From evidence to action: How can we build systems to promote children’s nutritional health with a focus on equity?

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The Case for Equity

Health Care

Economic Stability

Education

Physical Environment

Community/Social Factors

Food Access

Health Outcomes
Mortality, morbidity, life expectancy, health status, food security
Food Insecurity

“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.”
U.S. households by food security status, 2020

- Food-secure households: 89.5%
- Food-insecure households: 10.5%
  - Households with low food security: 6.6%
  - Households with very low food security: 3.9%

Prevalence of food insecurity by selected household characteristics, 2020

Household composition
- All households
- With children < 18
- With children < 6
- Married couples with children
- Single women with children
- Single men with children
- Other households with child
- No children < 18
- More than one adult, no children
- Women living alone
- Men living alone
- Household with elderly
- Elderly living alone

Race/ethnicity of household reference persons
- White non-Hispanic
- Black non-Hispanic
- Hispanic
- Other non-Hispanic

Household income-to-poverty ratio
- Under 1.00
- Under 1.30
- Under 1.85
- 1.85 and over
- Income unknown

Area of residence
- Inside metropolitan area
- In principal cities
- Not in principal cities
- Outside metropolitan area

Census region
- Northeast
- Midwest
- South
- West

What happened as a result of COVID-19?

Food Insecurity Trends & Projections

- Overall Food Insecurity Rate
- Child Food Insecurity Rate

Food insecurity among Black and white individuals

- 2019 (Actual)
- 2020 (Projections)
- 2021 (Projections)

Feeding America, 2021
Childhood Obesity Disparities and Food Insecurity

A Conceptual Framework: Cycle of Food Insecurity & Chronic Disease

- Household Income
- Spending Tradeoffs
- Health Care Expenditures
- Employability

Stress

Coping Strategies
- Dietary Quality
- Eating Behaviors
- Bandwidth

Chronic Disease

Food Insecurity

COVID-19

Poverty

Health

Food supply and school meals disrupted
Health conditions may require a special diet
Healthcare costs increase

Stress; lack of health care
More difficult to study/work; increased health costs

“Long COVID-19”
Comorbidities worsen
COVID-19

Higher COVID-19 exposure risk
Healthcare costs increase

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Getting To Equity (GTE) Framework

**INCREASE HEALTHY OPTIONS**
- Food retail and provision
- Schools and worksites
- Built environment
- Parks and recreation
- Transport

**REDUCE DETERRENTS TO HEALTHY BEHAVIORS**
- Promotion of unhealthy products
- Higher costs of healthy foods
- Threats to personal safety
- Discrimination
- Social exclusion

**IMPROVE SOCIAL AND ECONOMIC RESOURCES**
- Anti-hunger programs
- Economic development
- Legal services
- Education and job training
- Housing subsidies; tax credits

**BUILD COMMUNITY CAPACITY**
- Empowered communities
- Strategic partnerships
- Entrepreneurship
- Behavior change knowledge and skills
- Promotion of healthy behaviors


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COVID-19 Emergency School Meal Distribution

Emergency school meals provision during COVID-19

Distribution of free meals
- Provide menu & nutrition facts
- Give social distancing guidance
- Offer broad geographic eligibility & operating hours

Address barriers to accessing meals
- Address fear of discrimination
- Provide multilingual communications
- Empower Households
- Accessible locations

Increase Healthy Options

Reduce Deterrents

Improve Social and Economic Resources

Build on Community Capacity

Facilitate Maximum Benefit
- Build community partnerships
- Leverage community resources
- Promote healthy behaviors

Individual and household resources and capacity

Since March 17, we've provided 12,534,573 grab-and-go meals across the district.

Desde el 17 de marzo, hemos proporcionado 12,534,573 cajas de comidas en todo el distrito.

Facility tour showcases how Nutrition Services is mobilizing to safely feed families

Assist with child and family needs
- Increase household minimum wage
- Access to food assistance programs
- Access to federal stimulus funds

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Chicago Public Schools (N=642)
377,644 enrollment
76.4% FARM Eligible
Greater # of sites across the district; 2 meals per day

New York City Department of Education (N=1866)
1,126,501 enrollment
72.8% FARM Eligible
Greater # of sites across the district; 3 meals per day

Los Angeles Unified School District (N=1386)
577,560 enrollment
80% FARM Eligible
Fewer sites- more centralized
2 meals per day

Houston Independent School District (N=280)
209,772 enrollment
74.9% FARM Eligible
 Fewer sites- food bank-style distribution; 1 week of food per visit
GIS Data Snapshot – Racial/Ethnic Minority

Chicago placed 40% of sites in census tracts above median %ethnic minority

Houston placed 76% of sites in census tracts above median %ethnic minority

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Los Angeles placed 67% of sites in census tracts above median % low-income.

Chicago placed 62% of sites in census tracts above median % low-income.
New York City placed 1.1% of sites in census tracts classed as low income/low access (food desert)

Houston placed 80.7% of sites in census tracts classed as low income/low access (food desert)
Document Analysis – Common Practices to Facilitate Equity

**Distribute School Meals**
- Emphasize healthy eating as a priority
- Greater # of free meals (2 or 3 each day)
- No limit on visits to sites
- Ensuring social distance guidelines

**Address Barriers to Accessing Meals**
- “Find your meal site” interactive maps
- Partnerships with food banks - increased supply
- Announcements in multiple languages
- Images promoting racial/ethnic diversity

**Assist with Child/Family Needs**
- Communication of access time slots
- Weekend/evening meal pick-ups
- Technology/WIFI support for e-learning

**Facilitate Maximum Benefit**
- Community fundraisers
- Partnering with local authorities
- Childcare for first responders
- Promotion of local wellness centers

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School Meal Service During COVID-19
Dissemination

Addressing Food Insecurity through a Health Equity Lens: a Case Study of Large Urban School Districts during the COVID-19 Pandemic

Gabriella M. McLoughlin • Julia A. McCarthy • Jared T. McGuirt • Chelsea R. Singleton • Caroline G. Dunn • Preety Gadhoke

- Article published
- Presentations at NOPREN, HER, SNA, and local stakeholder meetings
- Press Release → policy implications
- Localized efforts to replicate GTE document analysis coding (i.e., Maryland)

The coronavirus pandemic has brought a number of challenges to schools, which were forced to close in the spring to help slow the spread of infection. One major challenge for schools was ensuring that students' nutritional supplementation needs were met when they were not attending school in person.

As schools across the country begin to welcome students back in person or for virtual learning, equity must be at the forefront of decisions pertaining to school emergency food services, finds a new study from the Brown School at Washington University in St. Louis.

*Ensuring access to food during these critical times is of paramount importance to meeting the public health needs of vulnerable populations at greatest risk for food security. Further, as schools contemplate emergency plans, a primary emphasis should be placed on...
Dissemination and Implementation Science (D&I)

• The processes by which evidence-based interventions are implemented and disseminated into practice

• Adoption of rigorous dissemination and implementation science (D&I) techniques can enhance program adoption and adherence
Implementation Outcomes

Acceptability
- Degree to which intervention/practice is agreeable/satisfactory

Adoption
- Intention to act/initial actions of implementing stakeholders

Appropriateness
- Perceived fit/relevance

Feasibility
- How easy/hard it will be for agency staff to adopt/implement

Fidelity/Compliance
- Degree to which EBP is implemented as planned

Penetration
- Number/percent of sites implementing EBP

Sustainability
- Extent EBP/policy is maintained within a setting

Cost
- Cost impact of implementation effort

Proctor et al. 2011
Implementation Determinants

Consolidated Framework for Implementation Research

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When defining implementation science, some very non-scientific language can be helpful...

- The intervention/practice/innovation is THE THING
- Effectiveness research looks at whether THE THING works
- Implementation research looks at how best to help people/places DO THE THING
- Implementation strategies are the stuff we do to try to help people/places DO THE THING
- Main implementation outcomes are HOW MUCH and HOW WELL they DO THE THING
Measures development project
Urban School Food Alliance – in progress

<table>
<thead>
<tr>
<th>Measure Development Steps</th>
<th>Key Activities</th>
<th>Timeline (months)</th>
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</table>
| 1. Select and Define Constructs (Aim 1) | • Review literature and select frameworks  
• Solicit expert input on selected constructs | 1 - 4             |
| 2. Develop Items and Gather Feedback (Aim 2) | • Create item bank, scoring and interpretation instructions  
• Develop instruments  
• Solicit expert feedback and revise instruments | 5 - 7             |
| 3. Pilot Test Instruments (Aim 2) | • Conduct cognitive testing with target groups  
• Analyze cognitive testing interview data | 8 - 10            |
| 4. Measures Refinement (Aim 2) | • Revise measures based on cognitive testing  
• Evaluate instrument pragmatic qualities  
• Solicit expert feedback on revised measures | 11 - 13           |
How can we better implement policy, systems, and environment (PSE) interventions with a focus on health equity?

Community Eligibility Provision (CEP)

USDA

Percentage of Eligible Schools Adopting Community Eligibility in School Year 2019–2020

Paving the Road to Health Equity

Health Equity is when everyone has the opportunity to be as healthy as possible

Programs
- Successful health equity strategies

Measurement
- Data practices to support the advancement of health equity

Policy
- Laws, regulations, and codes to improve population health

Infrastructure
- Organisational structures and functions that support health equity

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

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“Most studies examining universal free school meals that included free lunch found positive associations with diet quality, food security, and academic performance; however, the findings of studies examining only universal free breakfast were mixed.”

“Strong evidence of benefits of UFM for meal participation rates; promising evidence for benefits for weight outcomes, food security, disciplinary referrals, and on-time grade promotion; and mixed evidence of impacts for test scores and attendance.”
Implementation Context and Challenge

- 64% of eligible districts participate; 60.3% in Pennsylvania; 78% of eligible PA schools
- All Philadelphia Schools are adopting CEP, but breakfast participation is ~40% and lunch is ~70% (pre-pandemic)
- Schools need to increase participation # to remain financially solvent
- Need is there, but why is participation so low?

Social determinants of health → social determinants of IMPLEMENTATION?
Building Partnerships with Implementation Experts

Potential Determinants

School-Level
- School climate
- Participation stigma

Community-Level
- Discrimination

Implementation Mapping

Task 1: Needs Assessment

Task 2: Identify Outcomes

Task 3: Select Implementation Strategies

Task 4: Develop Implementation Protocols

Task 5: Evaluate Outcomes

Implementation Outcomes

Acceptability
- School meal satisfaction
- Implementation mapping acceptability

Cost
- Intended/unintended costs
- Materials/time

Feasibility
- Perceived complexity of implementation mapping

Sustainability
- Sustainability of strategies

Enhanced implementation of USM to facilitate equity in accessing healthy school meals
Future Directions

Better understanding of factors influencing implementation
- Health equity and D&I frameworks
- Robust contextual data from key stakeholders

Tailored interventions which enhance capacity for implementation
- Considerations for context
- Implementation mapping

Appropriate Outcomes
- Need low-cost, sustainable solutions
- Pragmatic tools and metrics grounded in health equity

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Pilot Project – Urban School Food Alliance

• Goals:
  • Build diverse stakeholder advisory group within SDP
    • Collaborate with equity coalition
    • Involve students and parents as key stakeholders
  • Adapt existing measures to assess key implementation outcomes for use with SDP collaboration
    • Cost of implementing school meals
    • Feasibility of new strategies
    • Sustainability of innovations in meal service
    • Reach of school meal programs to students
Get involved in our research
Teachers, Administrators, students, parents
Scan the QR code to contact us!
Thank you!

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