





MEETING REPORT

*Pediatric Obesity***Disseminating and Implementing the Science of Pediatric Obesity Treatment and Prevention**

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ABSTRACT

Objective: Pennington Biomedical Research Center convened a scientific symposium in March–April 2025, which brought together leaders in dissemination and implementation science to identify what is known and what is needed to foster the rapid dissemination and implementation of evidence-based, guideline-backed pediatric obesity prevention and treatment interventions.

Methods: The primary aim of the symposium was to identify effective dissemination and implementation strategies, contextual factors related to strategy selection, and mechanisms of successful intervention reach, adoption, implementation, and maintenance. Through this symposium, the overarching goal was to accelerate the rate of translation of evidence-based interventions for the prevention and treatment of pediatric obesity into practice while advancing dissemination and implementation science in settings including health care, schools, and the community.

Results and Conclusions: This article summarizes the state of the scientific evidence discussed at the symposium, identifies exemplars of implementation-effectiveness trials, and provides recommendations for disseminating and implementing evidence-based pediatric obesity prevention and treatment interventions into typical clinical and community settings.

Study Importance

- There is a critical need to identify effective dissemination and implementation (D&I) strategies to accelerate the rate of translation of evidence-based interventions for the prevention and treatment of pediatric obesity into practice while advancing D&I science in settings including health care, schools, and community.
- To increase the likelihood of long-term impact, researchers and practitioners should integrate evidence-based approaches within existing health, education, and policy systems, including but also moving beyond short-term grant cycles to models of financial and operational sustainability. Ultimately, D&I science is a framework to achieve population-level reductions in pediatric obesity through the systematic integration, evaluation, and sustainment of evidence-based interventions.
- Future D&I research should consider a range of outcomes from reach, adoption, and fidelity to equity, cost, implementation quality, sustainment duration, and policy uptake. This research will generate practical information to speed the uptake of pediatric obesity prevention and treatment into sustained community and clinical practice.

1 | Introduction

The pediatric obesity epidemic continues to be a public health challenge, affecting 22% of US youth ages 2–19 years [1, 2], shortening the health span and life expectancy of youth, decreasing quality of life, and contributing to skyrocketing health care expenditures from obesity-related complications and comorbidities [3–5]. The past 40 years of scientific research have produced several safe, effective treatment interventions for pediatric obesity, including intensive health behavior lifestyle treatment (IHBLT), pharmacotherapy, and metabolic and bariatric surgery. Evidence for the prevention of pediatric obesity has also grown, including efforts to create healthier schools and neighborhoods to curtail the obesogenic environment. Building on this mounting evidence base, the American Academy of Pediatrics (AAP) released a clinical practice guideline (CPG) on the treatment of child and adolescent obesity [6] and also a clinical report of recommendations for clinicians related to the prevention of pediatric obesity [7]. Further, in 2024 the US Preventive Services Task Force updated its recommendations for safe and effective pediatric obesity prevention and treatment interventions [8].

Despite this progress in the scientific evidence and these resulting guidelines, children's access to obesity treatment is historically poor [9, 10]. To our knowledge, there are no recent national data on the proportion of youth with obesity who have access to these evidence-based interventions (EBIs), but based on surveys of clinicians [11, 12] it is estimated to be less than 25%. Recent electronic health record (EHR) reviews identified fewer than 10% of adolescents with obesity had nutrition referral or counseling [13], fewer than 1% of adolescents with obesity were prescribed obesity medications [10, 13], and only 331 per 1,000,000 adolescents with severe obesity had metabolic/

bariatric surgery in 2017 [14]. This may not be surprising as there is a persistent and decades-long gap between discovery and implementation, and many efficacious interventions never reach broad and equitable implementation [15]. For pediatric obesity treatment, this time course has been a 45-year odyssey. Early data on the effectiveness of at least 26 contact hours of IHBLT were first published in the 1980s [16, 17], but these family weight management programs only recently became available at a larger scale. Most recently, dissemination and implementation (D&I) science has been applied to identify and deploy strategies that will contribute toward the spread and scale-up of EBIs. Still, how to best disseminate, implement, and maintain these EBIs pragmatically and equitably, moving into health care, schools, and community settings, remains a challenge. Yet the convergence of new guidelines with increasing public awareness and demand has created an unprecedented window of opportunity for the rapid D&I of pediatric obesity solutions, moving EBIs from research labs into the real world (Figure 1).

In brief, D&I science studies how to use purposeful strategies and the mechanisms of change that explain how research evidence is translated into real-world clinical and community settings to improve outcomes for specific populations [18]. D&I science can be organized around context–strategy–mechanism–outcome pathways [19]. This includes the multilevel clinical and community context [20], selection and tailoring of D&I strategies informed by the context [21], testing the mechanisms through which those strategies work [22], and evaluating outcomes such as EBI reach, adoption, implementation fidelity, feasibility, acceptability, cost, and maintenance (Figure 1) [23]. Core to D&I science is the application of theories, models, and frameworks that can be used to describe translation processes, provide guidance on relevant contextual factors, and build generalizable knowledge by linking D&I strategies to mechanisms and outcomes [19]. Finally, D&I science is often characterized by hybrid studies that may include testing multiple outcomes concurrently such as hybrid effectiveness-implementation studies that vary in focus on effectiveness (i.e., testing of participant or population changes in health) and D&I outcomes (i.e., reach, adoption, implementation, and maintenance of EBIs) as primary, co-primary, or secondary outcomes [24].

On March 31–April 1, 2025, the Pennington Biomedical Research Center convened a scientific symposium that brought together leaders in D&I science to identify what is known and what is needed to foster the rapid dissemination, high-quality implementation, and maintenance of evidence-based, guideline-backed pediatric obesity treatment and prevention interventions (see Table S1). The scientific program was developed to review D&I strategies and effective approaches from a developmental and ecological lens, focusing on obesity prevention and treatment from pregnancy through early childhood, middle childhood, and into adolescence and delivered in settings including health care, schools, and the community. Importantly, research gaps, opportunities, and barriers to progress were identified during the symposium. The purpose of this article is to summarize scientific evidence for pediatric obesity prevention and treatment as discussed at the symposium, highlight exemplars of D&I trials, and provide recommendations for disseminating and implementing EBIs into clinical and community settings.

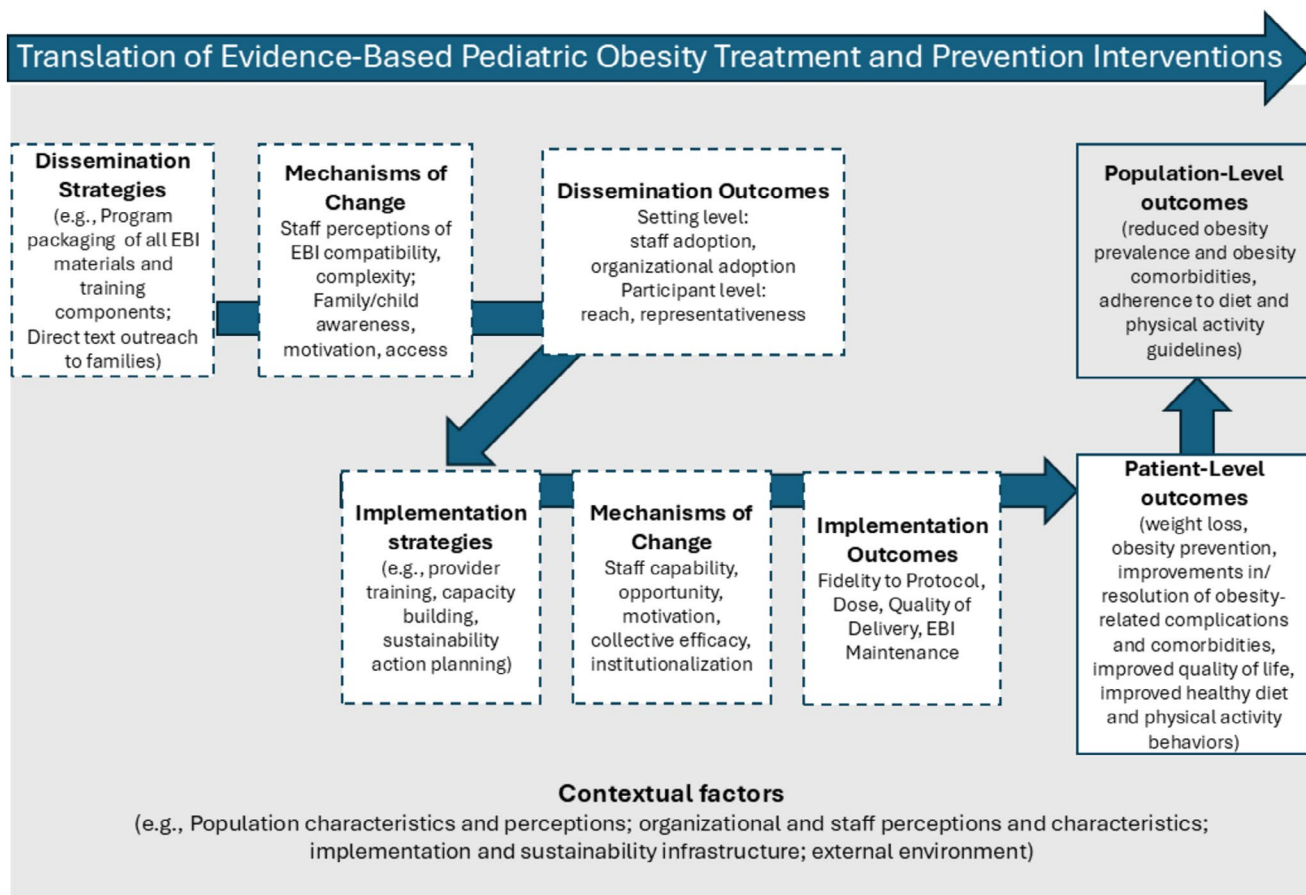


FIGURE 1 | A framework for translating evidence-based pediatric obesity treatment and prevention interventions into practice.

2 | Methodology

Pennington Biomedical solicited proposal ideas from faculty for symposium topics that are timely and important to advance a given field related to obesity and chronic disease. The center leadership selected the present topic among these proposals and identified two faculty members to chair the symposium (A.E.S. and P.T.K.). The leads then identified a cochair external to Pennington Biomedical based on national and international prominence in the field (P.A.E.). The three cochairs drafted the meeting agenda and identified potential speakers.

During the 2-day symposium, time was allocated after each session and at the conclusion to facilitate discussion, synthesize key findings on the state of the science, and build consensus on key recommendations. Using minutes transcribed from the symposium, A.E.S. drafted the manuscript with input from the cochairs, then circulated the manuscript to all coauthors who reviewed, edited, and approved.

3 | D&I Science

The 2023 AAP CPG and the 2024 US Preventive Services Task Force recommendations identified substantial clinical trial data supporting safe and effective prevention and treatment for pediatric obesity [6, 8]. These recommendations reflect EBIs, the intervention or policy that is implemented to treat or prevent obesity,

such as a behavioral lifestyle program, obesity medication, or surgery. For impacts to be realized, these EBIs must be deployed into real-world settings and studied to inform the future dissemination, implementation, and maintenance across settings with priorities that align with obesity prevention and treatment. D&I science in this area investigates the process by which pediatric obesity-related EBIs are adopted, implemented, and sustained in practice [25]. A key focus of D&I science is the identification and testing of strategies to support real-world delivery of EBIs without seeing a voltage drop [26] in effectiveness (i.e., the prevention and reduction of obesity) when introduced in practice settings.

In the field of pediatric obesity prevention and treatment, D&I theories, models, and frameworks commonly used include Diffusion of Innovation [27, 28], the Consolidated Framework for Implementation Research (CFIR) [29, 30], the integrated Promoting Action on Research in Health Services (i-PARIHS) [31, 32], and the Exploration, Preparation, Implementation, and Sustainment (EPIS) Framework [33, 34]—each provides structured approaches to create and monitor the process of disseminating and implementing EBIs while taking into consideration the context [35–37]. Rogers' seminal Diffusion of Innovations—which explains diffusion (passive) and dissemination (active) as a function of the innovation, the social system it moves through, the communication channels linking across systems and people, and time—provides the core components of most D&I theories, models, and frameworks. The CFIR describes the innovation and social system, respectively,

as intervention characteristics and multilevel inner and outer settings, emphasizing how context shapes implementation. Exploration, Preparation, Implementation, Sustainment makes the time dimension explicit using a temporal path model moving across the stages of EBI adoption, implementation, and maintenance. Finally, i-PARIHS centers success on the fit among innovation, implementers within local settings, and context, supported by facilitation to improve D&I outcomes. Across these models, attention to communication channels and networks remains central (e.g., variability in local organizational communication channels), and the “time” arc extends beyond adoption to long-term maintenance/sustainment—underscoring that D&I is as much about ongoing systems alignment as initial uptake [19].

While effectiveness remains a priority, addressing D&I outcomes in the design, scale-up, and scale-out of pediatric obesity EBIs is critical to improving population-level health outcomes. D&I strategies can be mapped to mechanisms that enhance implementation success, leading to better health outcomes for children and families. Important considerations for the selection of D&I strategies include key contextual factors and assessing mechanisms to drive adoption, fidelity, and long-term impact. By understanding these interrelationships, researchers and practitioners can develop more scalable and sustainable solutions for addressing pediatric obesity.

4 | State of the D&I Science for the Treatment of Pediatric Obesity

National infrastructure is rapidly expanding to foster the scale-up and scale-out of evidence-based obesity treatments. For example, the United States (US) Centers for Disease Control and Prevention (CDC) recognizes several family healthy weight programs delivering IHBLT that have been shown to be effective in randomized controlled trials (RCTs) and being implemented in clinical and community settings, and these programs are being actively implemented in over 60 US communities via CDC funding mechanisms to state health agencies and municipalities [38]. Other organizations including the AAP, the National Association of Community Health Centers, and the YMCA are similarly supporting the translation, dissemination, and scale-out of evidence-based programs, offering an unprecedented opportunity for D&I evaluation. The AAP also offers continuing education on the prescription of obesity medication, and the American Society for Metabolic and Bariatric Surgery (ASMBS) offers accreditation for pediatric centers along with guidelines specific to pediatric surgery [39].

5 | Examples of Implementation Strategies to Improve Uptake of Treatment EBIs

Building on the context–strategy–mechanism–outcome pathways in the Figure 1, this section highlights key implementation strategies that have been identified and tested to improve the adoption, implementation, and maintenance of pediatric obesity treatment aligned with guidelines and scientific evidence.

5.1 | Provider and Clinical Capacity Building

A significant barrier to scaling up or scaling out obesity interventions is the lack of education and training for health care providers, particularly regarding the multifactorial etiologies of obesity, stigma associated with the disease, understanding of the full range of obesity treatments, and the use of new pharmacological therapies. Gaps in health care provider training are being identified and addressed through quality improvement opportunities, continuing medical education, maintenance of certification, and technical assistance offered by professional associations like the AAP and obesity clinical or community experts.

At the earliest stages of implementation, it is necessary to evaluate whether and how the infrastructure of the health system, hospital, or clinic can integrate and support the deployment of interventions as intended. An example of an implementation strategy is a clinic capacity checklist that allows a health care provider or clinical entity to review its infrastructure, workflow, staffing, and resources to determine its current capacity and its areas of need to prepare for the delivery of obesity treatment [40]. Along with reviewing capacity, clinical practices require onboarding support including training staff to deliver components of treatment; integrating treatments, referrals, and evaluation into the EHR and workflow of the clinic; and thinking toward maintenance and sustainability related to financing and resources.

During onboarding, it is important to consider the ability of clinics to deliver EBIs as intended and to identify logistical and other barriers to delivery. Strategies can include identifying billing or reimbursement codes for EBIs that will pay for treatment services. The EHR and other existing patient care systems may be leveraged to improve patient enrollment and fidelity to obesity treatment. Building the workforce to deliver treatment programs is necessary but requires consideration of payment, training, and availability to deliver frequent sessions during times that are available to the families. Strengthening provider capability and clinic capacity (i.e., mechanisms of implementation change) through these strategies enhances implementation and long-term maintenance of obesity treatment interventions. Further, these capacity-building strategies correspond to the Expert Recommendations for Implementing Change (ERIC) categories [41] of training/education and infrastructure change and primarily operate through capability and opportunity mechanisms described earlier.

5.2 | Deployment/Adoption

Successful implementation involves simplifying the delivery of complex behavior-based treatments, such as supporting children and adolescents to change their eating and physical activity, take a new medication, or undergo surgery, while maintaining fidelity to core components. Patient-centered approaches like shared decision-making between the family and clinician are critical to align with the family's needs while supporting the medical management of the child's obesity. As EBIs move from efficacy testing to broader dissemination, effectiveness can decline with program drift, which is the expected decline in effectiveness as practitioners

adapt the treatment delivery to the point of not achieving the desired outcome of weight reduction or health improvement (i.e., voltage drop). One estimate suggested that weight status and health behaviors achieved less than 75% of the original effectiveness when obesity interventions were scaled up versus the original efficacy trial [42], and another analysis showed a 59% drop in effectiveness in physical activity interventions [43]. Waning effect sizes in real-world settings reveal the challenges of implementation with fewer resources and a patient population that is more heterogeneous than prior clinical trials. As noted earlier, voltage drop exemplifies how incomplete fidelity at scale undermines the mechanisms of reach and effectiveness outlined in the Figure 1. Further, program drift occurs as practitioners adapt the delivery of EBIs. Not all EBIs are scalable due to complexity, lack of support, both internal and external to the delivery agent, insurance gaps and financial constraints, and a lack of integrated systems of care [26, 44–45].

6 | Aligning Implementation Research With Clinical Practice

The 2023 AAP CPG [6] was based on a large systematic review published as a pair of technical reports [46, 47] to inform the decisions of what evidence rose to the standard of a clinical guideline or expectation. A unique requirement of the trials included in this systematic review was that they had to involve the primary care or health care setting in a meaningful way, that is, not solely delivered through an academic partner. Thus, consistent with hybrid effectiveness–implementation designs noted earlier, the evidence upon which the AAP CPG is based on includes pragmatic and feasible designs that align with typical clinical contexts. These types of trials also align with the concept of context-strategy fit highlighted in the Figure 1. Still, many trials may be supplemented by research staff recruiting patients, delivering the intervention, and at times financially subsidizing the clinics' participation. Trials often require extensive eligibility criteria to test efficacy, as opposed to implementation science studies that typically aim for a more inclusive sample for pragmatism and generalizability. Examples of pragmatic trials that attempted to better align the study design and implementation with real-world treatment delivery are provided in the online [Supporting Information](#).

6.1 | Integration of Family-Based Lifestyle Treatment With Pharmacotherapy

While IHBLT is the foundation of pediatric obesity management, the recent emergence of highly effective obesity medications is fundamentally altering the landscape of clinical care delivery [48]. Pharmacotherapy fills a critical gap in targeting biological drivers of obesity like appetite and satiety regulation, cravings, and defended fat mass. The AAP CPG outlines that clinicians should offer medication to those patients who qualify, along with IHBLT, though most trials have lasted 1 year and lack long-term safety data [6]. Newly approved medications like semaglutide (glucagon-like peptide-1 receptor agonist: GLP-1RA) and phentermine/topiramate reduce body mass index (BMI) on average by 10%–17% by acting in the brain to reduce appetite, enhance satiety, and quell food cravings to treat the underlying pathophysiology of obesity [49, 50]. Prescription rates

of obesity medications (GLP-1RAs in particular) for adolescents increased 300% from 2020 to 2023, yet still <1% of medically eligible adolescents with obesity are prescribed an obesity medication, with lower prevalence among specific groups including boys and non-White children [10]. New obesity medications are expected to be approved for younger children soon [51].

Payment for obesity pharmacotherapy remains a barrier to access. Over half of the children in the US are enrolled in a Medicaid health benefit program and entitled to benefits that cover preventive and treatment services for obesity [52], but coverage for obesity care under Medicaid varies from state to state [53]. Advocacy efforts emphasize the importance of framing obesity as a medical condition to overcome stigma, particularly in the context of Medicaid coverage for GLP-1RAs and other treatments. Key policy recommendations to support GLP-1 accessibility and reach include securing funding for obesity treatments, improving insurance coverage with coordinated advocacy efforts that combine clinical evidence with economic cost modeling, and changing stigmatizing language around weight loss. These reimbursement structures represent external contextual factors that influence adoption and maintenance (Figure 1).

Many practical questions remain unanswered regarding the integration of IHBLT with pharmacotherapy. These questions include defining the role of IHBLT when paired with medications in terms of the ideal number of contact hours required to safely maximize treatment effectiveness. A critical concept to consider is that obesity medications alter the underlying pathophysiology, essentially changing behaviors from the inside out, potentially lessening the need for high doses of IHBLT. If so, this could relieve a heavy burden placed on families (e.g., missed school/work, cost for transportation and childcare, out-of-pocket expenses such as copays and deductibles) and the health care system in terms of staffing, resource allocation, and financial investment associated with IHBLT. It may also facilitate accessibility and broader implementation of pharmacotherapy into primary care. Nonetheless, the need for IHBLT or similar approaches may remain since access to obesity medications changes over time, discontinuation rates are high, weight rebound typically occurs after discontinuation, and insurance coverage is intermittent or finite, indicating that support is needed both on obesity medications to support appropriate lifestyle interventions while on obesity medications and when these medications are reduced, discontinued, or no longer available. All of these areas of consideration provide a broad opportunity for D&I research that includes studies on ensuring the specific intervention reaches a given family at the right time, provider adoption decisions, implementation costs and complexity, and strategies to support the maintenance of intervention delivery.

6.2 | Implementing CPGs for Metabolic and Bariatric Surgery

Strong scientific evidence coupled with guidelines from the AAP and ASMBS support metabolic/bariatric surgery for adolescents [6, 39, 54–55], yet surgery remains underutilized. According to the 2023 AAP CPG, bariatric/metabolic surgery should be considered for adolescents 13 years and older with severe obesity (BMI \geq 120% of the 95th percentile for age and sex) [6]. Ten-year

outcomes after bariatric surgery in adolescents enrolled in the Teen-LABS trial indicated long-term durability of weight loss and remission of coexisting conditions (including type 2 diabetes, hypertension, and dyslipidemia) that were greater than expected in adults undergoing the same surgery [56]. For example, 55% of the adolescents had a remission of type 2 diabetes compared to 18% of adults undergoing similar surgery [56]. Further, the Swedish AMOS study showed substantial weight loss with Roux-en-Y gastric bypass over 5 years and improved comorbidities, though not without side effects (72% with nutritional deficiency and 25% with complications or rapid weight loss requiring additional abdominal surgery) [57]. These trials indicate that early surgical intervention may be most effective, particularly for diabetes remission, and requires ongoing advanced obesity treatment for postoperative monitoring, nutritional counseling, and continued intervention.

Implementation science and continuous quality improvement initiatives related to surgery are necessary to move the field forward, improve outcomes, and implement and track changes in clinic. Tailored, patient-centered preparation and postoperative care are essential for the success and safety of surgery for adolescents, and this is even more necessary for youth with developmental disabilities, mental health needs, or complex social circumstances. Patient success and satisfaction are tied to weight loss outcomes and relationship and support from the metabolic/bariatric team [58]. Telehealth home appointments have been a successful tool to improve engagement and prevent no-shows.

Hybrid effectiveness-implementation trials are also needed to expand outcomes beyond weight reduction, including integrated programs that focus on exercise improvements and lean tissue preservation post surgery. While metabolic/bariatric surgery is currently completed in a very small number of patients, the intensity of intervention requires a significant number of visits and a multidisciplinary care team, including those focused on supporting health behavior changes.

For clinical and systems-level implementation of surgery, efforts need to focus on increased awareness and acceptance of the guidelines related to surgery among pediatricians and other referring providers; partnerships are needed with implementation scientists and quality improvement teams to co-design referral pathways; and programs are needed to support caregivers, streamline transitions before and after surgery, and ensure continued dietary monitoring specific to micronutrient intake and other risks following surgery. These contextual factors, both internal and external (e.g., AAP CPG) to a health care system, are key concepts in the design and use of strategies to improve adoption through mechanisms such as awareness, motivation, and feasibility across family, provider, and administrator levels (Figure 1).

7 | Insurance Coverage and Cost-Effectiveness Analysis of Obesity Treatment

Cost-effectiveness research is essential to demonstrate the societal value and feasibility of delivering obesity interventions. One of the major barriers to scaling interventions is the lack

of consistent reimbursement mechanisms and universal coverage by payer type. Different models, such as value-based or bundled payments, are being explored to increase access and sustainability, including for nonlicensed providers like community health workers to deliver IHBLT [59]. Addressing budget impact analysis and the financial burden of obesity on families can provide a clearer societal perspective on the necessity and benefit of interventions. Reimbursement pathways are being identified, adapted, created, and tested including through Medicaid and employer-sponsored insurance benefits. Fee-for-service remains a common billing pathway, with billing guides used as an implementation strategy to guide health care providers and families on how to receive coverage for weight management services [52].

Cost is a key component of current D&I science outcome frameworks, and tools for estimating the sustainability of programs in clinics are crucial, equipping clinical and administrative decision-makers with information for the sustainable implementation of pediatric obesity treatment by estimating the patient volume needed to balance program costs [60]. The Childhood Obesity Intervention Cost-Effectiveness Study (CHOICES) uses cost-effectiveness analysis to explore how to balance intervention costs with health outcomes and potential savings for pediatric obesity prevention and treatment initiatives in the school, community, and clinic settings [61]. An adaptable cost tool is also available that captures reimbursement of clinical provider time and a minimum stream of clinic volume to aid decision-makers in financial planning to both implement and sustain IHBLT within the medical home [60]. When comparing costing methods across family healthy weight programs implemented across health care, community, and public health settings, identifying commonalities, including direct measurement methods and cost categorizations, can provide structured frameworks and practical tools to inform the sustainability of these programs [62].

8 | State of the D&I Science for the Prevention of Pediatric Obesity

In contrast to the plethora of EBIs for the treatment of pediatric obesity, there are few recognized and effective EBIs for pediatric obesity *prevention*, which has stymied the translation of research into practice and minimized opportunities for implementation science. As such, the AAP recommendations for prevention in primary care are in a Clinical Report [7] rather than meeting the evidence base required for a CPG. Challenges to D&I science for prevention include (1) obesity prevention's dual emphasis on diet and physical activity, daily behaviors that are difficult to change and to measure; (2) multiple groups (e.g., government agencies, clinical practices, school health clinics) sharing responsibility for the implementation of preventive interventions, which renders implementation difficult to track; (3) the lack of distinction between the anticipated EBI and the implementation strategies used to support its uptake and sustainment; and (4) the reality that the level of dietary change necessary to bring a child into energy balance, or reduce energy imbalance, may far exceed the dietary targets of preventive intervention. The difficulty in separating the EBI from the implementation strategy causes confusion on what key components must be retained in the EBI and

can lead to difficulties in evaluating effects and interpreting differences between sites. Despite these challenges, there are exemplars of D&I efforts to prevent obesity (see online [Supporting Information](#)).

8.1 | Scaling Up Prevention Programs

Scaling up is the process of increasing the impact of a successfully tested program to benefit a larger population. Only an estimated 3% of chronic disease EBIs are scaled, meaning the vast majority are not deployed into the population at large [63]. The goal is to achieve population-wide health or behavior improvement (horizontal scale) and to foster program sustainability through policy, regulation, financing, or systems changes (vertical scale). In D&I science, scale-up can be understood as a function of both reach—expanding the number and diversity of individuals or families who benefit from an evidence-based obesity prevention intervention—and adoption—increasing the number and diversity of organizations that decide to deliver the intervention.

Failure to scale leads to wasted resources and can exacerbate health inequities by preventing high-risk populations from accessing the EBI. Scaling evidence-based early childhood programs is both a high priority and a challenge for researchers, practitioners, and policy makers. Poor implementation quality represents a critical scaling-up barrier undermining infant nutrition and breastfeeding programs' effectiveness and sustainability, that is, the ability to maintain programming and its benefits over time. Implementation quality measures the discrepancy between an intervention's intended design and its implementation, including content adherence (i.e., fidelity), quality of delivery, and engagement (i.e., recipient responsiveness).

To date, there is limited knowledge of the implementation strategies required to sustain high implementation quality of pediatric obesity prevention interventions at scale or transitioning-to-scale such as infant nutrition and breastfeeding programs. The evidence-based building blocks framework identifies a strategy for successful implementation and scale-up of pediatric obesity prevention programs, including early childhood nutrition and breastfeeding programs [64]. These essential components for scaling include workforce development, training, monitoring, and strong leadership. Ongoing evaluation may require integration of monitoring within an institution's existing metrics, coordination of goals, and monitoring efforts across multiple entities [45]. Key considerations include adaptation to specific community needs and operating with limited resources. Clear curricula, simplifying the EBI, and integrating with existing local practices can improve the likelihood of scale.

8.2 | Implementation Mapping

Implementation mapping provides a systematic method to develop, test, and adapt implementation strategies to increase the reach, adoption, and maintenance of an EBI—essential components of scale-up. Within the school obesity prevention

context, a needs assessment gathers qualitative and quantitative data from observations, surveys, and/or interviews to identify community assets and both strengths and challenges for implementation. Consideration of the context, in line with the CFIR approach, identifies local conditions such as a lack of affordable healthy foods as well as factors within the inner setting (such as a school) and the outer setting (such as a neighborhood or community) that will facilitate or impede the implementation of the EBI. The EPIS framework can be used to connect the outer and inner contexts to bridge the gap between the scientific evidence and practice [33, 65]. Identifying community champions within the setting that will deliver the EBI is also a critical element for success, and these may not only be the school administrator but also teachers or student advocates. Designing for dissemination is another element to ensure the EBI is distributed throughout the community [66]. Ultimately, dissemination methods including district reports, infographics for the community, and social media posts facilitate transparency and community engagement for sustainment.

Policy, Systems, and Environmental (PSE) interventions for obesity and cardiovascular disease prevention also represent vertical scaling approaches. These interventions address broader community and population-level factors that influence health outcomes, such as poverty, discrimination, and inadequate access to healthy food [67]. School-based PSE interventions, such as those which promote healthy eating and physical activity through enhancing the school environment, show promise for preventing obesity [68–71] but often lack long-term implementation and sustainability planning [72, 73]. Research has shown that providing healthy school meals is associated with higher quality nutritional intake and reduced obesity prevalence [74–77]. Increasing access to healthy meals at school is a critical step to mitigating disparities in obesity prevalence in youth [76]. The adoption of Universal School Meals, a program embedded within the National School Lunch Program that provides free breakfast and lunch to all students in the school, is associated with quality of dietary intake, food security, and academic achievement observed in randomized trials and longitudinal studies [78–80]. Despite the many benefits associated with Universal School Meals, schools cite financial challenges for implementation and lack of uptake among students [81]. Reports highlight consistent increases in adoption among eligible schools and districts over the last 5 years [81], yet student participation (i.e., reach) in Universal School Meals remains low; available data indicate only 30%–40% of students partake in breakfast and 50%–60% in lunch [82]. Programs and policies designed to mitigate health disparities for obesity cannot make the most impact if they are not reaching their target population. Students who do not participate in school meals are more likely to purchase unhealthy foods from outside retailers (e.g., corner stores) [83, 84], increasing risk for overweight and obesity [85]. These data illustrate that scale-up success is dependent on both organizational adoption (schools implementing programs) and individual reach (students participating). In addition, the current literature in this area, indicate that successful scale-up also depends on the interplay of contextual readiness, appropriate strategy selection, and continuous attention to the mechanisms that link implementation quality to population-level outcomes.

9 | Recommendations for Advancing D&I Research to Improve Pediatric Obesity Treatment and Prevention

The symposium generated recommendations for disseminating and implementing EBIs into clinical and public health settings. We report them here based on the focus on context, strategies, mechanisms, and outcomes (see Table 1 for key highlights). We begin with general recommendations followed by more specific recommendations for those focused on the D&I of pediatric obesity-focused interventions. Advancing D&I science in this field will require more systematic assessment of the contextual factors that shape implementation, rigorous testing and specification of D&I strategies, and the explicit identification of mechanisms and outcomes that explain and evaluate how strategies work. Collectively, these recommendations support the development of generalizable knowledge and scalable solutions that can move evidence-based pediatric obesity prevention and treatment interventions into routine practice.

D&I research in this area will benefit from more consistent assessment and understanding of how multilevel contextual factors (e.g., organizational readiness, community assets, reimbursement structures, sociocultural norms) influence both the selection and impact of implementation strategies. Frameworks such as Practical, Robust Implementation and Sustainability Model (PRISM), CFIR, and EPIS can guide systematic assessment of inner and outer contexts to improve the likelihood of fit for both EBIs and D&I strategies. Research should also focus on consistent specification of strategies using existing compendiums when relevant and describing new or adapted strategies that best fit with the contextual needs of clinical and community systems. To date, strategy specification as it relates to the hypothesized mechanisms through which improvements are made in reach, adoption, implementation quality, and maintenance is lacking.

In designing, testing, and delivering EBIs, researchers should also consider characteristics that support dissemination from creation through implementation. Communicating with the end-users to understand what they want or need to adapt will help to preserve core functions of EBIs while being accommodating and pragmatic about what can change. Research is needed on shared decision-making tools between family and clinicians—especially if a family or clinician is strongly for or against a specific treatment like medication or surgery. Assigning or selecting specific implementation responsibilities across stakeholder groups (e.g., clinicians, community organizations, educators) is important to avoid fragmentation and diffusion of responsibility. Public health agencies and community partners are important for the delivery of prevention messaging, such as the WIC program and early childhood education centers or schools. Tools such as workbooks and guidelines are vital for facilitating community engagement in implementation and dissemination efforts, to ensure the core functions of EBIs are retained while effective implementation strategies are employed.

Having identified critical contextual and strategic considerations, future research should also examine the mechanisms through which D&I strategies lead to changes in outcomes.

Future research should apply qualitative, quantitative, and mixed methods approaches to determine the mechanisms that explain how and why D&I strategies work. Provider and clinic capacity-building strategies may act through capability and opportunity mechanisms, while community-based facilitation may operate through collective efficacy and social cohesion, and system-level policy strategies may function through institutionalization. Additional mechanisms warranting investigation include implementation climate and leadership engagement (e.g., linking contextual readiness to sustained delivery), trust and relational embeddedness (e.g., supporting engagement in under-resourced communities), and feedback responsiveness (e.g., facilitating continuous improvement). Understanding these mechanisms can inform how D&I strategies are selected, adapted, and bundled across clinical and community delivery systems.

Several content-specific areas emerged as priorities for advancing D&I research, including IHBLT, pharmacotherapy, and metabolic/bariatric surgery. Regarding the delivery of IHBLT and to better align clinical trials with the needs and realities of clinical practice, there are opportunities to refine implementation strategies, simplify interventions while maintaining fidelity to core components, and identify outcomes of importance to the family and overall medical management (e.g., diet or physical activity but also behavioral health support, addressing sleep, stress, mental health). There are many IHBLT options, though many derive back to the original Epstein studies and the Traffic Light Plan [86–89]. Specifying core components and tracking adaptations in real-world settings will inform what can be changed based on context and will better align clinical trials with pragmatic adoption and implementation. Bundling and testing D&I strategies, such as viable reimbursement pathways and training, and building the workforce of delivery agents remain areas of need and opportunity for the scale and sustainability of IHBLT.

There are significant and time-sensitive opportunities as pharmacotherapy options for children continue to expand. Type I and II hybrid trials may help to understand within systems what strategies might be helpful to ensure that providers and families are prepared for their use when appropriate. This may include strategies to expand pharmacotherapy education for providers, including primary care or community-based settings, including obesity pathophysiology and obesity medicine training in medical schools. Given the pace of medication options and therapies, an important advancement is to develop and test decision support tools that help clinicians stay abreast of current recommendations and prescribing options. Another avenue of study is how pharmacotherapy options connect to and intersect with behavioral programs and important questions about sequencing (before, along with, as maintenance) and dose (i.e., program intensity) and mode of delivery (i.e., digital or telehealth) of behavioral programs in conjunction with pharmacotherapy.

D&I theories, models, and frameworks are useful to identify the local context and barriers to access treatment options, to design and adapt programs that reach all children and adolescents regardless of economic status or location, and to ensure sufficient surgeons, dietitians, psychologists, exercise physiologists, and

TABLE 1 | Recommendations for disseminating and implementing evidence-based solutions in clinical and community settings.

Context-focused recommendations	Need filled
<p>Recommendation</p> <ul style="list-style-type: none"> Identify and mitigate barriers to adoption, such as treatment side effects (real or perceived), weight stigma and bias, and fee-for-service payment models. Connect researchers and clinicians with policy makers to ensure adequate funding to build workforce capacity and support dissemination and implementation strategies for the success of EBIs. Expand access to treatment EBIs in home and community settings, including IHBLT, pharmacotherapy, and metabolic and bariatric surgery. Enhance community partnerships to better adapt to social and community needs and to support long-term engagement in prevention and treatment EBIs. Ensure sustainability through policy, funding, and scalability strategies. 	<p>Addresses contextual barriers within those who will benefit, clinical systems, and costs that shape adoption.</p> <p>Focuses on policy and structural context needed to support implementation infrastructure.</p> <p>Emphasizes context and setting diversification to enhance equity and reach.</p> <p>Targets community context and local fit, aligning with external environmental relevance.</p> <p>Focuses on contextual sustainability factors (policy, finance, infrastructure) influencing maintenance.</p>
Strategy-focused recommendations	Need filled
<p>Recommendation</p> <ul style="list-style-type: none"> Design type III hybrid effectiveness trials that prioritize the testing of implementation strategies and that focus on implementation outcomes to move EBIs into clinical and public health settings. Identify and test dissemination strategies to scale EBIs. Facilitate quality improvement projects that focus on systems- and clinic-level changes, such as leveraging the EHR or improving workflow efficiencies, to more rapidly deploy EBIs. Conduct hybrid effectiveness trials that integrate technologies such as telehealth, mobile apps, texting, artificial intelligence, machine learning, just-in-time adaptive interventions, and multiphase optimization approaches to better respond to individual patients' needs and deploy EBIs at the right time to the right person. Support training for researchers and clinicians who wish to pursue D&I science. 	<p>Explicitly describes research design for strategy testing (type III hybrids).</p> <p>Has a core focus on strategy identification and testing for broader EBI dissemination.</p> <p>Moves beyond training strategies to include implementation and sustainability infrastructure changes.</p> <p>Includes complex multilevel strategies that can improve efficiencies in the dissemination and implementation processes.</p> <p>Capacity building for those interested in applying D&I in pediatric obesity.</p>
Mechanism-focused recommendations	Need filled
<p>Recommendation</p> <ul style="list-style-type: none"> Increase awareness and acceptance of EBIs for treatment and prevention among the public, families, health care providers, insurance payers, policy makers, and educators. 	<p>Determines the role of awareness and motivational mechanisms in participant reach and setting-level adoption.</p>

(Continues)

TABLE 1 | (Continued)

Mechanism-focused recommendations	Need filled
<p>Recommendation</p> <ul style="list-style-type: none"> • Test how provider and clinic training strategies influence capability, opportunity, and motivation to deliver EBIs with fidelity. 	<p>Identifies the behavioral and organizational mechanisms through which workforce development and onboarding strategies improve implementation quality.</p>
<ul style="list-style-type: none"> • Examine how facilitation, co-design, and partnership approaches build collective efficacy and trust across organizations and communities. 	<p>Clarifies the social mechanisms leading to reach, adoption, implementation or maintenance, particularly in diverse or underserved populations.</p>
<ul style="list-style-type: none"> • Assess how implementation climate and leadership engagement mediate the relationship between contextual readiness and sustained delivery of EBIs. 	<p>Identifies mechanisms of long-term maintenance and scale-up.</p>
<p>Outcomes-focused recommendations</p>	<p>Need filled</p>
<p>Recommendation</p> <ul style="list-style-type: none"> • Measure equity in reach, adoption, and outcomes across population groups and settings. 	<p>Ensures that efforts reduce rather than exacerbate health inequities.</p>
<ul style="list-style-type: none"> • Track implementation quality as a composite outcome including fidelity, delivery quality, and acceptable adaptation. 	<p>Provides benchmarking for evaluating intervention integrity during real-world implementation.</p>
<ul style="list-style-type: none"> • Evaluate sustainment duration and policy or systems institutionalization as indicators of long-term impact. 	<p>Monitors maintenance and vertical scaling outcomes beyond initial implementation success.</p>

other health care support staff to optimize long-term outcomes, safety, and success. Many families do not know their treatment options, and there are limitations in primary care providers' and families' awareness and knowledge about the potential effectiveness and safety of treatment options. Children with special health needs, such as developmental disabilities, neurocognitive diversity, Prader-Willi syndrome, chronic pain, and mental health diagnoses, require tailored interventions. Addressing co-occurring conditions like depression or social needs like food insecurity is also a critical component of ensuring effective treatment. Combining IHBLT with pharmacotherapy and/or surgery is critical, as indicated in the AAP CPG. Together, these examples illustrate the diversity of implementation contexts that require tailored yet theoretically informed D&I strategies to ensure equitable access and sustained delivery.

10 | Conclusion

In summary, obesity is a chronic, relapsing condition that requires sustained, coordinated responses across childhood and adolescence. Priority research questions include examining contextual factors that facilitate or impede implementation of evidence-based prevention and treatment strategies, precise specification and rigorous testing of D&I strategies to identify successful practices, and evaluation of the mechanisms that lead to successful outcomes. These critical research directions will inform scalable solutions to move evidence-based approaches into real-world delivery.

Future D&I research should consider a range of outcomes from reach, adoption, and fidelity to equity, cost, implementation quality, sustainment duration, and policy uptake. Evaluating these outcomes at individual, organizational, and system levels—and over time—will provide practical information that can be used to speed the uptake of pediatric obesity prevention and treatment into sustained community and clinical practice. Using a more structured equity lens would identify strategies that provide equitable care across key family characteristics including race/ethnicity, rurality, and insurance coverage. To increase the likelihood of long-term impact, researchers and practitioners should integrate evidence-based approaches within existing health, education, and policy systems, including, but also moving beyond, short-term grant cycles to models of financial and operational sustainability. Legislative action, institutional investment, and multisector learning systems are likely needed to translate discovery into lasting change. Ultimately, D&I science provides the road map for achieving equitable, population-level reductions in pediatric obesity through the systematic integration, evaluation, and sustainment of EBIs.

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Data Availability Statement

Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

References

1. M. Liu, K. Inoue, A. Boyd, R. Aggarwal, L. X. Marinacci, and R. K. Wadhera, "Obesity Prevalence Among Children and Adolescents in the United States, 2011 to 2023," *Annals of Internal Medicine* 178 (2025): 1517–1520, <https://doi.org/10.7326/Annals-25-00389>.
2. K. Hu, R. A. Underwood, and Y. Shen, "Racial and Ethnic Disparities in Obesity Trends Among US Children and Adolescents Aged 2-19, 2011-2023," *Pediatric Obesity* 20 (2025): e70032, <https://doi.org/10.1111/jipo.70032>.
3. M. Simmonds, A. Llewellyn, C. G. Owen, and N. Woolcott, "Predicting Adult Obesity From Childhood Obesity: A Systematic Review and Meta-Analysis," *Obesity Reviews* 17, no. 2 (2016): 95–107, <https://doi.org/10.1111/obr.12334>.
4. C. Marcus, P. Danielsson, and E. Hagman, "Pediatric Obesity-Long-Term Consequences and Effect of Weight Loss," *Journal of Internal Medicine* 292, no. 6 (2022): 870–891, <https://doi.org/10.1111/joim.13547>.
5. J. Ling, S. Chen, N. R. Zahry, and T. A. Kao, "Economic Burden of Childhood Overweight and Obesity: A Systematic Review and Meta-Analysis," *Obesity Reviews* 24, no. 2 (2023): e13535, <https://doi.org/10.1111/obr.13535>.
6. S. E. Hampl, S. G. Hassink, A. C. Skinner, et al., "Clinical Practice Guideline for the Evaluation and Treatment of Children and Adolescents With Obesity," *Pediatrics* 151, no. 2 (2023): e2022060640, <https://doi.org/10.1542/peds.2022-060640>.
7. N. D. Muth, C. Bolling, T. Hannon, M. Sharifi, and Section On O, Committee On N, "The Role of the Pediatrician in the Promotion of Healthy, Active Living," *Pediatrics* 153, no. 3 (2024): e2023065480, <https://doi.org/10.1542/peds.2023-065480>.
8. Force USPST, W. K. Nicholson, M. Silverstein, et al., "Interventions for High Body Mass Index in Children and Adolescents: US Preventive Services Task Force Recommendation Statement," *JAMA* 332, no. 3 (2024): 226–232, <https://doi.org/10.1001/jama.2024.11146>.
9. Children's Hospital Association, "2013 Survey Findings of Children's Hospitals Obesity Services," published May 2014, https://www.urmc.rochester.edu/MediaLibraries/URMCMedia/pediatrics/labs/Cook/documents/ObesitySurveyReport_CHA_SRCook_2014.pdf.
10. L. Kompaniyets, S. L. Pierce, R. Porter, et al., "Prescriptions for Obesity Medications Among Adolescents Aged 12-17 Years With Obesity

- United States, 2018-2023," *MMWR. Morbidity and Mortality Weekly Report* 74, no. 20 (2025): 337-344.
11. O. E. Imoisili, A. B. Goodman, C. A. Dooyema, M. R. Harrison, B. Belay, and S. Park, "Screening and Referral for Childhood Obesity: Adherence to the U.S. Preventive Services Task Force Recommendation," *American Journal of Preventive Medicine* 56, no. 2 (2019): 179-186, <https://doi.org/10.1016/j.amepre.2018.10.003>.
 12. A. Staiano, A. Marker, M. Liu, E. Hayden, D. Hsia, and S. Broyles, "Childhood Obesity Screening and Treatment Practices of Pediatric Healthcare Providers," *Journal of the Louisiana State Medical Society* 169, no. 1 (2017): 2-10.
 13. P. J. Rodriguez, D. Do, S. Gratzl, B. M. Goodwin-Cartwright, N. L. Stucky, and D. R. Wright, "Shifts in US Pediatric Obesity Treatment After the AAP Guidelines," *Pediatrics Open Science* 1, no. 3 (2025): 1-12, <https://doi.org/10.1542/pedsos.2025-000623>.
 14. M. E. Bouchard, Y. Tian, S. Linton, et al., "Utilization Trends and Disparities in Adolescent Bariatric Surgery in the United States 2009-2017," *Childhood Obesity* 18, no. 3 (2022): 188-196, <https://doi.org/10.1089/chi.2021.0201>.
 15. E. A. Balas and S. A. Boren, "Managing Clinical Knowledge for Health Care Improvement," *Yearbook of Medical Informatics* 1 (2000): 65-70.
 16. L. H. Epstein, R. R. Wing, R. Koeske, and A. Valoski, "Long-Term Effects of Family-Based Treatment of Childhood Obesity," *Journal of Consulting and Clinical Psychology* 55, no. 1 (1987): 91-95.
 17. L. H. Epstein, R. R. Wing, L. Steranchak, B. Dickson, and J. Michelson, "Comparison of Family-Based Behavior Modification and Nutrition Education for Childhood Obesity," *Journal of Pediatric Psychology* 5, no. 1 (1980): 25-36.
 18. P. A. Estabrooks, R. C. Brownson, and N. P. Pronk, "Dissemination and Implementation Science for Public Health Professionals: An Overview and Call to Action," *Preventing Chronic Disease* 15 (2018): E162, <https://doi.org/10.5888/pcd15.180525>.
 19. P. A. Estabrooks, "An Overview of Dissemination and Implementation Science in Physical Activity and Health Promotion," *Kinesiology Review* 12, no. 1 (2023): 14.
 20. J. Mielke, S. De Geest, F. Zuniga, et al., "Understanding Dynamic Complexity in Context-Enriching Contextual Analysis in Implementation Science From a Constructivist Perspective," *Frontiers in Health Services* 2 (2022): 953731, <https://doi.org/10.3389/frhs.2022.953731>.
 21. M. E. Fernandez, G. A. Ten Hoor, S. van Lieshout, et al., "Implementation Mapping: Using Intervention Mapping to Develop Implementation Strategies," *Frontiers in Public Health* 7 (2019): 158, <https://doi.org/10.3389/fpubh.2019.00158>.
 22. C. C. Lewis, P. Klasnja, A. R. Lyon, et al., "The Mechanics of Implementation Strategies and Measures: Advancing the Study of Implementation Mechanisms," *Implementation Science Communications* 3, no. 1 (2022): 114, <https://doi.org/10.1186/s43058-022-00358-3>.
 23. K. L. Reilly, S. Kennedy, G. Porter, and P. Estabrooks, "Comparing, Contrasting, and Integrating Dissemination and Implementation Outcomes Included in the RE-AIM and Implementation Outcomes Frameworks," *Frontiers in Public Health* 8 (2020): 430, <https://doi.org/10.3389/fpubh.2020.00430>.
 24. S. M. Harden, K. I. Galaviz, and P. A. Estabrooks, "Expanding Methods to Address RE-AIM Metrics in Hybrid Effectiveness-Implementation Studies," *Implementation Science Communications* 5, no. 1 (2024): 123, <https://doi.org/10.1186/s43058-024-00646-0>.
 25. R. C. Brownson, G. A. Colditz, and E. K. Procter, eds., *Dissemination and Implementation Research in Health: Translating Science to Practice*, 2nd ed. (Oxford Academic, 2017).
 26. D. A. Chambers, R. E. Glasgow, and K. C. Stange, "The Dynamic Sustainability Framework: Addressing the Paradox of Sustainment Amid Ongoing Change," *Implementation Science* 8, no. 1 (2013): 117, <https://doi.org/10.1186/1748-5908-8-117>.
 27. E. M. Rogers, *Diffusion of Innovations*, 5th ed. (Free Press, 2003).
 28. D. Harriger, W. Lu, E. L. McKyer, B. E. Pruitt, and P. Goodson, "Assessment of School Wellness Policies Implementation by Benchmarking Against Diffusion of Innovation Framework," *Journal of School Health* 84, no. 4 (2014): 275-283, <https://doi.org/10.1111/josh.12145>.
 29. L. J. Damschroder, C. M. Reardon, M. A. O. Widerquist, and J. Lowery, "The Updated Consolidated Framework for Implementation Research Based on User Feedback," *Implementation Science* 17, no. 1 (2022): 75, <https://doi.org/10.1186/s13012-022-01245-0>.
 30. W. J. Heerman, D. Schludt, D. Harris, L. Teeters, R. Apple, and S. L. Barkin, "Scale-Out of a Community-Based Behavioral Intervention for Childhood Obesity: Pilot Implementation Evaluation," *BMC Public Health* 18, no. 1 (2018): 498, <https://doi.org/10.1186/s12889-018-5403-z>.
 31. G. Harvey and A. Kitson, "PARIHS Revisited: From Heuristic to Integrated Framework for the Successful Implementation of Knowledge Into Practice," *Implementation Science* 11 (2016): 33, <https://doi.org/10.1186/s13012-016-0398-2>.
 32. J. L. Hill, K. A. Heelan, R. T. Bartee, et al., "A Type III Hybrid Effectiveness-Implementation Pilot Trial Testing Dissemination and Implementation Strategies for a Pediatric Weight Management Intervention: The Nebraska Childhood Obesity Research Demonstration Project," *Childhood Obesity* 17, no. S1 (2021): S70-S78, <https://doi.org/10.1089/chi.2021.0170>.
 33. J. C. Moullin, K. S. Dickson, N. A. Stadnick, B. Rabin, and G. A. Aarons, "Systematic Review of the Exploration, Preparation, Implementation, Sustainment (EPIS) Framework," *Implementation Science* 14, no. 1 (2019): 1, <https://doi.org/10.1186/s13012-018-0842-6>.
 34. F. A. Newsome, A. Dilip, S. C. Armstrong, R. G. Salloum, and M. I. Cardel, "Scaling-Up Stage 4 Pediatric Obesity Clinics: Identifying Barriers and Future Directions Using Implementation Science," *Obesity (Silver Spring)* 29, no. 6 (2021): 941-943, <https://doi.org/10.1002/oby.23162>.
 35. R. E. Glasgow, S. M. Harden, B. Gaglio, et al., "RE-AIM Planning and Evaluation Framework: Adapting to New Science and Practice With a 20-Year Review," *Frontiers in Public Health* 7 (2019): 64, <https://doi.org/10.3389/fpubh.2019.00064>.
 36. L. J. Damschroder, D. C. Aron, R. E. Keith, S. R. Kirsh, J. A. Alexander, and J. C. Lowery, "Fostering Implementation of Health Services Research Findings Into Practice: A Consolidated Framework for Advancing Implementation Science," *Implementation Science* 4 (2009): 50, <https://doi.org/10.1186/1748-5908-4-50>.
 37. A. C. Feldstein and R. E. Glasgow, "A Practical, Robust Implementation and Sustainability Model (PRISM) for Integrating Research Findings Into Practice," *Joint Commission Journal on Quality and Patient Safety* 34, no. 4 (2008): 228-243.
 38. A. B. Goodman, E. Bosso, R. Petersen, and H. M. Blanck, "Moving Beyond Research to Public Health Practice: Spread and Scale of Interventions That Support Healthy Childhood Growth," *Childhood Obesity* 21, no. 1 (2025): 1-2, <https://doi.org/10.1089/chi.2024.0255>.
 39. J. S. A. Pratt, A. Browne, N. T. Browne, et al., "ASMBBS Pediatric Metabolic and Bariatric Surgery Guidelines, 2018," *Surgery for Obesity and Related Diseases* 14, no. 7 (2018): 882-901, <https://doi.org/10.1016/j.soard.2018.03.019>.
 40. "Capacity Considerations for Obesity Evaluation and Treatment," American Academy of Pediatrics' Institute for Healthy Childhood Weight, <https://www.maineaap.org/assets/resources/Capacity-Assessment-Checklist-1-6-final.pdf>.
 41. B. J. Powell, T. J. Waltz, M. J. Chinman, et al., "A Refined Compilation of Implementation Strategies: Results From the Expert Recommendations for Implementing Change (ERIC) Project," *Implementation Science* 10, no. 1 (2015): 21.

42. S. McCrabb, C. Lane, A. Hall, et al., "Scaling-Up Evidence-Based Obesity Interventions: A Systematic Review Assessing Intervention Adaptations and Effectiveness and Quantifying the Scale-Up Penalty," *Obesity Reviews* 20, no. 7 (2019): 964–982, <https://doi.org/10.1111/obr.12845>.
43. C. Lane, S. McCrabb, N. Nathan, et al., "How Effective Are Physical Activity Interventions When They Are Scaled-Up: A Systematic Review," *International Journal of Behavioral Nutrition and Physical Activity* 18, no. 1 (2021): 16, <https://doi.org/10.1186/s12966-021-01080-4>.
44. D. Laddu, I. J. Neeland, M. Carnethon, et al., "Implementation of Obesity Science Into Clinical Practice: A Scientific Statement From the American Heart Association," *Circulation* 150, no. 1 (2024): e7–e19, <https://doi.org/10.1161/CIR.0000000000001221>.
45. R. Perez-Escamilla, M. Vilar-Compte, E. Rhodes, et al., "Implementation of Childhood Obesity Prevention and Control Policies in the United States and Latin America: Lessons for Cross-Border Research and Practice," *Obesity Reviews* 22, no. S3 (2021): e13247, <https://doi.org/10.1111/obr.13247>.
46. A. C. Skinner, A. E. Staiano, S. C. Armstrong, et al., "Appraisal of Clinical Care Practices for Child Obesity Treatment. Part I: Interventions," *Pediatrics* 151, no. 2 (2023): e2022060642, <https://doi.org/10.1542/peds.2022-060642>.
47. A. C. Skinner, A. E. Staiano, S. C. Armstrong, et al., "Appraisal of Clinical Care Practices for Child Obesity Treatment. Part II: Comorbidities," *Pediatrics* 151, no. 2 (2023): e2022060643, <https://doi.org/10.1542/peds.2022-060643>.
48. W. P. Dutton, N. Paddu, A. Braddock, and B. Sweeney, "Clinician's Guide for Pediatric Anti-Obesity Medications," *Pediatric Clinics of North America* 71, no. 5 (2024): 957–980, <https://doi.org/10.1016/j.pcl.2024.07.006>.
49. D. Weghuber, T. Barrett, M. Barrientos-Perez, et al., "Once-Weekly Semaglutide in Adolescents With Obesity," *New England Journal of Medicine* 387, no. 24 (2022): 2245–2257, <https://doi.org/10.1056/NEJMoa2208601>.
50. A. S. Kelly, M. O. Bensignor, D. S. Hsia, et al., "Phentermine/Topiramate for the Treatment of Adolescent Obesity," *NEJM Evidence* 1, no. 6 (2022): 14, <https://doi.org/10.1056/evidoa2200014>.
51. C. K. Fox, M. Barrientos-Pérez, E. M. Bomberg, et al., "Liraglutide for Children 6 to <12 Years of Age With Obesity—A Randomized Trial," *New England Journal of Medicine* 392, no. 6 (2025): 555–565.
52. Pediatrics AAO, "Connecting Coding and Clinical Practice Guidelines: Obesity," *AAP Pediatric Coding Newsletter* 19, no. 8 (2024): 5–7, https://doi.org/10.1542/pcco_book241_document003.
53. STOP Obesity Alliance and OAC, "Medicaid Obesity Treatment Coverage 2024," <https://stop.publichealth.gwu.edu/coverage/medicaid-2024>.
54. T. H. Inge, N. F. Krebs, V. F. Garcia, et al., "Bariatric Surgery for Severely Overweight Adolescents: Concerns and Recommendations," *Pediatrics* 114, no. 1 (2004): 217–223.
55. S. C. Armstrong, C. F. Bolling, M. P. Michalsky, K. W. Reichard, and Section On Obesity SOS, "Pediatric Metabolic and Bariatric Surgery: Evidence, Barriers, and Best Practices," *Pediatrics* 144, no. 6 (2019): e20193223, <https://doi.org/10.1542/peds.2019-3223>.
56. J. R. Ryder, T. M. Jenkins, T. H. Inge, et al., "Ten-Year Outcomes Following Adolescent Bariatric Surgery," *New England Journal of Medicine* 391, no. 17 (2024): 1656–1658.
57. T. Olbers, A. J. Beamish, E. Gronowitz, et al., "Laparoscopic Roux-En-Y Gastric Bypass in Adolescents With Severe Obesity (AMOS): A Prospective, 5-Year, Swedish Nationwide Study," *Lancet Diabetes & Endocrinology* 5, no. 3 (2017): 174–183, [https://doi.org/10.1016/S2213-8587\(16\)30424-7](https://doi.org/10.1016/S2213-8587(16)30424-7).
58. M. L. Dreyer Gillette, H. J. Killian, C. Fernandez, and B. R. Sweeney, "Treating Obesity in Children and Adolescents With Special Healthcare Needs," *Current Obesity Reports* 11, no. 4 (2022): 227–235.
59. D. E. Wilfley, A. E. Staiano, M. Altman, et al., "Improving Access and Systems of Care for Evidence-Based Childhood Obesity Treatment: Conference Key Findings and Next Steps," *Obesity (Silver Spring)* 25, no. 1 (2017): 16–29, <https://doi.org/10.1002/oby.21712>.
60. C. F. Ruggiero, D. D. French, J. D. Smith, et al., "Development and Application of a Cost Tool for a Primary Care-Based Intensive Health Behaviour and Lifestyle Treatment," *Pediatric Obesity* 20 (2025): e70028, <https://doi.org/10.1111/ijpo.70028>.
61. CHOICES: Childhood Obesity Intervention Cost-Effectiveness Study, <https://choicesproject.org/>.
62. T. L. Michaud, J. L. Hill, K. A. Heelan, et al., "Considerations for Cost Assessment of Implementing Family Healthy Weight Programs Across Community and Clinical Contexts," *Childhood Obesity* Published ahead of print, October 30, 2025, <https://doi.org/10.1177/21532176251389760>.
63. L. Wolfenden, P. Hawe, L. Rychetnik, et al., "A Call to Action: More Collaborative Implementation Research Is Needed to Prevent Chronic Disease," *Australian and New Zealand Journal of Public Health* 46, no. 5 (2022): 549–553, <https://doi.org/10.1111/1753-6405.13270>.
64. R. Perez-Escamilla, L. Curry, D. Minhas, L. Taylor, and E. Bradley, "Scaling Up of Breastfeeding Promotion Programs in Low- and Middle-Income Countries: The "Breastfeeding Gear" Model," *Advances in Nutrition* 3, no. 6 (2012): 790–800, <https://doi.org/10.3945/an.112.002873>.
65. G. A. Aarons, M. Hurlburt, and S. M. Horwitz, "Advancing a Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors," *Administration and Policy in Mental Health* 38, no. 1 (2011): 4–23, <https://doi.org/10.1007/s10488-010-0327-7>.
66. R. C. Brownson, J. A. Jacobs, R. G. Tabak, C. M. Hoehner, and K. A. Stamatakis, "Designing for Dissemination Among Public Health Researchers: Findings From a National Survey in the United States," *American Journal of Public Health* 103, no. 9 (2013): 1693–1699, <https://doi.org/10.2105/AJPH.2012.301165>.
67. C. Alcantara, S. V. Diaz, L. G. Cosenzo, E. B. Loucks, F. J. Penedo, and N. J. Williams, "Social Determinants as Moderators of the Effectiveness of Health Behavior Change Interventions: Scientific Gaps and Opportunities," *Health Psychology Review* 14, no. 1 (2020): 132–144, <https://doi.org/10.1080/17437199.2020.1718527>.
68. C. P. Lambrinou, O. Androustos, E. Karaglani, et al., "Effective Strategies for Childhood Obesity Prevention via School Based, Family Involved Interventions: A Critical Review for the Development of the Feel4Diabetes-Study School Based Component," *BMC Endocrine Disorders* 20, no. S2 (2020): 52, <https://doi.org/10.1186/s12902-020-0526-5>.
69. K. L. Reilly, N. Nathan, J. Wiggers, S. L. Yoong, and L. Wolfenden, "Scale Up of a Multi-Strategic Intervention to Increase Implementation of a School Healthy Canteen Policy: Findings of an Intervention Trial," *BMC Public Health* 18, no. 1 (2018): 860, <https://doi.org/10.1186/s12889-018-5786-x>.
70. M. Malakellis, E. Hoare, A. Sanigorski, et al., "School-Based Systems Change for Obesity Prevention in Adolescents: Outcomes of the Australian Capital Territory 'It's Your Move!'," *Australian and New Zealand Journal of Public Health* 41, no. 5 (2017): 490–496, <https://doi.org/10.1111/1753-6405.12696>.
71. L. M. Bogart, M. N. Elliott, B. O. Cowgill, et al., "Two-Year BMI Outcomes From a School-Based Intervention for Nutrition and Exercise: A Randomized Trial," *Pediatrics* 137, no. 5 (2016): e20152493, <https://doi.org/10.1542/peds.2015-2493>.
72. L. Herlitz, H. MacIntyre, T. Osborn, and C. Bonell, "The Sustainability of Public Health Interventions in Schools: A Systematic Review," *Implementation Science* 15, no. 1 (2020): 4, <https://doi.org/10.1186/s13012-019-0961-8>.

73. S. Cassar, J. Salmon, A. Timperio, et al., "Adoption, Implementation and Sustainability of School-Based Physical Activity and Sedentary Behaviour Interventions in Real-World Settings: A Systematic Review," *International Journal of Behavioral Nutrition and Physical Activity* 16, no. 1 (2019): 120, <https://doi.org/10.1186/s12966-019-0876-4>.
74. E. V. Sanchez-Vaznaugh, M. Matsuzaki, P. Braveman, et al., "School Nutrition Laws in the US: Do They Influence Obesity Among Youth in a Racially/Ethnically Diverse State?," *International Journal of Obesity (Lond)* 45, no. 11 (2021): 2358–2368, <https://doi.org/10.1038/s41366-021-00900-8>.
75. L. E. Au, K. Gurzo, W. Gosliner, K. L. Webb, P. B. Crawford, and L. D. Ritchie, "Eating School Meals Daily Is Associated With Healthier Dietary Intakes: The Healthy Communities Study," *Journal of the Academy of Nutrition and Dietetics* 118, no. 8 (2018): 1474–e1, <https://doi.org/10.1016/j.jand.2018.01.010>.
76. E. L. Kenney, J. L. Barrett, S. N. Bleich, Z. J. Ward, A. L. Craddock, and S. L. Gortmaker, "Impact of the Healthy, Hunger-Free Kids Act On Obesity Trends," *Health Affairs* 39, no. 7 (2020): 1122–1129, <https://doi.org/10.1377/hlthaff.2020.00133>.
77. P. Ober, C. Sobek, N. Stein, et al., "And Yet Again: Having Breakfast Is Positively Associated With Lower BMI and Healthier General Eating Behavior in Schoolchildren," *Nutrients* 13, no. 4 (2021): 1351, <https://doi.org/10.3390/nu13041351>.
78. A. A. Hecht, K. M. Pollack Porter, and L. Turner, "Impact of the Community Eligibility Provision of the Healthy, Hunger-Free Kids Act on Student Nutrition, Behavior, and Academic Outcomes: 2011–2019," *American Journal of Public Health* 110, no. 9 (2020): 1405–1410, <https://doi.org/10.2105/AJPH.2020.305743>.
79. J. S. Bartfeld, L. Berger, and F. Men, "Universal Access to Free School Meals Through the Community Eligibility Provision Is Associated With Better Attendance for Low-Income Elementary School Students in Wisconsin," *Journal of the Academy of Nutrition and Dietetics* 120, no. 2 (2020): 210–218, <https://doi.org/10.1016/j.jand.2019.07.022>.
80. J. F. W. Cohen, A. A. Hecht, G. M. McLoughlin, L. Turner, and M. B. Schwartz, "Universal School Meals and Associations With Student Participation, Attendance, Academic Performance, Diet Quality, Food Security, and Body Mass Index: A Systematic Review," *Nutrients* 13, no. 3 (2021): 911, <https://doi.org/10.3390/nu13030911>.
81. FRA C, "Community Eligibility: The Key to Hunger-Free Schools," School Year 2020–2021, accessed November 22, 2021, <https://frac.org/wp-content/uploads/CEP-Report-2021.pdf>.
82. Hunger Solutions New York, "Bridging the Gap: Reaching Underserved Students With Breakfast After the Bell," accessed March 3, 2026, https://hungersolutionsny.org/wp-content/uploads/2020/08/School-Breakfast-report-web-view-3_4_20.pdf.
83. C. E. Caspi, Q. Wang, A. Shanafelt, et al., "School Breakfast Program Participation and Rural Adolescents' Purchasing Behaviors in Food Stores and Restaurants," *Journal of School Health* 87, no. 10 (2017): 723–731, <https://doi.org/10.1111/josh.12546>.
84. C. E. Caspi, G. Sorensen, S. V. Subramanian, and I. Kawachi, "The Local Food Environment and Diet: A Systematic Review," *Health & Place* 18, no. 5 (2012): 1172–1187, <https://doi.org/10.1016/j.healthplace.2012.05.006>.
85. P. Ohri-Vachaspati, F. Acciai, K. Lloyd, et al., "Evidence That Changes in Community Food Environments Lead to Changes in Children's Weight: Results From a Longitudinal Prospective Cohort Study," *Journal of the Academy of Nutrition and Dietetics* 121, no. 3 (2021): 419–434e9, <https://doi.org/10.1016/j.jand.2020.10.016>.
86. L. H. Epstein, A. Valoski, R. R. Wing, and J. McCurley, "Ten-Year Follow-Up of Behavioral, Family-Based Treatment for Obese Children," *JAMA* 264, no. 19 (1990): 2519–2523.
87. L. H. Epstein, A. M. Valoski, L. S. Vara, et al., "Effects of Decreasing Sedentary Behavior and Increasing Activity on Weight Change in Obese Children," *Health Psychology* 14, no. 2 (1995): 109–115, <https://doi.org/10.1037//0278-6133.14.2.109>.
88. L. H. Epstein, R. A. Paluch, M. D. Beecher, and J. N. Roemmich, "Increasing Healthy Eating vs. Reducing High Energy-Dense Foods to Treat Pediatric Obesity," *Obesity (Silver Spring)* 16, no. 2 (2008): 318–326, <https://doi.org/10.1038/oby.2007.61>.
89. L. H. Epstein, D. E. Wilfley, C. Kilanowski, et al., "Family-Based Behavioral Treatment for Childhood Obesity Implemented in Pediatric Primary Care: A Randomized Clinical Trial," *JAMA* 329, no. 22 (2023): 1947–1956, <https://doi.org/10.1001/jama.2023.8061>.

Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Data S1:** oby70197-sup-0001-supinfo.docx. **Table S1:** Disseminating and Implementing the Science of Child Obesity Treatment and Prevention agenda and speakers, March 31–April 1, 2025.