

Developing a Strategy Menu for Community-Level Obesity Prevention

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ABSTRACT

Childhood obesity is a complex problem influenced by policies, systems, and environments, and its prevention requires changes across a range of community settings. To address this, we developed an obesity prevention strategy menu and an ongoing study to pilot its use and provide technical support for its implementation.

The strategy menu is comprised of a set of effective approaches communities can use to develop tailored, context-specific health interventions based on local community needs and capacity. It was developed by a multidisciplinary team of researchers and practitioners who reviewed evidence and organized it to incorporate effective policy, systems, and environmental changes for reducing and preventing childhood obesity. Eventually, it will be part of a web-based point of access that complements the foundational relationships built between communities, researchers, and practitioners.

By developing a framework to engage communities in the selection and implementation of multisetting obesity prevention strategies, we aim to create and sustain momentum toward a long-term reduction in obesity in Wisconsin children.

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INTRODUCTION

The Obesity Prevention Initiative (Initiative) in Wisconsin is piloting a multisetting community intervention study for childhood obesity as 1 of 3 components of the larger initiative described in this issue by Adams and colleagues.¹ As an initial step, a team of University of Wisconsin researchers, community members, and practitioners (the intervention team) are conducting a pilot study using comprehensive community prevention strategies in 2 Wisconsin counties, Marathon and Menominee.² Herein, we present 2 aspects of this pilot study.

First, the intervention team, supported by a national advisory group of obesity prevention experts, has developed a menu of multisetting, evidence-based strategies (strategy menu) to address obesity. To do this, the team focused on identifying environmental and policy-related obesity prevention strategies that can be tailored to specific Wisconsin community needs and contexts. Second, the intervention team is working with the 2 initial communities in an ongoing study to pilot the strategy menu and provide technical support for its implementation.

Through a process of local capacity building, along with academic support for community-based participatory research, outreach, and surveillance, the Initiative will engage Wisconsin citizens in making policy, systems, and environmental changes at both the grassroots and institutional levels.¹ While this report focuses on the strategy menu, selection framework, and local implementation, the report by Christens and colleagues in this issue describes the engagement component in more detail.³

The Initiative's approach started with the acknowledgement that there is no "silver bullet" for reducing childhood obesity. The intervention team grounded its work in the social ecological

model of health, a theoretical framework for understanding the multiple factors that influence health and wellness of individuals, groups, and populations. The complex challenges of childhood obesity prevention cannot be addressed through clinical care and education alone.⁴ Rather, a collaborative, multisetting approach that includes policy, systems, and environmental prevention strategies is vital. Such an approach also needs to be flexible and responsive to community needs rather than a top-down prescription for change. This report describes the development of the obesity prevention strategy menu, how pilot communities are using the menu, and future development of a web-based point of access for community technical assistance and resources.

Strategy Menu Development

Previous initiatives have shown that community-wide capacity building followed by the implementation of multiple strategies across settings is one of the promising approaches for obesity prevention initiatives.⁵⁻⁸ This approach can influence individuals from diverse directions and extend reach to different groups within a community, but does come with challenges. First and foremost is how to provide an evidence-based foundation and the associated technical support to communities that differ in context, capacity, and resources.

To address this challenge, we identified 4 important steps: (1) leveraging expertise from multiple disciplines, (2) identifying and synthesizing evidence for multisetting interventions, (3) creating a menu of strategies, and (4) providing information and technical assistance to help communities select strategies that will be effective within their specific context.

Recognizing that no single discipline had all of the necessary expertise to identify potential obesity prevention strategies, the Initiative followed the lead of other transdisciplinary research programs in public health like the Center for Training and Research Translation at the University of North Carolina at Chapel Hill.⁹ The intervention team included researchers and practitioners from nutritional sciences, urban and regional planning, landscape architecture, food systems, pediatrics, family medicine, public health, and community development, who collaboratively developed the initial menu for community feedback. Development reflected key aspects of other transdisciplinary initiatives by bringing together multiple perspectives on methodologies, theories, and working strategies.^{1,10} A unique aspect of the Initiative's approach has been in identifying strategies with the ongoing involvement of community partners and practitioners—partnerships that have been supported by the work of healthTIDE staff members.¹¹

Public health researchers and practitioners are increasingly recognizing the importance of people's environments in supporting or hindering health efforts, as well as the necessity for community leadership in sustaining health promotion related-activities.¹² Our approach seeks to mobilize communities in pursuit of changes

that can catalyze healthy behaviors and positive outcomes. In this way, our approach is aimed at primary prevention through school food policies, transportation policies, access to affordable healthy food, land use policies, and other policy, systems, and environmental changes.

Identifying and Synthesizing Evidence for Multisetting Strategies

The intervention team reviewed existing resources, including *What Works For Health Wisconsin (What Works)*, the US Department of Health and Human Services *Guide to Community Preventive Services (Guide)*, community strategies to prevent obesity recommended by the Centers for Disease Control and Prevention, and others.¹³⁻¹⁵ In cases where existing reviews from those resources were older, disciplinary experts on the team searched for newer studies. The team also examined systematic reviews and individual studies for various settings (schools and early childhood environments, the built environment, work sites, health and maternal care, and others) to identify strategies not included in *What Works* or other existing resources.

A specific challenge of the transdisciplinary approach is that different disciplines (and even researchers within the same disciplines) have different evidentiary standards. Also, population-level changes typically have not been studied using the designs that have been used in efficacy trials or behavioral interventions for clinical preventive services and medical care.^{14,16} Therefore, the team developed a protocol for review of population-level environmental and policy-related health interventions based on that used in the *Guide*.^{14,16,17} This protocol evaluates a variety of factors to determine the strength of evidence for an intervention, such as study execution, design, and the weight of expert opinion. Based on these reviews, the strength of evidence for an intervention is labeled as “strong,” “sufficient,” or “expert opinion.” The recommendation reflects the confidence by the reviewers that changes in outcomes, such as increases in physical activity or consumption of fruits and vegetables are attributable to the intervention and not to other factors. The categories of “strong” and “sufficient” evidence are determined based on either a small number of available studies with better execution and more suitable design, or a larger number of studies with less suitable design or weaker execution. The “expert opinion” category is used when the intervention is in widespread use or important enough to consider, but there are too few studies or other evidence is not available. Examples of these categories assigned to specific strategies can be found in Table 1.

Strategy Menu Design

To address the challenge of organizing strategies that cut across settings or differ in scope or structure, the intervention team clustered the most promising strategies into 9 inclusive nutrition, physical activity, health care, and maternal care approaches.

Table 1. Example Summary for Comparing Strategies

Strategy	Likely Effect Size ¹	Immediacy ²	Sustainability ³	Evidence	Policy, Systems and Environment or Program
1.1: Complete Streets ¹⁸	2	1	3	Strong	Policy/Environment
1.2: Safe Routes to School ²¹	2	2	1	Strong	Program
1.3: Complete bike path networks	2	1	3	Strong	Environment/Program
1.4: Public transit	2	1	3	Strong	Policy/Environment

¹Effect size is the measure of the strength or size of the potential results of a strategy. The scale for effect size ranges from 1 (weakest) to 3 (strongest). Scores are assigned based on evidence of effectiveness in the scientific literature or through expert opinion.

²Immediacy is the amount of time for a strategy to be fully implemented to the point where effects can be measured. The scale for immediacy ranges from 1 for a longer amount of time to 3 for a shorter amount of time. Scores are assigned based on evidence of immediacy in the scientific literature or through expert opinion.

³Sustainability is the long-term viability of a strategy. The scale for sustainability ranges from 1 when a strategy is unlikely to continue without long-term investments of money and resources to 3 for when little to no consistent investment of money and resources will be required to support the strategy. Scores are assigned based on evidence of sustainability in the scientific literature or expert opinion.

Box. Approaches and Strategies

Approach 1. Active Transportation

1. Complete Streets¹⁸
2. Safe Routes to School²¹
3. Complete bike path networks
4. Public transit

Approach 2. Recreational Spaces and Programming

1. Access to places for physical activity
2. Parks and open space
3. Recreational and community fitness programs

Approach 3. Active Settings

1. Active time in schools and early childcare environments
2. Workplace wellness initiatives
3. Physical activity policies

Approach 4. Community Design for Healthy Living

1. Mixed-use development
2. Public infrastructure
3. Comprehensive planning

Approach 5. Healthy Food Access and Consumption

1. School wellness policies
2. Healthy food standards in public places
3. Healthy food procurement
4. Early care nutrition policies
5. Healthy food standards in hospitals

Approach 6. Local Food Economies and Agriculture

1. Access to locally produced food
2. Local food production, processing, and distribution
3. Farm-to-institution
4. School gardens
5. Community farms and gardens

Approach 7. Food and Beverage Industry Change

1. Food store incentive and recognition programs
2. Healthy food stores in underserved areas
3. Restaurant menu labeling

Approach 8. Breastfeeding and Maternal Care Practices

1. Breastfeeding friendly maternity care
2. Breastfeeding friendly workplaces
3. Breastfeeding friendly childcare
4. Breastfeeding friendly public spaces
5. Healthy lifestyles for mothers

Approach 9. Clinical Care Practices

1. Body mass index screening
2. Team-based obesity care
3. Provider education, training, and resources
4. Patient self-management and counseling

In addition to encompassing the evidence base, approaches are designed to align with work being done by other Wisconsin organizations such as the Wisconsin Department of Health Services. Within each approach are 3 to 5 promising obesity prevention strategies for environmental or policy-related changes to promote healthy eating and physical activity in key settings, including schools, homes, childcare centers, health care organizations, work sites, and neighborhoods. While the focus of the Initiative is on childhood obesity, the intervention team recognized that to be successful, it is important to provide strategies benefiting all community members, because the health behaviors of children are strongly influenced by those of adults within their homes and communities.⁵ (See Box for menu approaches and strategies.)

Each strategy includes information to help communities make informed decisions. Key details on likely effect size, immediacy, sustainability, and strength of evidence of effectiveness are displayed in the example in Table 1. The scale for effect size, immediacy and sustainability ranges from 1 (weakest) to 3 (strongest). For example, of the 4 active transportation strategies listed, Complete Streets¹⁸ policies and projects are estimated to have a moderate effect size, a low level of immediacy (greater than 3 years to implement), and a high level of sustainability. Because no single strategy when implemented alone is likely to have a strong impact on childhood obesity at the population level, the Initiative encourages communities to implement a mix of programs, policies, and environmental changes.^{19,20} For example, a Complete Streets project might be paired with a Safe Routes to School²¹ program to ensure that neighborhoods near schools have walkable streets. Implementing strategies across multiple settings is most likely to result in population-level changes in overweight and obesity.

Using the Strategy Menu

Many Wisconsin communities are already implementing obesity prevention interventions and have expert knowledge of previous successes and challenges. As a key step in selecting and implementing strategies, communities are encouraged to inventory assets (eg, local champions, health coalitions) and barriers (eg, vested inter-

ests, land use policies that enable urban sprawl). The Initiative envisions communities using the menu to create a tailored set of obesity prevention strategies that takes into account past and present public health interventions, as well as current needs and priorities.

In Wisconsin, community context varies widely across the state for a number of demographic, cultural, and physical features (eg, ethnicity, population densities, cultural traditions, land use types, topography, transportation infrastructure). Assessing community context is an important step in determining which strategies are feasible and which are likely to be most effective for the local social, economic, and environmental conditions.¹⁹ The rural-to-urban continuum as described by the transect model is an example of a tool that can help communities understand the importance of context in selecting strategies to improve mobility and physical activity within the built environment (Figure 1).²²

For instance, enhancing a public transit system may be an appropriate strategy for an urban setting, but may not be feasible in less populated areas. Similarly, a regional bike trail system may be a more appropriate strategy to increase physical activity along rural roads than adding sidewalks. Another important contextual consideration is how winter months affect physical activity and food consumption in regions that experience cold winters. Some communities may need to winterize physical activity or nutrition strategies to increase their benefits (eg, creating multiuse bike and cross-country ski trails).

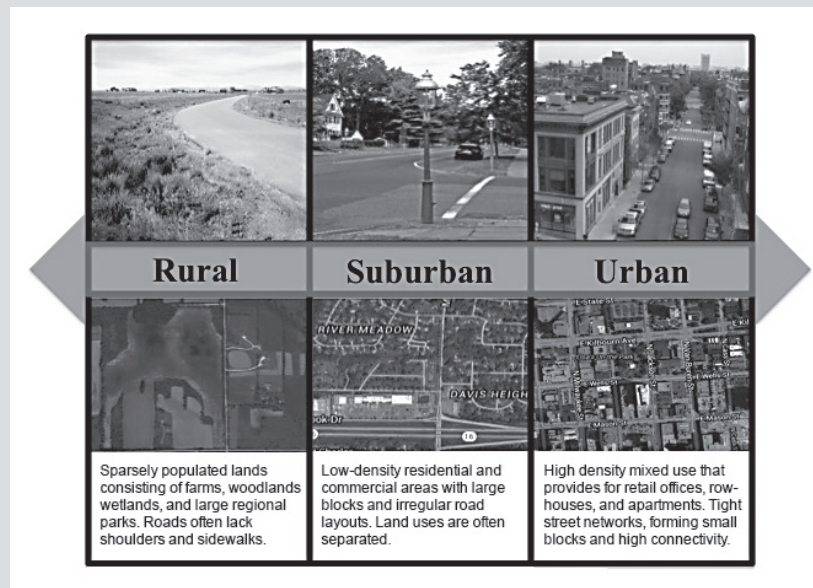
Future Work

The Initiative's intervention team is developing an interactive website that includes strategy summaries, evidence, links to resources and assessment tools, suggested complimentary strategies, and a scoring system for comparing strategies. The site also will provide Wisconsin examples of implementation and allow communities to search for specific topic areas or settings. While it will provide a collective point of access for technical assistance and will be a useful resource, the website is not intended to replace the foundational relationships built between communities, scholars, and clinicians. Future iterations may expand its use beyond Wisconsin.

CONCLUSION

A transdisciplinary approach to obesity prevention, while vital to making progress in obesity prevention, can be challenging due in part to different disciplines having different evidentiary standards

Figure 1. Rural-to-Urban Continuum



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for effective strategies. To address this, the Initiative's intervention team has developed a strategy menu that encompasses important elements of various disciplines and provides evidence that has been systematically reviewed so that communities can choose from strategies likely to be effective in preventing childhood obesity. These strategies are clustered into 9 approaches and are inclusive of nutrition, physical activity, health care, and maternal care approaches.

Throughout the development of this menu, the intervention team has strived to balance strength of evidence with expert opinion and on-the-ground practice in Wisconsin communities. Practitioner feedback indicated that some promising strategies are hard to achieve in the context of particular communities and that smaller steps are sometimes easier. This kind of understanding is available only once community engagement occurs. For this reason, the intervention team considered not only strategies supported by scientific research and a rigorous evidence base, but also strategies that have demonstrated positive results based on practice-based evidence.²³

The strategy menu developed as part of the larger Obesity Prevention Initiative will serve as a tool that communities can use to shift momentum toward a long-term reduction in obesity prevalence in children and adolescents. Ultimately, both policy and environmental changes will promote improved nutrition and physical activity behavior, which will, in turn, decrease childhood obesity.

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