



Footprints to Health-Community Case Study: Using the Social Ecological Model in Intervention Planning

Background

The Healthy Eating Active Living (HEAL) Coalition was formed in 2003, as obesity became one of the top health priorities for Marathon County. HEAL's first initial intervention used the CDC School Health Index in eight schools in the county. The schools were a mix of elementary/secondary, urban/rural and public/private. Each school was to implement one program and one policy change. Following this intervention, the HEAL Coalition began working with worksites to evaluate the environment to encourage healthy choices and support healthy behaviors. Up to this point, the HEAL Coalition had not used a theoretical model in planning interventions; instead they based their planning on intuition, perceived need, and available resources. Then, in 2005, the HEAL Coalition was introduced to the Social Ecological Model (SEM) by the Wisconsin Department of Health Services' Nutrition, Physical Activity and Obesity (NPAO) Program. Through a grant awarded by the NPAO Program, HEAL was asked to use the model to develop a local intervention that might be transferable to other communities.

The SEM conceptualizes social change in five spheres/levels of influence: individual, family/interpersonal, institutional/organizational,

community, and policy/systems. Using a behavioral theory, such as the SEM, in population-based interventions enhances the likelihood of sustained behavior change and thus, social and cultural change. The model served as a great tool for the coalition during the planning phases of the intervention, serving as a reminder to address all levels of influence as a means for supporting long-term, healthful lifestyle choices for Marathon County residents.

In the Footprints to Health: Franklin Neighborhood Intervention, the SEM was used while designing the objectives and strategies to ensure that all spheres of influence would be impacted. In conjunction with the SEM, the HEAL Coalition used a Social Marketing Planning Process to ensure that the intervention was appropriate for their primary target audience (parents of elementary-aged students).

SUMMARY:

Objective – To highlight the use of the Social Ecological Model in planning a neighborhood intervention in Wausau

Methods – The HEAL Coalition used the Social Ecological Model to design the Footprints to Health-Franklin Neighborhood Intervention.

Conclusions – Using a theoretical model or framework is essential when designing population-based interventions in communities. The Social Ecological Model (SEM) is appropriate for interventions addressing obesity. The SEM ensures that individual-behavior, environment, and policy change will be addressed in the intervention.

Implications or Lessons Learned – The HEAL Coalition has repeatedly found success in utilizing the SEM. These successes have resulted from partners learning about and understanding how to use the model. Once an intervention is underway, the SEM can also be used to ensure that components are being implemented; especially intervention objectives that address environment and policy change.

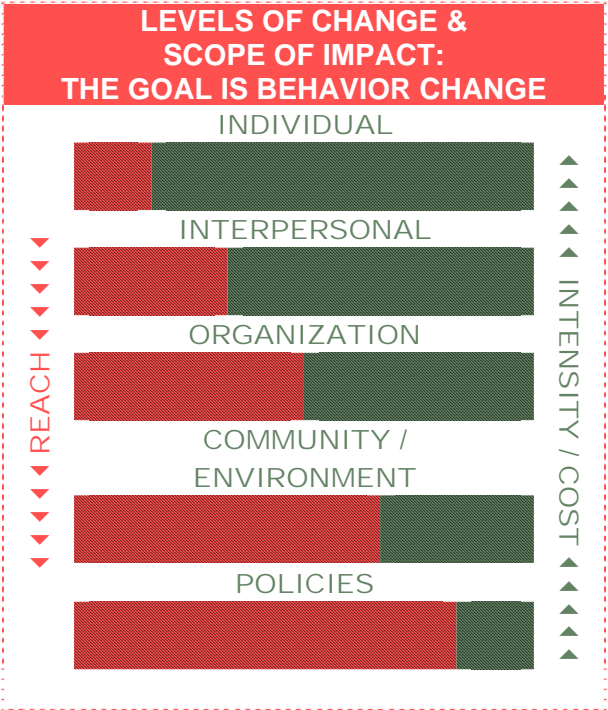


Below is a depiction of the intervention objectives by each of the SEM levels:

Level	Physical Activity	Fruits & Vegetables
Individual	Messages/Tips on how to be more active	Fruit & Vegetable Recipes/Tips for Selecting & Preparing
	Destination Map of nearby restaurants, stores and parks to walk or bike to	
Interpersonal	Activity Resource Guide of recreational opportunities in Wausau	Family Meal Planning Tips/ Family Meal Planning Training for Parents
	Walk to School program in conjunction with Safe Routes	
School/ Organization	Safe Routes to School	Adoption of healthy eating policy at school
	Increase access to facilities through off hours use of school	
Community/ Environment	Activity Resource Guide of recreational opportunities in Wausau	Farmers' Market coupons distributed to primary target audience
	Increase access to facilities through agreement with local clubs	Assessment of and changes to restaurant and grocery and convenience store environments
	Media Campaign; family activity messaging	Media Campaign; family meal messaging
	Walking Challenge as part of a Spring activity campaign	
Social/Policy	Traffic Calming around the school as part of the Safe Routes initiative	Adoption of healthy eating policies at businesses/ organizations in neighborhood
	Increase access to facilities through off hours use of school	

Why Use the Social Ecological Model?

Unlike trying to impact change at an individual level, environmental and policy changes have the ability to impact large groups of people and will likely provide the most “bang for the buck.” The following diagram illustrates why changes in the environment or changes in policy are so important.



What the diagram illustrates is that interventions that target individual behavior change take a great deal of resources and impact only one person at a time. Policy and higher level interventions targeting communities and organizations have a much greater potential impact. Although wellness strategies should address as many levels as possible, it's also important to focus on areas where the greatest potential benefit could occur.

Conclusions

In implementing the intervention, it is interesting to note that the HEAL Coalition’s trend was to intervene more frequently on the individual and interpersonal levels. HEAL believed the reason for this was familiarity with the process and ease in planning and implementation at these two levels. HEAL had to make a conscious effort to implement the objectives at all levels of influence, including addressing objectives related to environmental and policy change.

When implementing strategies at the organizational level, whether in the Franklin Elementary School itself or in worksites in the neighborhood, the coalition found that it was crucial to have buy-in from key community leaders. For example, while HEAL identified the principal of the Franklin Elementary School as a key player through the Social Marketing Planning Process, the coalition unfortunately, was unable to develop a trusting relationship with the principal and encountered barriers throughout the project. Some factors that could have contributed to this lack of trust were: the principal was new to the school at the beginning of the project, the principal had his own priorities for success, and the principal was only peripherally involved in the development of the intervention objectives and strategies. A lesson learned was to have key players involved in the planning phase of the intervention to enhance ownership.

Developing effective strategies at the community and policy levels requires a comprehensive knowledge of all the forces, relationships, and politics that will impact the intervention. While the HEAL Coalition was interested in implementing Safe Routes to School objectives, the principal and PTA of the Franklin Elementary School were interested in purchasing property to expand green space to allow for the redesign of an area to drop off children. If the coalition would have developed a relationship with the mayor and/or alderperson, they would have been aware of all the forces affecting the project.

In evaluating the outcomes of the Footprints to Health – Franklin Neighborhood Intervention, the HEAL Coalition learned that they needed to be consistently conscious of the SEM spheres and continually monitor strategies. Given the tendency to intervene at the individual and interpersonal levels, there is a need to revisit the model periodically (even after implementation has begun) to ensure activity at all levels, while paying particular attention to the need to address environment and policy change. This may partially account for no significant behavior change associated with the nutrition objectives, as the objectives related to higher levels of the Social Ecological Model were not fully implemented as originally intended. Due to a variety of reasons, these objectives, which included modifying stores and restaurants, changing organizational policies, and broadcasting media messages, were only partially implemented. Contrary to the nutrition outcomes, using the SEM proved somewhat more fruitful for the physical activity indicators, as there

were some favorable changes. Of the 12 indicators relating to increasing physical activity or its predictors, five were at least marginally significant and all of these observed differences occurred in a favorable direction. However, despite these positive changes, not all of the physical activity objectives at the higher levels of the SEM were implemented either. Of interest, responses to some questions in the final survey suggested that the population was open to the unimplemented aspects of the intervention related to both nutrition and physical activity outcomes.

Although the intervention had some effect, it is important to note that creating a community intervention with enough “dosage” to measurably change health-related behaviors is a challenging prospect. Including key policy and environmental aspects of the intervention may be essential to see positive change.

Implications

As a result of HEAL’s experience using the SEM in Footprints to Health – Franklin Neighborhood Intervention, the SEM is now used widely in other projects in Marathon County. The following are examples:

- Healthy Marathon County is an oversight committee for action teams that have been formed to impact health priorities identified as a result of the Marathon County Community Health Assessment. The action teams impact issues of prenatal care, alcohol, tobacco, falls in the elderly, obesity, and suicide. The oversight committee has embraced the SEM and has requested all action teams plan interventions based on the model. This has been accomplished by introduction and discussion at Healthy Marathon County meetings.
- The SEM is also highlighted on the Healthy Marathon County web site.
<http://www.healthymarathoncounty.org/hmc/>
- The HEAL (Healthy Eating Active Living) incorporated the SEM in its successful application to the UW Partnership for a Healthy Future grant. This grant of \$150,000 for three years expanded the Footprints to Health Initiative to an additional six school neighborhoods.
http://wphf.med.wisc.edu/how_to_apply/grantsawarded.php?grants_awarded_isPageDrawn=&county=37

With this new funding, the HEAL Coalition used the SEM again to plan their expanded intervention components. See *expanded intervention components in the table on the next page.*

SEM Level	Specific Success Measurement
Individual / Interpersonal	<ul style="list-style-type: none"> • Increased fruit and vegetable consumption • Increased physical activity
Organizational School/Worksite	<ul style="list-style-type: none"> • Increased number of students who walk or bike to school
Community	<ul style="list-style-type: none"> • Increased number of primary care providers who adopt Clinical Guidelines for identifying, treating, and maintaining obesity • Increased participation in physical activity opportunities in the community
Policy	<ul style="list-style-type: none"> • Increased number of school policies implemented • Increased number of school district policies implemented

An important aspect in planning a multifaceted intervention is to introduce the Social Ecological Model early, so all partners understand the concept. Then, throughout the intervention, it is necessary to continually monitor progress with implementing objectives relative to the model. The HEAL Coalition believes that if they consistently use the Social Ecological Model in planning and implementation, they will be more effective at changing the culture in Marathon County and increasing healthy behaviors.

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Lessons Learned

Planning multifaceted interventions not only takes time, but also a concerted effort to identify and engage all leaders in the community. This includes municipal leaders and organizational leaders, but also connectors and other persons that influence the community. Objectives and interventions need to be planned and implemented at all levels of the Social Ecological Model. Coalitions must recognize that many community partners, especially health care providers, are not familiar with this model. Interestingly, health care providers, by the nature of what they do, are more familiar with intervening at the individual and interpersonal levels.