mo preceding survey completion. Associations between household redemption and child dietary intake (servings or amount/day) were assessed with multivariable linear regression and expressed as estimates and 95% confidence intervals (CI).

Results: Twenty-five percent higher redemption of breakfast cereal, whole grain bread, yogurt and whole milk in the 6 mo prior to the survey were associated with higher child intake frequency for cereal (0.02 servings/d; 95% CI: 0.00, 0.04), whole grain bread (0.02 servings/d; 95% CI: 0.00, 0.03), yogurt (0.04 servings/d; 95% CI: 0.02, 0.06), and whole milk (0.09 servings/d; 95% CI: 0.01, 0.16). Significant effect modification by child age (12 to <24 mo, 24-59 mo) was found for redemption of cheese/tofu and 100% juice (P-interaction = 0.02 and 0.001, respectively), and 25% higher redemption of these benefits were associated with lower intake frequency for cheese (-0.05 servings/d; 95% CI: -0.09, -0.02) and higher intake frequency for juice (0.12 servings/d; 95% CI: 0.06, 0.18), but only among children ages 12 to <24 mo.

Conclusions: Higher redemption was associated with higher child intake of select WIC foods. Pairing the promotion of benefit redemption among program participants with nutrition education efforts may enhance dietary impacts of WIC participation.

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6. EVALUATING THE ASSOCIATION OF THE INCREASE IN THE WIC CASH VALUE BENEFIT ON THE DIVERSITY OF MYPLATE FRUITS AND VEGETABLES REDEEMED AND CONSUMED BY CHILDREN IN LOW-INCOME HOUSEHOLDS

Chaney, A. M., Anderson, C. E., Arnold, C. D., Whaley, S. E., Ritchie, L. D., Pundi, G. R., Nguyen, C. J., & Au, L. E. (2024). Evaluating the association of the increase in the WIC cash value benefit on the diversity of MyPlate fruits and vegetables redeemed and consumed by children in low-income households. Current Developments in Nutrition, 8(6), 103778–103778. https://doi.org/10.1016/j.cdnut.2024.103778

Abstract:

Background: Fruits and vegetables (FV) are a critical source of nutrients, yet children in the United States are not meeting the Dietary Guidelines for Americans (DGA). The monthly FV cash value benefit (CVB) included in the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)'s food package to support child FV intake (FVI) received a substantial increase for economic relief during the COVID-19 pandemic.

Objectives: To evaluate how an expansion of the monthly WIC CVB to purchase FV for WIC children ages 1-4 y is associated with diversity in FV redeemed, and how changes in redeemed FV are related to FVI.

Methods: Caregivers representing 1463 WIC-participating children recruited from Los Angeles County, California, completed surveys during the CVB augmentation (T1: CVB = $9/mo; T2 = $35/mo; T3 = $24/mo). Redeemed price look-up codes (PLUs), corresponding to a food item, were assigned to its corresponding MyPlate FV group. Multivariable generalized estimating equation regression models assessed changes in amount and diversity of FV redemption across MyPlate groups and associations between changes in FV diversity and changes in FVI.

Results: Slightly over half of all households were food insecure (55%), half of the children were female (52%), and most were Hispanic (78%). Compared with T1, significant increases in the number of PLUs and dollars redeemed were observed in most MyPlate FV groups. From T1 to T2, significant increases in diversity scores were observed for total fruit (β: 1.6 pts; 95% confidence interval [CI]: 1.4, 1.7), total vegetable (β: 3.6 pts; 95%CI: 3.4, 3.9), and total FV (β:7.8 pts; 95%CI: 7.4, 8.2). Similarly, increases in diversity score were observed at T3 compared with T1. Changes in FV diversity redeemed were not associated with changes in FVI.

Conclusions: During the CVB augmentation, WIC participants redeemed a greater amount and variety of FV according to DGA MyPlate recommendations, supporting its permanent increase.

7. FOOD POLICY COUNCILS AND HEALTHY FOOD ACCESS POLICIES: A 2021 NATIONAL SURVEY OF COMMUNITY POLICY SUPPORTS

Oza-Frank, R. (2025). Food Policy Councils and Healthy Food Access Policies: A 2021 National Survey of Community Policy Supports. Preventing Chronic Disease, 22. https://doi.org/10.5888/pcd22.240335

Abstract:

Introduction

Food policy councils (FPCs) are frequently used to facilitate change in food systems at the local, state, and regional levels, or in tribal nations. The objective of this study was to describe the prevalence of food policy councils and similar coalitions among US municipalities and their associations with healthy food access policies.

Methods

We used data from the 2021 National Survey of Community-Based Policy and Environmental Supports for Healthy Eating and Active Living, administered to municipal officials from May through September 2021. We used logistic regression models to examine associations between 1) having an FPC and 2) FPC membership composition and healthy food access policies. We grouped policies into 4 categories based on topic modules in the survey instrument: supporting new or existing food stores to sell healthy foods, financial or electronic benefits transfer (EBT) supports, transportation-related supports for accessing locations to purchase food, and consideration of local food supports in community planning.

Results

Municipalities with FPCs (27.6%) had significantly higher odds than municipalities without FPCs of having policies supporting access to food retail stores (adjusted odds ratio [AOR] = 1.5; 95% CI, 1.2–1.9), access to farmers markets (AOR = 2.2; 95% CI, 1.7–2.7), access to transportation supports (AOR = 2.2; 95% CI, 1.8–2.8), and objectives in community planning documents (AOR = 2.0; 95% CI, 1.6–2.5). Among municipalities with FPCs, those with a health/public health representative (42.1%) or a community representative (65.1%) were more likely to report having any healthy food access policies.

Conclusion

This study emphasized the positive association between FPCs and healthy food access policies. This study also highlights the potential importance of FPC membership composition, including health/public health and community representatives.

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8. FOOD SECURITY DIMENSIONS IN US DISASTER PLANS: A COMPARATIVE ANALYSIS OF STATES AND TERRITORIES.

Muñoz, M. M., Gartner, D. J., Hassan, S., & Fuster, M. (2025). Food Security Dimensions in US Disaster Plans: A Comparative Analysis of States and Territories. Disaster Medicine and Public Health Preparedness, 19. https://doi.org/10.1017/dmp.2025.98

Abstract:

Objective

Disaster response plans play a major role in mitigating the impact of climate-related disasters on community food access. This study examined existing disaster response plans in 5 US locations that experienced the costliest hurricanes since 2017 (states: Florida, Texas, Louisiana; territories: Puerto Rico, US Virgin Islands) to assess how existing disaster response plans and response efforts address food-related issues across 4 key domains: availability, accessibility, agency, and acceptability.

Methods

A content analysis of disaster response plans was conducted. Disaster response plans were complemented by a review of gray literature and media sources examining the post-hurricane aftermaths. Disaster plans were coded using a deductive analysis approach guided by the Disaster Food Security Framework.

Results

The analysis revealed significant disparities in planning and resources between territories and states. Findings highlight political and structural drivers of disparities in food access, particularly in US territories. State-mandated procedures resulted in a consistent level of effectiveness in their food distribution strategies.

Conclusions

These disparities underscore the need for targeted policy reforms and enhanced federal support to ensure equitable food security during disasters.

9. FOODSERVICE DIRECTORS' PERCEIVED BARRIERS TO STUDENT PARTICIPATION IN SCHOOL MEALS WHEN MEALS WERE SERVED FREE OF CHARGE DURING THE 2021-2022 SCHOOL YEAR

Olarte, D. A., Gosliner, W., Chapman, L. E., Hecht, C., Hecht, K., Punam Ohri-Vachaspati, Patel, A. I., Read, M., Ritchie, L. D., Schwartz, M. B., Zuercher, M. D., Orta-Aleman, D., Polacsek, M., & Juliana. (2025). Foodservice Directors' Perceived Barriers to Student Participation in School Meals When Meals Were Served Free of Charge During the 2021–2022 School Year. Journal of School Health, 95(8). https://doi.org/10.1111/josh.70019

Abstract:

Background: School meals were served free of charge to all public school students in the United States during the COVID-19 pandemic, but some students still did not participate.

Methods: In this mixed-methods study, surveys and interviews were conducted with food service directors (FSDs) from California (n = 556 surveys; n = 29 interviews) and Maine (n = 43 surveys; n = 20 interviews) during spring 2022. Survey data was analyzed using multivariable logistic regression models, and interview data was analyzed using the immersion/crystallization approach.

Results: Students' preference to eat meals from home or elsewhere (81.5%) and negative perceptions of the school food's taste (67%) were the most common barriers reported. Schools' prior community eligibility provision (CEP) participation and smaller student enrollment were associated with fewer reported barriers. Inadequate time to eat lunch and stigma were also reported as barriers to participation.

Implications for school health policy, practice, and equity: Investments are needed to help schools partner with students to optimize school meal experiences and to improve food taste. Policies that provide school meals free of charge for all students can also help reduce negative social barriers such as stigma.

Conclusions:
Despite the provision of USM, barriers to participation remain. Policies to enhance meal quality and program implementation are needed.

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10. HEALTHY FOOD SERVICE GUIDELINES FOR WORKSITES AND INSTITUTIONS: A SCOPING REVIEW

Dai, J., Oza-Frank, R., Lowry-Warnock, A., Williams, B. D., Murphy, M., Hill, A., & Silverman, J. (2025). Healthy Food Service Guidelines for Worksites and Institutions: A Scoping Review. International Journal of Environmental Research and Public Health, 22(8), 1194–1194. https://doi.org/10.3390/ijerph22081194

Abstract:

Healthy food service guidelines (HFSG) comprise food, nutrition, behavioral design, and other standards to guide the purchasing, preparation, and offering of foods and beverages in worksites and institutional food service. To date, there have been few attempts to synthesize evidence for HFSG effectiveness in non-K-12 or early childhood education sectors, particularly at worksites and institutional food services. We conducted a scoping review to achieve the following: (1) characterize the existing literature on the effectiveness of HFSG for improving the institution's food environment, financial outcomes, and consumers' diet quality and health, and (2) identify gaps in the literature. The initial search in PubMed and Web of Science retrieved 10,358 articles; after screening and snowball searching, 68 articles were included for analysis. Studies varied in terms of HFSG implementation settings, venues, and outcomes in both U.S. (n = 34) and non-U.S. (n = 34) contexts. The majority of HFSG interventions occurred in venues where food is sold (e.g., worksite cafeterias, vending machines). A diversity of HFSG terminology and measurement tools demonstrates the literature's breadth. Literature gaps include quasi-experimental study designs, as well as interventions in settings that serve dependent populations (e.g., universities, elderly feeding programs, and prisons).

11. THE IMPACT OF A WATER PROMOTION AND ACCESS INTERVENTION ON ELEMENTARY SCHOOL STUDENTS IN THE PRESENCE OF FOOD INSECURITY

Gerstenfeld, L., Blacker, L., McCulloch, C. E., Ritchie, L., Ordonez, V., Schmidt, L., & Patel, A. (2024b). The Impact of a Water Promotion and Access Intervention on Elementary School Students in the Presence of Food Insecurity. Public Health Nutrition, 28(1), 1–21. https://doi.org/10.1017/s1368980024002283

Abstract:

Objective:
School-based interventions encouraging children to replace sugar-sweetened beverages with water show promise for reducing child overweight. However, students with child food insecurity (CFI) may not respond to nutrition interventions like children who are food-secure.

Design:
The Water First cluster-randomised trial found that school water access and promotion prevented child overweight and increased water intake. This secondary analysis used mixed-effects regression to evaluate the interaction between the Water First intervention and food insecurity, measured using the Child Food Security Assessment, on child weight status (anthropometric measurements) and dietary intake (student 24-h recalls, beverage intake surveys).

Setting:
Eighteen elementary schools (serving ≥ 50 % children from low-income households), in which drinking water had not been previously promoted, in the San Francisco Bay Area.

Participants:
Students in fourth-grade classes (n 1056).

Results:
Food insecurity interacted with the intervention. Among students with no CFI, the intervention group had a lower prevalence of obesity from baseline to 7 months (-0·04, CI -0·08, 0·01) compared with no CFI controls (0·01, CI -0·01, 0·04) (P = 0·04). Among students with high CFI, the intervention group had a pronounced increase in the volume of water consumed between baseline and 7 months (86·2 %, CI 21·7, 185·0 %) compared with high CFI controls (-13·6 %, CI -45·3, 36·6 %) (P = 0·02).

Conclusions:
Addressing food insecurity in the design of water promotion interventions may enhance the benefit to children, reducing the prevalence of obesity.

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12. LOCAL FOOD POLICY COUNCIL COVERAGE REDUCES HOUSEHOLD FOOD INSUFFICIENCY DURING COVID-19 IN LOW-INCOME AND MINORITY HOUSEHOLDS

Calancie, L., Pan, Y., Bassarab, K., Cooksey-Stowers, K., Palmer, A., & Eliasziw, M. (2025). Local Food Policy Council Coverage Reduces Household Food Insufficiency During COVID-19 In Low-Income and Minority Households. Current Developments in Nutrition, 9(2), 106230–106230. https://doi.org/10.1016/j.cdnut.2025.106230

Abstract:

Objectives:
To determine whether households living in states with higher local food policy council (FPC) coverage were less likely to experience food insufficiency during COVID-19 compared to households in states with lower local FPC coverage.

Methods:
We estimated the prevalence of household food insufficiency in states with high and low local FPC coverage, adjusting for age and gender of the survey respondent, and percent of the state's population living in a rural area (N=1,909,647). Longitudinal food insufficiency was measured via the US Census Household Pulse Survey (May 2020 – May 2023).

Results:
Lower income households in states with low local FPC coverage were more likely to experience food insufficiency than households in states with high FPC coverage (food insufficiency prevalence ratio: 1.05, 95% CI 1.04 – 1.07, p< 0.001). Lower FPC coverage was associated with significantly more food insufficiency among lower-income non-Hispanic Black and white households.

Conclusions:
Presence of FPCs may have been a protective factor against food insufficiency for low-income Black and white households during the COVID-19 pandemic. Local FPCs may have potential for promoting resilience and racial equity within food systems.

13. STATEWIDE UNIVERSAL SCHOOL MEAL POLICIES AND FOOD INSECURITY IN HOUSEHOLDS WITH CHILDREN

Orta-Aleman, D., Schwartz, M. B., Patel, A. I., Polacsek, M., Hecht, C., Hecht, K., Zuercher, M. D., Ritchie, L., ScM, J. C., & Gosliner, W. (2025). Statewide Universal School Meal Policies and Food Insecurity in Households with Children. American Journal of Preventive Medicine, 70(1), 107942. https://doi.org/10.1016/j.amepre.2025.107942

Abstract:

Introduction:
Food insecurity disproportionately affects U.S. households with children, causing adverse health and developmental outcomes. During COVID-19, federal waivers enabled free meals for all K-12 students, but these waivers expired in 2022. Subsequently, some states adopted their own School Meals for All policies. This study examined whether households in states with School Meals for All policies experienced lower food insecurity than those in states reverting to means-tested programs and whether associations varied by family income.

Methods:
A cross-sectional survey of 3,377 caregivers from 8 states (4 with School Meals for All policies, 4 without) was conducted in spring/summer 2023 and analyzed in 2024. Household food security was measured with the U.S. Department of Agriculture 5-item module. Generalized estimating equation models estimated the association of School Meals for All with food insecurity, adjusting for sociodemographic factors, prepolicy county-level food insecurity data, and state-level clustering. Interaction terms tested differential effects by free and reduced-price meal eligibility.

Results:
Households in School Meals for All states had a 12% lower prevalence of food insecurity than those without School Meals for All (adjusted prevalence ratio=0.88; 95% CI=0.82, 0.94). This association was most pronounced among households eligible for free meals (19% lower prevalence; adjusted prevalence ratio=0.81; 95% CI=0.76, 0.86) and those near free and reduced-price meal eligibility thresholds (adjusted prevalence ratio=0.82; 95% CI=0.67, 0.98).

Conclusions:
Statewide School Meals for All policies were associated with lower household food insecurity, particularly among those with low or near-low income. These findings support School Meals for All as a strategy to reduce food insecurity and suggest that expanding School Meals for All could further benefit families with school-aged children. Future research should assess School Meals for All's long-term impacts.

14. WATER FIRST SCHOOL WATER PROMOTION AND ACCESS INTERVENTION: A COST ANALYSIS STUDY

Pedroza-Tobias, A., Cradock, A. L., Blacker, L., Ritchie, L. D., Schmidt, L. A., McCulloch, C., Salomon, J. A., Brindis, C. D., Cabana, M. D., & Patel, A. I. (2024). "Water First" School Water Promotion and Access Intervention: A Cost Analysis Study. Journal of the Academy of Nutrition and Dietetics, 125(10). https://doi.org/10.1016/j.jand.2024.10.022

Abstract:

Background:
Adequate water intake is associated with improved cognitive and physical performance, prevention of dental caries, and overweight and obesity. However, access to free drinking water in schools remains inadequate. Water First, a school-based intervention promoting water consumption, was shown effective in preventing overweight, yet its costs have not been quantified.

Objective:
To evaluate the costs of Water First from the school's perspective over 1 academic year.

Design:
Secondary analysis of a cluster-randomized clinical trial assessing the cost of Water First.
Participants and setting: Six public schools in the San Francisco Bay Area during the 2018-2019 academic year, with an average of 578 ± 69 students per school and 110 ± 2 fourth-grade students in intervention schools, and 508 ± 190 students per school and 101 ± 5 fourth-grade students in control schools.

Intervention:
Schools were randomized to receive water dispensers and stations in cafeterias and high-traffic areas and a schoolwide water promotion campaign (school-level intervention). Fourth-grade students and teachers received reusable water bottles, lessons, and materials for school and home (class-level intervention).

Main outcome measures:
Activities, resources, and the value needed to implement the school-level and classroom-level intervention were systematically captured over 1 academic year, including labor, materials, and utilities costs.

Statistical analysis:
The intervention costs per school and per student were estimated by summing the component-specific costs. Results are presented for both school-level and classroom-level interventions in 2023 US dollars.

Results:
The Water First intervention costs $20 per student for the school-level and $131 per student for the classroom-level intervention over 1 academic year. Accounting for the useful life of the installed water stations and dispensers beyond 1 year, the annualized cost of the school-level intervention was $11 per student.

Conclusions:
These cost estimates provide useful insights for schools and stakeholders to plan and implement effective school-based interventions that promote access to drinking water.

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