



## Missouri uses creative formative research strategies to develop its intervention

### Background

**Overview.** Missouri received funding from the Centers for Disease Control and Prevention (CDC) in 2003 as part of the Nutrition and Physical Activity Program to

Prevent Obesity and Other Chronic Diseases. Part of this funding required a pilot intervention that included both a physical activity and a nutrition component. The Missouri Nutrition and Physical

Activity Program staff (the “state team”) partnered with the St. Joseph/ Buchanan County Health Department and a local community health care provider, Heartland Health, to develop and implement this intervention.

Community partners (representatives from the county health department, the community health care provider, and community leaders) chose one of their existing activities to develop further for the pilot intervention. The existing program, called Mission to Move, was originally developed for the community and Heartland Health. It was designed to increase social support networks for physical activity. Most participants in the program were middle-aged women who wanted to maintain their

health. To redesign this program for the pilot intervention, the state team worked with the community partners to emphasize the nutrition portions of the program and strengthen the physical activity portions.

The state team provided technical assistance to the community partners during the planning phase of this pilot program. Representatives from the state and local community (the “intervention planning team”) worked in partnership to meet the needs of both groups. They were committed to making sure that the target audience had a voice in which behaviors were targeted and what strategies were used to help them change these behaviors. This case describes the social marketing process used by the intervention planning team and emphasizes the team’s dedication to addressing needs expressed by the target audience.

**Training in Social Marketing.** The state team members have backgrounds in public health or marketing. Each state team member participated in a series of teleconferences about social marketing offered by CDC. Two had undergone other social marketing training in previous positions.

### Describe the Problem

**Problem Description.** To describe the problem of obesity, the intervention planning team used community-wide data along with data collected on Mission to Move’s

**Challenge:** *One of the initial challenges that Missouri faced was the difficulty that physical distance creates in working collaboratively on a project. The state team and community partners demonstrated their commitment to working together by traveling to meet each other face to face whenever possible.*

participants. The community-wide data came from a Behavioral Risk Factor Surveillance System (BRFSS) survey conducted in St. Joseph/Buchanan County. The BRFSS provided information on the burden of overweight and obesity in the county, as well as physical activity and nutrition behaviors. Participants in Mission to Move had been asked to complete a health risk assessment (HRA) when the program started. The HRA collected information about current physical activity behaviors and fruit and vegetable consumption as well as participants' readiness to change. The intervention planning team used this information to describe the audience and choose potential behavioral objectives.

Potential Target Audiences. The intervention planning team began its planning process with a target audience identified: Mission to Move's current participants. They were an attractive target audience for several reasons. First, they had already expressed an interest in participating in physical activity, but many were inconsistently active, leaving room for improvement. Second, baseline data on their current behaviors were available from the HRA. Finally, they were already engaged in the current intervention and had developed small networks of social support.

There were still some decisions to make in choosing a segment for the intervention. Relatively few men were participating in the existing program. To have a consistent target audience for the new program, the intervention planning team decided to target women exclusively. Men could still participate, but their data would not be used for evaluation purposes. The chosen segment of women is still diverse



in terms of age and stage of life. The intervention strategies will address some of these differences.

Audience Research and Initial Decisions. HRA data were used to identify potential behavioral objectives. The nutrition behavior goals initially considered were higher fruit and vegetable consumption, lower fat consumption, and portion size control. For physical activity behavior goals, the team considered the areas of moderate physical activity, strength training, and flexibility. Out of all those behaviors, community partners chose to improve fruit and vegetable consumption and levels of moderate-intensity physical activity in their target audience. They based this decision on perceived potential effectiveness in their community. The behavior goals guided questions for formative research, and

**Apply it:** *If you are under pressure to provide an intervention to a broad group of people, you could tailor your intervention to a specific segment, and then offer it to other audiences, making sure that the additional participants are appropriate to invite. Then, you would only use data from the segment you targeted to evaluate your program. This way, the intervention can be available to a broader group, but you are only measuring changes in the group you targeted.*

were refined as the formative research was conducted with the target audience.

### **Conduct Market/Formative Research**

#### Formative Research Development.

The coalition hired a local agency to conduct focus groups with women currently participating in Mission to Move. Moderators' guides were drawn from research conducted by CDC. The guides were also submitted to a member of the Nutrition and Physical Activity Communication Team (NuPAC) and the state's project officer at CDC for feedback and comments.

Focus Groups. The agency recruited participants using a phone survey and a recruitment protocol that was developed in conjunction with the state health department. Calls were made only to women who had signed up for the Mission to Move program. The recruitment protocol was designed to confirm that the women had been participating in Mission to Move, and to recruit a variety of ages and current behaviors regarding fruit and vegetable intake and physical activity.



Four focus groups were conducted with five to eight women in each group.

Participants were asked specific questions about their fruit and vegetable consumption and physical activity patterns. They also were asked about their knowledge of current recommendations for these two behaviors. They created a list and ranked both barriers and motivators to making healthy food choices and exercising. Participants suggested methods to increase fruit and vegetable consumption and physical activity.

The agency that conducted the focus groups analyzed the results and presented a report to local and state representatives.

### **Create the Intervention Strategy**

#### Segmenting the Target Audience.

Because the intervention planning team chose to target women who were already participating in an existing intervention, its target audience was fairly specific. However, even these women differed in some respects. For example, some had younger children and prepared meals for a family, while others had grown children living outside the home and only cooked for one or two people. Potential secondary audiences include family members and friends.

Refining Behavioral Objectives. The broad behavior goal of achieving moderate physical activity chosen by community partners needed to be more specific, because the target audience was already involved in some physical activity. The intervention planning team turned this behavior into a broad behavioral objective: "Increase the proportion of women who regularly meet the CDC/



American College of Sports Medicine (ACSM) guidelines for physical activity.” The team had less information on current nutritional behaviors, so they stayed with the broad nutritional objective of increasing fruit and vegetable consumption. In the focus groups, women said that this was an area in which there was room for improvement and something they thought they could accomplish.

Later, after considering strategies for the intervention, the intervention planning team settled on these specific objectives:<sup>1</sup>

- (1) Increase the number of the target population consuming at least five servings of fruits and vegetables per day by no less than 10% from the beginning of the project to the end of the project (26 weeks).
- (2) Decrease the number of the target population reporting consuming a high-fat diet by no less than 10% from the beginning of the project to the end of the project (26 weeks).
- (3) Increase the number of the target population participating in at least 30 minutes (continuous or intermittent duration)

- of moderate-intensity physical activity 5 or more days of the week by no less than 10% from the beginning of the project to the end of the project (26 weeks).
- (4) At least 33% of the target population will at least maintain weight from the beginning of the project to the end of the project.

Baseline data for the objectives will be added after the participants meet for the first time.

Strategy Development. The state and local teams independently examined the focus group results and discussed potential major themes. They also brainstormed some intervention activities that might be appropriate based on those results.

The two groups then met to discuss their perceptions of the formative research results and to identify possible intervention strategies. A participant from each focus group was invited to attend this strategy development meeting in order to keep the planning team consistent with the findings of the focus groups. One state team member called the process “one of the most gratifying parts; they helped keep us on track, and we wanted to maintain our being true to what came out of the focus groups.” Major themes emerged regarding motivation and access for

**Creative Idea:** *Inviting representatives from each focus group not only allowed participants a chance to help develop strategies, it also created another chance for the planners to interact with members of the target group. It forced the planning group to stay consistent with the focus group results, instead of developing its own ideas about what the community would like.*

<sup>1</sup> Objectives taken directly from Missouri’s intervention proposal.

physical activity, as well as menu planning and preparation of fruits and vegetables.

With the help of focus group participants, the teams used these themes to identify potential strategies for the intervention. Then the focus group participants left and the state and community team continued to discuss how to incorporate these strategies with funding requirements for the project.

After several subsequent meetings and discussions, the intervention planning team decided on several intervention activities. The team plans to conduct three sessions for the target audience. The first session will consist of four nutrition classes (with a choice of two days and times) spread out over eight weeks. Each nutrition class will incorporate some physical activity. The second session will consist of four physical activity classes, each offered at two different days and times over the course of eight weeks. Each physical activity class will incorporate healthy snacks. Both nutrition and physical activity classes will address needs that emerged in the focus groups. The 16 weeks of classes on physical activity and nutrition will be followed by a third 10-week session when participants will practice the various skills learned in their classes.

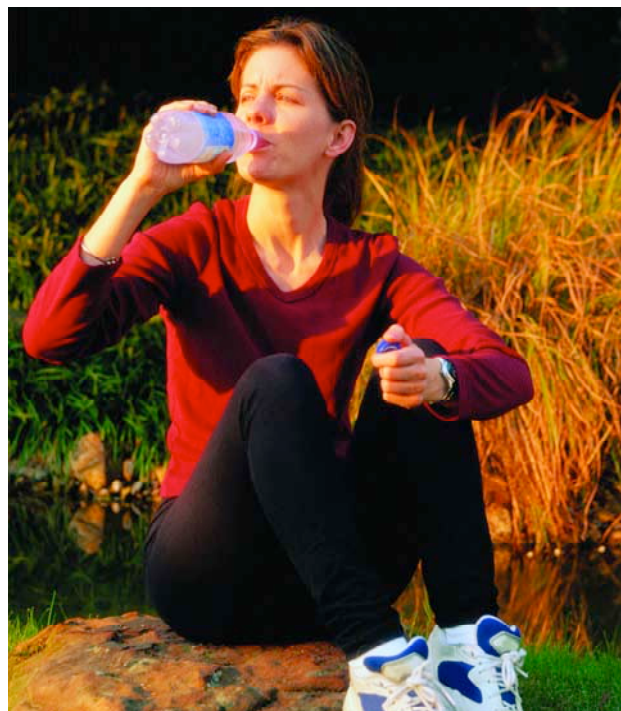
The intervention planning team will use two existing curriculum sets for the classroom sessions. The first is Sisters in Health<sup>2</sup>, a nutrition curriculum developed by Cornell University. The physical activity curriculum is Active Living Every Day: Twenty Weeks to Lifelong Vitality<sup>3</sup>, from the Cooper Institute. Both curricula will be modified and tailored to address specific barriers identified by the target audience.

## Evaluation

The intervention will be evaluated using several methods. Participants will be given a survey that measures fruit and vegetable consumption, fat consumption, physical activity, knowledge, skills, attitudes, self-efficacy, social support, secondary audience impact, self-monitoring, and awareness of other campaigns. This survey will be completed at the beginning of the intervention, after 16 weeks (when both series of classes are completed) and after 26 weeks (when the entire intervention is completed). Physical measurements of height, weight, waist circumference, fat mass, and blood pressure will be taken at each of these times. Finally, the class sessions will be evaluated by measuring attendance and capturing feedback and suggestions for future sessions.

## Next Steps

The intervention team has begun implementing the proposed strategies.



<sup>2</sup> Information about Sisters in Health can be found at <http://legacy.cce.cornell.edu/programs/sistersinhealth/sisters.html>.

<sup>3</sup> Information about Active Living Every Day can be found at <http://www.cooperinst.org/ALED.asp>.

## Missouri's Intervention Planning at a Glance

<b>Behavior Change Theories Used:</b>	Social Cognitive Theory Stages of Change
<b>Important Partners:</b>	St. Joseph/Buchanan County Health Department Heartland Health (regional health care provider) Health Education Center
<b>Decision-Making Process:</b>	Collaboration between community partners and the state team through face-to-face meetings, conference calls, and e-mails Decisions made by consensus through discussion
<b>Overall Target Audience:</b>	Middle-aged to older women in the St. Joseph/ Buchanan County area
<b>Rationale for Target Audience:</b>	<ul style="list-style-type: none"> <li>• Expressed an interest in being physically active, although not yet consistently active</li> <li>• They were part of an existing intervention</li> <li>• Baseline data and some information on their readiness to change had already been collected</li> <li>• Were participating in existing small groups of social support for physical activity</li> </ul>
<b>Secondary Audience/Influencers:</b>	Potential secondary audiences: family members and friends
<b>Formative Research:</b>	Four focus groups Some focus group participants attended strategy planning meeting
<b>Audience Segments:</b>	Women who were already participating in the current Mission to Move intervention
<b>Current Behaviors:</b>	Somewhat active and interested in doing more, but not currently meeting physical activity recommendations Not meeting recommendations for five or more servings of fruits and vegetables per day

<p><b>Behavior Change Goal:</b></p>	<p><b>Nutrition:</b> 1) Increase by at least 10% the number of the target population consuming at least five servings of fruits and vegetables per day, 2) Decrease by at least 10% the number of the target population consuming a high-fat diet</p> <p><b>Physical activity:</b> Increase by at least 10% the number of the target population participating in at least 30 minutes of moderate-intensity physical activity 5 or more days of the week</p> <p><b>Weight:</b> At least 33% of the target population will at least maintain weight from the beginning of the project to the end of the project</p>
<p><b>Barriers/Costs to Behavior Change:</b></p>	<p><b>Physical activity:</b> feeling sick, tired, or unmotivated; bad weather; family obligations; and TV time</p> <p><b>Nutrition (fruits and vegetables):</b> don't like them, family doesn't like them, not in the habit of eating them, lack the time to prepare them, high cost, unavailability, and difficulty storing and keeping them fresh</p>
<p><b>Benefits/Incentives Offered to Change Behavior:</b></p>	<p><b>Physical activity:</b> better overall health, stress relief, ability to spend time with friends or significant others</p> <p><b>Nutrition:</b> better health, a means to lose weight</p> <p>Incentives to be offered for attending sessions, will be pre-tested with the first group</p>
<p><b>Pre-testing:</b></p>	<p>Will pre-test the logo and slogan (sending e-mails, letters, or calls to participants to obtain their input); Use materials (curricula) proven to be effective, will ask participants at the end of each session what they would like for the next session</p>
<p><b>Evaluation:</b></p>	<p>Evaluation measures at baseline, 16 weeks, and 26 weeks</p> <ul style="list-style-type: none"> <li>• Survey to measure behaviors, knowledge, skills, attitudes</li> <li>• Measurements of height, weight, waist circumference, fat mass, and blood pressure</li> <li>• Class evaluations—attendance, feedback</li> </ul>

<b>Helpful Tools/ Resources Used:</b>	<ul style="list-style-type: none"><li>• Inviting focus group participants to participate in strategy development</li><li>• <i>Guide to Community Preventive Services</i></li><li>• Sisters in Health curriculum for nutrition component</li><li>• Active Living Every Day: 20 Weeks to Lifelong Vitality curriculum for physical activity component</li><li>• Curricula will be modified as needed for target audience</li></ul>
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This case study is part of a series developed by:

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For additional case studies or more information on  
NuPAC's other social marketing resources, please go to:  
[www.cdc.gov/dnpa/socialmarketing](http://www.cdc.gov/dnpa/socialmarketing)