

An Adapted Version of Intervention Mapping (AIM) Is a Tool for Conducting Community-Based Participatory Research

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The field of public health is increasingly using community-based participatory research (CBPR) to address complex health problems such as childhood obesity. Despite the growing momentum and funding base for doing CBPR, little is known about how to undertake intervention planning and implementation in a community-academic partnership. An adapted version of Intervention Mapping (AIM) was created as a tool for university and elementary school partners to create school-level environment and policy changes aimed at increasing student physical activity and healthy eating. After AIM was completed, interviews were conducted with school partners. Findings indicate AIM is closely aligned to 7 of 9 CBPR principles. Examples include equitable involvement of all partners, co-learning, and balancing knowledge generation and community improvement. Shortcomings, lessons learned, and suggestions for strengthening the AIM process are described.

Keywords: *intervention mapping; community-based participatory research; schools; environments; policies; physical activity; nutrition*

Despite the encouraging news that the percentage of childhood overweight remained steady between 2003-2004 and 2005-2006 (Ogden,

Ogden, Carroll, & Flegal, 2008), the United States continues to face a childhood obesity epidemic. Almost 19% of the nation's population ages 6 to 11 are obese (a fourfold increase since 1963), and Hispanic children have higher rates of obesity than non-Hispanic Whites (Ogden et al., 2006). These alarming statistics present a pressing need for interventions aimed at increasing physical activity and healthy eating among young children. Public schools are an important setting for promoting health behaviors and reversing obesity trends (Serdula et al., 1993). However, access to unhealthy foods in schools combined with limited opportunities for daily physical activity undermines schools' potential to promote healthy behaviors. For example, 60% and 70% of school districts across the country allow junk foods to be sold in à la carte and vending machines (O'Toole, Anderson, Miller, & Guthrie, 2007). In addition, despite the recommendation for daily physical education (PE) by several national organizations such as the National Association for Sport and Physical Education (Council on Physical Education for Children, 2000), only 4% of elementary schools offer daily PE (Lee, Burgeson, Fulton, & Spain, 2007).

The Institutes of Medicine's (IOM) Childhood Obesity Task force (Committee on Prevention of Obesity in Children and Youth, 2005) is calling for schools to make healthier foods available to students, create daily opportunities for physical activity, and provide health education. These IOM recommendations are important to implement but require significant time and resources

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that most school administrators and teachers do not have because of competing priorities, such as high stakes testing (Belansky et al., 2009). University researchers are well positioned to partner with schools in accomplishing IOM recommendations as they possess knowledge and skills related to evidence-based practices, intervention design, and evaluation. This article describes such a partnership in which the Rocky Mountain Prevention Research Center's (RMPRC) School Environment Project (SEP) sought to assist school personnel in creating environment and policy changes related to nutrition and physical activity using an adapted version of Intervention Mapping (AIM).

► BACKGROUND AND LITERATURE REVIEW

A Partnership Approach: Community-Based Participatory Research

To solve complex, or “wicked,” health problems (Kreuter, De Rosa, Howze, & Baldwin, 2004), the field of public health is increasingly using a community-based participatory research (CBPR) approach to bring together the strengths of university researchers and community partners (Green & Mercer, 2001). One example of the growing recognition of CBPR's potential is the Centers for Disease Control and Prevention's requirement that

all of its Prevention Research Centers establish a community advisory board, identify a community-driven research agenda, and use a CBPR approach for conducting core projects (Faridi, Grunbaum, Gray, Franks, & Simoes, 2007).

CBPR is defined as “a collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings” (W. K. Kellogg Foundation, 2001). Israel, Eng, Shulz, and Parker (2005) put forth nine CBPR principles:

- (1) CBPR acknowledges community as a unit of identity;
- (2) CBPR builds on strengths and resources within the community;
- (3) CBPR facilitates a collaborative, equitable partnership in all phases of the research, involving an empowering and power-sharing process that attends to social inequalities;
- (4) CBPR fosters colearning and capacity building among all partners;
- (5) CBPR integrates and achieves a balance between knowledge generation and intervention for the mutual benefit of all partners;
- (6) CBPR focuses on the local relevance of public health problems and on ecological perspectives that attend to the multiple determinants of health;
- (7) CBPR involves systems development, using a cyclical and iterative process;
- (8) CBPR disseminates results to all partners, it involves them in the wider dissemination of results; and
- (9) CBPR involves a long-term process and commitment to sustainability.

According to Israel and her colleagues, the extent to which any one of these principles should be adhered to depends on the particular partnership's needs, goals, and purpose. These principles are merely guidelines; each partnership needs to determine the level of involvement and role of each partner throughout the research process.

Several examples exist of CBPR being used to address a range of public health issues (Horn, McCracken, Dino, & Brayboy, 2006; Krieger et al., 2002; Mosavela, Simon, van Stade, & Buchbinder, 2005; Parker et al., 2003; Teufel-Shone, Siyuja, Watahomigie, & Irwin, 2006). However, we only found one example of CBPR being used for obesity prevention in a school-based setting: “Shape Up Somerville” (SUS; Economos et al., 2007). SUS was a community-wide childhood obesity intervention that resulted in decreased body mass index for children at high risk for obesity. (For a summary of

other community-based childhood obesity prevention efforts that did not use a CBPR approach, see DeMattia and Denney, 2008.) Although there is a growing trend to use a CBPR approach in public health interventions, published articles typically lack sufficient description about the process by which researchers and community members move through program selection, planning, and implementation phases of the research process in ways that honor the nine principles.

Intervention Mapping

The SEP sought to determine if AIM could be used as a tool for university and elementary school partners to plan and implement an intervention aimed at making school-level environment and policy changes to increase opportunities for physical activity and healthy eating. Intervention Mapping (IM; Bartholomew, Parcel, & Kok, 1998; Bartholomew, Parcel, Kok, & Gottlieb, 2001, 2006) is a planning process characterized by (a) an explicit recognition of links between individuals and their physical and sociocultural environment(s), (b) the application of behavior theory and known best practices in the development of intervention strategies, and (c) early planning for evaluation, adoption, and sustainability. There are five steps: (a) creating a matrix of proximal program objectives, (b) selecting theory-based intervention methods and practical strategies, (c) designing and organizing a program, (d) specifying adoption and implementation plans, and (e) generating program evaluation plans. “Core processes” are conducted for each step: searching empirical findings from the literature, accessing and using theory, and collecting and using new information from the priority population. Products such as program matrices, planning documents, and program materials are developed throughout each step of the process.

At the outset of the IM process, developers, implementers, and program participants form a linkage system. Bartholomew et al. (1998) state, “The linkages can span the range from inclusion of prospective program participants and intermediate users as planning team members, through a community empowerment model in which the community members are the planners” (p. 547). To date, IM has mostly been used by academic and/or public health interventionists—for example, parent education for violence prevention (Murray, Kelder, Parcel, & Orpinas, 2006); HIV, STD, and pregnancy prevention (Aaro et al., 2006; Leshabari, Koniz-Booher, Astrom, & Moland, 2006; Tortolero et al., 2005; van Empelen, Kok, Schaaïma, & Bartholomew, 2003); teen nutrition programs (Hoelscher, Evans, Parcel, & Kelder, 2002; Singh et al., 2006); cervical cancer education (Hou,

Fernandez, & Parcel, 2004); and tobacco abstinence (Cote, Godin, & Gagne, 2006)—with small amounts of involvement by program participants, intermediate users, and community members. However, in some cases, community members have been involved in one or more parts of the planning process (Fernandez, Gonzales, Tortolero-Luna, Partida, & Bartholomew, 2005; Leshabari et al., 2006; Perez-Rodrigo et al., 2005). For example, Perez-Rodrigo et al. (2005) sought input from students and school staff in the development phase of Pro Children, a school-based intervention aimed at promoting fruit and vegetable consumption in three European countries. The researchers conducted focus groups with children to identify determinants of fruit and vegetable consumption, as well as interviews with school principals and teachers, to assess the feasibility of the proposed intervention and to pretest intervention materials. The authors note, “IM helped us to systematically get input from different actors, such as programme developers, users and the target population, thus ensuring participation and involvement of key actors in all developmental stages of the programme” (p. 276). Although this type of input is important, it does not reflect shared decision-making power, a key element of CBPR. For more information about ways IM can be a more community engaging and empowering process, see Heaney (1998).

In sum, childhood obesity is a significant health concern in the United States and schools remain a key setting for health promotion and disease prevention interventions. However, school administrators and teachers are under significant pressure to focus attention on high stakes testing and other priorities related to academic achievement, making it challenging for them to devote energy and attention to health-related issues (Belansky et al., 2009). University researchers have an important role to play in partnering with schools to create environments and policies that incorporate evidence-based practice to promote health and physical activity. The SEP sought to determine if AIM could be used as a tool for university and elementary school partners to plan and implement an intervention aimed at making school-level environment and policy changes to increase opportunities for physical activity and healthy eating. University researchers, a new generation of CBPR professionals earning doctorate degrees in the field of public health, and community organizations interested in forming CBPR partnerships need research that documents the process of selecting, developing, and implementing public health interventions (Mukoma & Fisher, 2004).

The University of Colorado’s CDC-funded RMPRC implemented the School Environment Project to increase student opportunities for physical activity and healthy

eating while at school. The SEP posed three research questions: (1) Does a CBPR planning process based on an adapted version of Intervention Mapping (AIM) lead to environment and policy changes in schools? (2) Does the degree to which the key steps of a planning process are completed relate to (a) the number and type of changes made, (b) better intervention implementation, (c) increased community and/or researcher capacity, (d) increased physical activity and healthy eating among students, and (e) sustainability of changes? and (3) Can AIM be used as a CBPR tool? This article describes the AIM process and addresses research question 3.

► METHODS, STRATEGIES, INTERVENTION APPLICATIONS

Adapted Version of Intervention Mapping in SEP

Overview of AIM. AIM was designed to elicit the community's voice and decision-making power in each step of the program planning process; thus, modifications from the original version of IM were needed to make the process appropriate and realistic for a CBPR approach. University researchers from the RMPRC, along with a community health educator highly familiar with the partner schools, adapted IM into a 12-meeting structure. At the outset of repackaging IM, university researchers envisioned AIM to be a short process that was enjoyable and engaging, efficient, clear about community and RMPRC roles, clear about the timeline and steps to completing the process, user-friendly, and visual. Researchers met with Dr. Guy Parcel in June 2005 (before the planning process began with school task forces) and again in August 2006 (after 10 of the 12 meetings were completed with each task force) to solicit input and guidance on the adaptation of IM. The goal was to preserve the intent of the IM process (e.g., drawing from evidence-based practices and behavior change theory) while scaling back on the thoroughness in order to make it realistic and feasible for community partners.

Primary adaptations of IM. Capitalizing on local knowledge of task force members was considered a priority in AIM. A primary strategy for engaging task force members in the "core processes" was through brainstorming sessions at most of the meetings. RMPRC facilitators posed targeted questions to the groups, such as "What could be changed about the school cafeteria environment or policies to help students eat more healthy foods while at school?" Then to revise and supplement the provisional brainstormed lists, facilitators developed and provided task force members with handouts of "best practices" as well as tailored summaries of school-level data, with recommendations for change.

To reduce an iterative, time-consuming process into one that could be accomplished in 12 task force meetings in as many months, and to preserve meeting time for brainstorming and decision-making, many of the technical aspects of AIM were accomplished outside of meetings by the research team. Input previously collected from task force members at meetings or as "homework" was used to inform development of IM products. For example, the research team created matrices of proximal program objectives by using performance objectives generated by task force members and matching them with a select set of determinants from social cognitive theory. Subsequent meetings were used to orient task force members to the matrices and other products created by the research team, and to obtain additional input. Other modifications included deemphasizing the technical jargon inherent to the process (e.g., "performance objectives" were referred to as "steps"), and simplifying the presentation of "products," such as Performance Objective matrices.

University (RMPRC) and elementary school partners' composition and roles. Three members from the RMPRC—a social psychologist based in Denver (Dr. Belansky) and two professional research assistants (Chavez and Waters) based in the partner community—comprised the university partners working with the five schools. All three RMPRC members received IM training through the University of Texas and are referred to as "facilitators." The main roles of the facilitators were to (a) lead the task force through the AIM process by running each meeting, (b) undertake the "core processes" and develop "products" in between meetings for task force members to review and modify at the next meeting (e.g., PRECEDE model, matrix of proximal program objectives), and (c) bring research, information, and resources to the task force such as data on the childhood obesity problem, an analysis of local school data in terms of how the school environment and policy features met or fell short of evidence-based practices and national recommendations for daily eating and physical activity, school success stories, evidence-based practices for increasing physical activity and healthy eating in schools, and methods and strategies to implement those practices. Toward the end of the process, the RMPRC provided assistance to subcommittees of the task force working on specific environment changes in between official AIM meetings. Dr. Belansky co-led the AIM process with Chavez and Waters in the first school but only Chavez and Waters facilitated the process in the remaining four schools.

The study coordinator (Chavez) worked closely with each school to set up the local school task force. On the basis of lessons learned from two pilot studies, each

school was asked to assemble a task force composed of at least seven individuals with at least one representative from administration (principal [the preferred choice], counselor, secretary); physical education, food-service, and classroom teachers (we suggested K-2nd grade as those teachers do not have to administer state-required academic assessments) and at least two parents. The RMPRC suggested the principal identify staff members and parents who “have a passion in the area of promoting healthy eating and physical activity.” In an effort to raise school awareness about the project and to recruit members onto the task force, the RMPRC attended staff meetings, gave PowerPoint presentations to staff, and provided brochures describing the project at all five schools. Task force members were told their role would be to (a) participate in a planning process during the school year, (b) commit to attending scheduled planning meetings (1-2 per month) and occasionally do project-related work outside of meetings, (c) make informed decisions about which environment and policy changes their school wants to work on and how to implement and evaluate those changes, (d) participate in annual interviews and surveys, and (e) meet at least twice during the beginning of the 2006-07 school year and then discuss whether the group needs to continue to meet and if so when and how often. In addition, task force members ensured the right players were involved throughout the process; ensured information about the culture and needs of the school were brought to the table when deciding the what, when, and how of changes to be made to the school; and implemented the changes and planned for their sustainability.

Meeting structure and contents. The first 10 meetings were held in the 2005-06 school year; the final two meetings—considered booster sessions—were held in the fall of 2006. Each meeting lasted 2 hours; facilitators brought the agenda, meeting materials, and healthy snacks. Most meetings began with an “energizer” activity that was often tied to the content of that day’s meeting. And to encourage participation from all task force members, most meetings included some type of brainstorming session. “Homework” was sometimes given to task force members to be completed in between meetings. Assignments varied from taking photos of the school environment (to inform the needs/assets assessment) to completing worksheets about steps needed to successfully implement their program. On occasion, task force members did additional work in between meetings on their own initiation (e.g., conducting classroom surveys about school breakfast consumption, surveying parents on their willingness to participate in a snack program, or doing a Web search on a particular health issue).

The first AIM meeting focused on introductions, overview of project goals, and establishing meeting norms, decision-making processes, and other ground rules to create healthy group functioning. The task force’s first step was to conduct a needs and assets assessment of how the school environment and policies facilitated and/or hindered student opportunities for physical activity and healthy eating. Several approaches were used. At the end of AIM Meeting 1, task forces were given a disposable camera and were asked to take photographs of the school environment. In taking pictures, members were asked to consider the following: What do you notice about the school environment and students’ eating and activity behaviors when they are at school? What is being served for lunch? What do students bring from home for snacks or lunch? What foods are in the staff lounge? Main office? What are in the vending machines? What do students eat in the classroom? How are students getting to school in the morning? What do they tend to do during recess, PE?

At AIM Meeting 2, AIM facilitators brought the developed photographs and presented the task force with completed sections of PRECEDE Phases 1 “Quality of Life Outcomes” and 2 “Childhood Obesity” (Green & Kreuter, 1999). During the Meeting 2 brainstorming session, task force members completed Phase 3: “What student behaviors may be contributing to childhood obesity at your school?” and “What aspects about your school environment and policies contribute to inactivity and poor eating?” They also participated in an assets assessment to identify student behavior and school features contributing to healthy behaviors.

In AIM Meeting 3, schools were given tailored reports that compared information about their school to national recommendations and evidence-based practices related to school environment and policy features pertaining to physical activity and healthy eating. At the beginning of the school year, principals, physical education teachers, and foodservice managers completed the RMPRC’s School Environment and Policy Survey. This three-module questionnaire was designed to assess and track changes in physical activity and nutrition features of a school (e.g., number of minutes of recess per week, minutes of physical education, playground features, total number of fruit and vegetable offerings at breakfast and lunch, presence and enforcement of policies regarding the nutrition content of items sold in schools, presence of a school health team, familiarity with the Local Wellness Policy and other state and federal mandates). The RMPRC used the schools’ survey responses to generate a report for the task forces to see how aspects of their school environment related to national recommendations and/or best

practices. For example, if fifth-graders had 90 minutes of physical education per week, the report said, “5th graders at your school get 90 minutes of PE per week. The national recommendation is 150 minutes per week. Consider increasing PE minutes if possible.” Task force members used the tailored survey report to add, delete, or modify ideas generated during the brainstorming session.

Before concluding the needs and assets assessment, task force members were asked to consider whether they were missing certain types of information to build a comprehensive picture of ways the school environment was or was not supporting healthy behaviors. In several cases, task force members collected additional information. For example, a classroom teacher in one school conducted an informal survey of the number of students who had eaten breakfast that morning; a nurse at another school calculated body mass index for a subsample of students.

The assets and needs assessment phase of this project involved drawing from the different and complementary sets of knowledge and expertise held by community members and university researchers. School task force members brought a keen sense of which aspects of the school day and school environment made it difficult or easy for students to be engaged in healthy behaviors. They also shared a deep understanding of student and staff attitudes and behaviors related to nutrition and physical activity in various settings, such as the lunchroom, playground, gym, before and after school and home. The AIM facilitators contributed to the process by sharing evidence-based practices, national recommendations, and tailored reports of school-level data.

Environment and policy changes were decided during AIM Meetings 3 and 4. The decision-making process consisted of the following steps: (a) AIM facilitators shared national dietary and physical activity guidelines and recommendations highlighting the types and quantities of foods and activity needed during the school day, (b) task force members used information generated during the needs assessment phase—regarding student behaviors and environmental factors related to poor eating and inactivity—and brainstormed ideas about changes to make to their schools to help children achieve daily recommendations for nutrition and activity, (c) AIM facilitators shared best practices information from the literature (e.g., What are the key environment and policy changes shown to increase fruit and vegetable consumption and/or physical activity?), (d) task force members individually completed an Importance by Changeability worksheet where they rated each of the possible changes according to importance factors, including evidence the change will lead

to increased activity and/or healthy eating, how often the change would affect students’ behaviors, and whether the change would affect all or only some of the students—as well as changeability factors such as potential barriers to implementing the change, difficulty of implementation, people who would need to be involved in implementation, and financial implications. Each task force member then voted on their top three physical activity and top three nutrition changes. By and large, the task force chose to implement the environment and policy changes receiving the most votes. Each school typically chose two to three changes in each area. Common nutrition interventions included reversing recess and lunch as well as establishing nutrition guidelines for foods allowed on campus. Schools varied with respect to the type of physical activity interventions selected: one school decided to increase the amount of PE time, another school planned to schedule smaller PE classes, two schools made physical improvements to the playground, etc.

In AIM Meeting 5, task force members answered the following questions for each environment and policy change: Who needs to be involved to make this change happen? What are the steps to implementing this change? What are the possible barriers that might be encountered? On the basis of literature searches and knowledge of other schools’ success stories, AIM facilitators also provided information to help answer these questions.

By and large, task force members and in some cases a few additional key people in the school building (e.g., janitor, secretary, teacher) were the change implementers. In AIM Meeting 5, AIM facilitators presented the Social Cognitive Theory (Bandura, 1977) to task force members as a way to help them identify personal and environmental determinants needed to implement change. Task force members considered the following: “What would it take—inside a task force member and in that member’s environment—to accomplish the steps to implement the change?” This discussion generated ideas such as members needing to establish nutrition guidelines for foods allowed on campus and having the skills to assess whether foods comply with those guidelines, members needing the skills and knowledge to advocate for increased financial resources to hire additional PE teachers, and members needing resources to implement change such as obtaining concrete for a new basketball court. Before AIM Meeting 6, AIM facilitators incorporated the brainstorming on determinants and created performance objective matrices. The meat, or inside, of the table included “change objectives.” These were specific tasks that needed to be accomplished for the determinant (e.g., knowledge) to be

addressed in completing a particular step (e.g., share benefits of recess before lunch with faculty).

In AIM Meeting 6, AIM facilitators presented the task force with a hand-drawn visual depiction of progress made to date. The left side of the figure showed key findings from the assets and needs assessment phase of the process; the next panel showed the environment and policy changes the school decided to make; and the rightmost panel displayed the AIM process leading to a healthier school environment. During this meeting, task force members broke into subcommittees with at least two members overseeing each environment and policy change. Timelines were set and subcommittees reported on their progress to the larger task force at AIM Meetings 7 to 10. AIM facilitators volunteered to meet with subcommittees in between task force meetings to provide resources and any help needed. In some cases, subcommittees conducted pilot tests before full-on implementation (e.g., reversing recess and lunch for one grade only during the last month of school).

The concept of program evaluation was introduced during AIM Meeting 8. Task force members were encouraged to identify the types of process and outcome evaluation they would need to conduct—in addition to what was already being planned at the overall project level across all ten schools—to know if the changes they made yielded the desired outcomes. They were also asked to anticipate the type of data they might need to show their school board and potential funders that environment and policy changes were worth keeping. In AIM Meeting 9, the focus shifted to program adoption and public relations to generate knowledge and enthusiasm for the environment and policy changes about to unfold. AIM Meeting 10, held just weeks before the end of the school year, was a celebration of accomplishments as well as a continuation of discussions about program implementation, adoption, and evaluation. Task forces also identified key steps that needed to occur over the summer in order for certain changes to be implemented at the start of the next school year. In some cases, task forces decided to hold a meeting during the summer months. AIM Meetings 11 and 12 happened during the fall months of the next school year. Meeting 11 served as an opportunity for subcommittees to provide the latest news about the changes being made. The idea of pilot testing changes was formally introduced at this meeting though was informally raised and in some cases completed during the prior school year. The concept of a program notebook was the main focus of this meeting. Task force members were encouraged to put a toolkit together to help sustain the environment and policy

changes from one school year to the next. Examples of the types of information to include in the notebooks were a schedule of what needs to happen to keep the program going from one year to the next, copies of program materials such as nutrition guidelines for healthy snacks, lists of businesses that donated money to support the program, and fact sheets about the importance of the environmental changes chosen. The downside of waiting this late in the process to introduce the idea of a program notebook will be described in the Findings and Discussion sections. Two of the schools conducted a 12th meeting to discuss remaining issues such as the status of certain changes, ways the AIM facilitators could be of service in the future, and infrastructure issues such as appointing someone internal to bring the group together. It is also important to mention that schools that used the AIM process to develop the federally mandated Local Wellness Policy discussed this policy throughout all of the AIM meetings.

In summary, the purpose of this study was to explore the extent to which AIM could be used as a tool for conducting CBPR. We set out to explore task force participants' experiences participating in the task force and perceptions of the process, including its strengths and weaknesses, suggestions for how the process could work better or differently in the future, the extent to which the planning process was similar to or different from how changes are typically made at the school, satisfaction with the facilitation of the process as well as the changes the task force made, community capacity, and predictions about the future of the task force and the sustainability of changes.

Data Analysis Methods

Qualitative interviews were particularly well suited to explore these questions. Miles and Huberman (1994) emphasize that qualitative study can gain a "holistic" understanding of context, while capturing data on participant perceptions "from the inside" (p. 6) about the program as it unfolded, pressures, choices, and turning points. The main sources of data for this study were 16 semistructured interviews (3 to 4 interviews at each of the five schools) with a purposeful sample of task force members who were perceived by the AIM facilitators to be "information-rich" by the nature of their roles in the schools and involvement in the AIM process. Thus, principals were always included in the sample because of their leadership position in their schools, and the remaining two or three individuals comprised classroom teachers, PE teachers, food service coordinators, parents, and a secretary, and were selected on the basis of their position in the school and level of involvement

in the planning process. Taken together, the participants provided a range of perspectives about the strengths and weaknesses of the planning process. The semistructured interview protocol was designed to elicit task force members' impressions of the IM process and their experience in the program. Interviews were led by Dr. Cutforth (hired as an evaluation consultant after the intervention took place) on the school sites during May 2006 to January 2007 and ranged from 30 to 70 minutes each. Dr. Belansky attended all interviews and was given the opportunity to ask follow-up questions throughout each interview. Fifteen of the interviews were conducted after the official planning process had ended; one was conducted toward the end of the process. Dr. Cutforth explained to each interviewee that the purpose of the interview was "to hear your thoughts about the parts of the planning process that were important, those that were unnecessary, or whether anything was missing. I am interested in knowing how you have been involved, what kinds of changes to the school have been made, and what you have learned from the process so far." The interview protocol consisted of 22 questions designed to elicit strengths and weaknesses of the AIM process. All interviews were transcribed and transcripts were returned to participants for member checking. The constant-comparison method of data analysis (Lincoln & Guba, 1985) involved mining the data for categories and themes related to the AIM process and the presence or absence of CBPR principles. Triangulation was achieved by the first two authors collecting data, conferring continuously about emerging themes, and examining data and themes in the context of participant statements and language and the CBPR literature (Patton, 2002). Task force members and the study coordinator were then asked to review and comment on emerging themes. This approach served to minimize intrinsic biases that might come from a single-method, single-observer approach.

► FINDINGS

AIM Process and CBPR Principles

The following section describes the extent to which the AIM process achieved the key elements of the CBPR principles. Each principle represents a goal to be strived for (Israel, Schulz, Parker, & Becker, 1998) and in this regard we describe AIM's successes and shortcomings.

1. Recognized community as a unit of identity

The community of identity was characterized by a sense of task force members' identification with their schools, shared values and norms, mutual—although

not necessarily equal—influence on school processes, and common interest in and commitment to improving their school's nutritional and activity environment.

Although principals recruited these individuals to the task forces with these characteristics in mind, improving schools' nutrition and physical activity environments tended not to rank very highly on the list of the schools' priorities. However two factors were in AIM's favor: first, the federal mandate requiring that public school districts develop a Local Wellness Policy (Child Nutrition and WIC Reauthorization Act, 2004) meant that attention had to be given to physical activity and nutrition environments; and second, there were existing pockets of interest among individual task force members who were pleased to participate because it gave them the opportunity to voice long-held concerns about nutrition- and physical activity-related issues in their schools.

The task force members had many other professional and personal obligations; in particular, several talked about the pressures of high stakes testing. These priorities competed with AIM for task force members' time and energy.

2. Built on strengths and resources within the community

By virtue of convening school-based task forces, the AIM process capitalized on members' knowledge relating to nutrition and physical activity, as well as insights about social and cultural values and economic conditions influencing families' capacity to access healthy food and physical activity opportunities. School task force members also provided their expertise by drawing on their professional training or college education. These local perspectives were instrumental in bringing a sense of reality and viability to proposed changes.

During task force meetings, members shared their frustrations and concerns about food insecurity, obesity rates, families' poor food choices, and sedentary lifestyles. At the same time, they were able to frame issues and pose solutions on the basis of their knowledge and expertise. For example, one parent's interest in healthy lunch menus was complemented by a nurse's nutritional expertise and advocacy for more fruits and vegetables. The school nurse said, "We have a different pool of information than the teachers and administrators." She was pleased to contribute information to discussions in ways that would not typically occur outside such a forum. Similarly, the food service coordinators' training in food nutrition and knowledge of federal lunch requirements clarified issues and the steps that would need to be taken if changes were to be made to lunch menus. A food service coordinator contributed

her knowledge about ramifications of adding more fruits and vegetables to menus and eliminating dessert items. Her contribution prompted one task force member to draw on his relationship with a local food store owner to explore the feasibility of purchasing healthy food items for the lunchroom.

3. Facilitated collaborative, equitable partnership in all phases of the research, involving an empowering and power-sharing process that attends to social inequalities
4. Fostered colearning and capacity building among all partners

These CBPR principles are combined because of their highly related nature. For example, a collaborative, equitable partnership involves colearning; similarly, an empowering process involves capacity building.

A collaborative and equitable forum. The establishment of operating norms set the stage for a democratic forum that valued different but complementary skill sets. Decision-making rules and meeting norms (e.g., “respect opinions and thoughts of others,” “listen with intent to truly understand,” “try to hear from each task force member so that no one voice dominates”) allowed task force members to transcend their role and status and be actively involved in information sharing, listening, decision making, intervention planning, and implementation. These features were valued by a school food service coordinator:

I listen a lot more. You learn to listen to others in a group instead of assuming. I was pretty rigid, especially with nutrition. It's OK to say your opinion and not agree. We didn't agree a lot of times but we learned to compromise.

Task force members also appreciated the opportunity to provide input and share expertise. Typical in this regard is a school secretary's comments about the opportunity to share her health and nutrition ideas:

You get stuck here . . . pigeonholed. I'm the secretary so I'm asked the same questions over and over again. I know where all the supplies are, I know what the kids and teachers need. I'm in that rut. . . . But I'm more than just the secretary. . . . I am a parent and want my kids to eat good food and exercise. I have ideas but nobody ever asks me about those things. . . . [The facilitators] weren't just looking at me as a secretary, [and AIM] was a chance for me to get my ideas out there.

The AIM meetings provided a safe, public forum for individuals to voice long-held concerns about nutrition and physical activity that they had previously expressed among themselves. This forum was a level playing field and one that overcame social inequalities, even in the presence of principals who are typically the key decision makers in schools, a point noted by a food service coordinator:

A lot of times administrators tend to carry every meeting and you're almost forced to follow their path. You can bring it up but he doesn't have to listen to you. [In the AIM meetings, the principal's] power was the same as all of ours. We had a forum where he had to sit with us, which was nice. You could talk more openly.

The infusion of evidence-based practice into AIM sessions lent credence to task force members' concerns. For example, in one school prior to AIM, the nurse and food service coordinator asked the principal and school board to replace the contents of the pop machine with milk and water, and to implement recess before lunch. Although in the past their concerns had largely fallen on deaf ears, evidence-based practice now provided them with validity. As the food service coordinator put it,

No one went there when I suggested it before. But the documentation and [the facilitators] helped us out by saying, “Yes, it does work, after lunch there are less discipline problems; the kids eat.” We had the backing and [the principal] had to sit and listen whereas before he didn't, he wouldn't listen, he wouldn't even go there, he didn't want it, he was adamant about it.

Principals appreciated the opportunity to be on an equal footing with task force members. As one principal put it, “Everybody had neat things to say and there were some great ideas. I felt like an equal; it felt real good; it's kind of cool to be on the same standing as parents, food service, nurse, PE teacher, classroom teacher. . . . It was a pretty good example of collaborative leadership and leadership by consensus.”

A colearning environment. The task force members' skills and varied professional roles described in the previous principle were complemented by physical resources and AIM's structured planning process that facilitators brought to the table. The physical resources, which included Web-based data and articles, research studies, legislation, and best practices from other schools,

were not readily available to task force members. In reflecting about the facilitators, one teacher said,

They were absolutely awesome on resources and willingness to help us. If we needed something they would find it for us. If we needed rules or laws they found them for us. . . . It was really great because we would need that important information to inform our decisions.

The facilitators helped ensure the momentum of the AIM process by providing essential structure, direction, and resources to task force members who faced competing responsibilities in their professional roles. Many members acknowledged that they would not have accomplished as much without the facilitators. In several respects, the facilitators were the glue that kept the task forces together. They convened meetings, gained input on agenda items, provided minutes of meetings and circulated materials, held informal communications outside of meetings, briefed members who were unable to attend meetings, and distributed essential information and resources.

Colearning occurred in AIM meetings through brainstorming sessions and reciprocal exchanges between task force members that served as a precursor to making decisions. The different perspectives that were brought forth were an important part of the colearning process. A school nurse said,

I enjoyed the brainstorming and hearing people's ideas . . . because even though you may have a good idea, someone might add a little twist to it that makes it that much better. . . . It's like two brains are better than one.

Task force members learned about the intricacies of their own schools including the organization of the lunchroom, the nutritional content of school meals, the cost of providing healthy snacks, district administrators' resistance to interrupting instructional time with breakfast in the classroom, and the problem of punishing children by withholding recess and PE. For one principal, these new understandings revealed opportunities for change:

Where we analyzed what is going on in [our] school and there were checklists and stuff . . . gave me a better understanding of what's here and what we want to have here. . . . The process brought us a lot of information about what's going on in the school. Things I hadn't thought of.

However, a parent described her learning like this:

I'm more knowledgeable about how the school and cafeteria function, and the whole snack recess thing, and they're supposed to have so many minutes of this and so many calories of this and so much protein.

Power sharing. Collaboration and power sharing meant the talents and knowledge of both task force members and facilitators were used in different ways and to different degrees throughout the AIM process. For example, although the facilitators held the bulk of power in terms of guiding task force members through the AIM process, actual decision-making power lay with the task force. As one member remarked, "If they came in and pushed their ideas on us we would have immediately put up a wall and said 'No!' They were very honest, [they said] 'This is what we'd like but this is your task force, you do it, this is for you.' That helped us take all that information and say, 'Yes, we can do it.'"

Furthermore, the balance of power deliberately shifted from the first six meetings when the facilitators played a strong leadership role in guiding the task force through all the AIM steps, up to the point when the task force decided on the interventions to be implemented. Once the task force decided on the changes to be made, the main focus of the meetings was to provide updates on planning and implementation status. Thus, the facilitators relinquished control during the latter half of the AIM process, and their role was primarily to convene meetings and ensure that momentum was maintained.

Task force members recognized their dependence on the facilitators to get things done, and to keep people accountable and the momentum going. Consequently, once the formal AIM process was over and the facilitators stepped away from the school, the process sometimes stagnated. There appear to be at least two reasons for this: first, task force members participated in AIM as an extra, unpaid responsibility with no relief from other responsibilities and most faced competing priorities, particularly around academic achievement; and second, the AIM process was not set up to develop task force leadership potential from within (though could have been, in retrospect) and consequently members relied on the facilitators to "check on us." As one school nurse put it: "[Task force members] had so much responsibility and as a district we were so overwhelmed that if [the facilitators] didn't do it, unfortunately it didn't get done.

5. Integrated and achieved a balance between knowledge generation and intervention for the mutual benefit of all partners

The task forces made several environment and policy changes in their school. Despite some frustrations about the length of the AIM process (see below), task force members were mostly pleased with the changes. As one principal said, “Some neat things have happened because we sat down and talked with the focus on how do we take care of kids, how do we take care of each other, how do we make the [school] a better place? I think everybody feels good about the changes.” In a few instances, members expressed disappointment about the task force not selecting important but perhaps more difficult changes to make. For example, one parent would have liked her task force to push for sweeping changes around the quality of nutrition in the lunchroom but acknowledged the food service manager’s resistance.

Another source of disappointment was the failure of the program notebook (referred to above) to play its intended role as a toolkit that would help sustain the environment and policy changes from one school year to the next. The intention was for the notebook to contain the key steps that need to be taken to sustain the spirit of the AIM process and updated program materials and fact sheets about nutrition and environmental changes. The presence of such information in one place would serve to establish an “institutional memory” and thus mitigate against turnover among school personnel common in this rural environment. One teacher spoke about the purpose of the notebook:

It was as a guide so that when we [task force members] are no longer [here] . . . we have it down in writing what we’re supposed to be doing. I would hope that it would be ingrained enough in other teachers by that point that it will just be continued on. But if a new principal comes in . . . we can say, “Yes, see, here it is!”

However, the program notebook was not introduced until Meeting 11 and because of members’ busy schedules and declining interest, the comprehensiveness of notebooks was not as high as had been expected. One teacher referred to the need (and missed opportunity) to set aside time during each of the AIM meetings to work on the notebook, because it would have enabled work to be done in small chunks rather than under time pressures during the last two or three meetings.

Tension between process and action. IM in its original form is a lengthy and highly detailed process. One of the challenges of adapting it was to preserve its key elements while making sure school-level changes happened in a timely fashion. The RMPRC’s emphasis on democratic processes and decision making, together

with the weight given to ensuring the appropriate consideration of evidence-based practice, may not have fully meshed with task force members’ desire to move ahead more quickly with the tasks of implementing changes. Within each task force, members varied with respect to their tolerance for process and the delay of action. Some needed to experience a success or change to stay engaged in the process (e.g., “We’ve talked about this for too long; let’s do it”) whereas others needed to think through the details of the change before endorsing it (e.g., “If we’re going to reverse lunch and recess, how and where will the children wash their hands?”).

Several task force members felt that the momentum of the AIM process slowed down after the fifth or sixth meeting. This school nurse’s comment is typical:

In April it seemed to stagnate. In February and March we decided what we were going to do, who was going to be on what committee. And it was almost like we had too much time to accomplish it. That’s how I felt, maybe not how other people felt. I figured like we should be done, let’s go.

6. Focused on the local relevance of public health programs and on ecological perspectives that attend to the multiple determinants of health

One goal of this project was to increase opportunities for student physical activity and healthy eating by making school-level environment and policy changes. Implicit was the recognition of the relationship—and interdependency—among the school environment, school staff and personnel, and students. AIM took both a positive and ecological perspective by posing and addressing a fundamental question: What will it take in the individual and in his or her immediate environment to achieve the desired behavior? In the case of the SEP, the individual was the task force member (e.g., classroom teacher, PE teacher, principal, food service manager) and the desired behavior was implementing environment and policy changes that would ultimately increase student physical activity (e.g., longer PE class periods) and healthy eating (e.g., more fruit and vegetable offerings in the lunchroom). After deciding which environment and policy changes to make, task force members identified personal and external determinants that needed to be addressed in order for school personnel to successfully implement changes. A PE teacher talked about the different layers of knowledge, attitudes, and accessibility required for change to occur in his school:

The PE teacher can sell healthy eating to the kids but the cooks have to be part of that process as well,

where the kids could have the choice to get an apple if they're still hungry. The cooks are definitely part of the process. We were doing snacks [at our school] and some of them weren't too healthy. But if the cooks become aware of some of this, like apples, a lot of fruits, then we could start giving the kids a choice of different fruits, maybe we could make it important.

7. Involved systems development using a cyclical and iterative process

As described in CBPR Principle No. 4, the task force structure comprising norms, decision-making rules, and regular meetings provided the foundation for the cyclical and iterative process. AIM included the entire continuum of intervention planning, as described earlier in this article. When reflecting on the needs assessment, one principal said, “[Analyzing] what is going on in our school . . . gave me a better understanding of what’s here and it drove the process as to what we want to have here.” A food service coordinator described the process by saying, “I like how we identified our needs first and then we worked towards common goals.” In brainstorming ideas, facilitators encouraged members to consider both basic changes as well as “pie in the sky” possibilities.

In selecting environment and policy changes based on importance and changeability, a food service coordinator recalled issues pertaining to changeability: “We had a lot more that we wanted to do but we narrowed it down to what we thought we could actually get done. We had tons of ideas at first. [The parent] wanted to see a lot more organic foods [but] that had to go out the window because we can’t afford it in this district. We wanted a 1.5 [FTE] PE teacher so that we could increase the PE time but it wasn’t feasible financially. Resources were the barrier.” One principal recalled this part of the process by saying, “We listed a couple of things and then [looked] at obstacles and what projects are we most likely to be successful at. And after some discussion we nailed down things we thought we could get done: recess before lunch, health zones, the [wellness] policy, the pop machine and snacks.”

One teacher recalled, “From our initiation to the end [it] was a process that was thought out; it wasn’t something that [they] just came in and said, ‘We’re going to change this and how would you like to go about doing it? OK, go.’ A lot of [times] in the school system we go into something very quickly without another being that comes in and says, ‘Let’s map this out.’ So it was well thought [out] and the process has taken us in the direction that we’ve wanted to go.”

8. Disseminated results to all partners and involved them in the wider dissemination of results

Several dissemination strategies were used to communicate changes schools made. At the individual school level, task forces’ work was disseminated via faculty meetings and, in some cases, flyers and/or articles in parent newsletters. In one community, an article about the school’s task force appeared in the local newspaper. Changes were also described and discussed at monthly SEP Steering Committee meetings. At a broader regional level, one of the AIM facilitators wrote an article for the daily newspaper on the important role of schools in fighting the childhood obesity epidemic. This article was written to promote attendance at a “Healthy Kids, Healthy Schools Summit” held at the region’s higher education institution. This event, put on by the SEP Steering Committee, showcased the region’s accomplishments related to school-level nutrition and physical activity, and was attended by 55 school and community members, including district administrators, school board members, teachers, student teachers, day care workers, and school foodservice and nursing staff.

Beyond the regional level, one of the school principals wrote an article for the RMPRC’s quarterly newsletter in which she described the changes made by her elementary school as a result of AIM. This newsletter is distributed to local, state, and national RMPRC partners. At the broader societal level, there are plans for the academic and community partners to collaborate and coauthor papers and presentations at national meetings and conferences.

9. Involved a long-term process and commitment to sustainability

According to Israel et al. (2003; Israel et al., 2005), a long-term process and commitment are needed to have the trust in place to do CBPR and to address health disparities. Characteristics of a long-term process and commitment include partnerships that remain intact beyond a single research project or funding period as well as retaining a commitment to the relationship that can be called on in the future.

At the time of writing this article, the SEP was entering its last year of funding. Discussions between RMPRC staff and school partners were under way about next steps for future projects (e.g., studying the effects of an after-school program on physical activity and healthy eating). At this point, it is unclear whether the partnerships formed with school task forces will continue beyond the SEP; however, both parties have expressed continued interest in working together.

Since the AIM process ended, there have been several examples demonstrating members’ continued commitment to the relationship. On a few occasions, the RMPRC

requested task force members communicate study findings to the community. The principal at one school who wrote the cover story article for the RMPRC newsletter also presented study findings to the regional board of superintendents, urging them to allocate funds to sustain physical activity and healthy eating opportunities for students. A teacher presented changes her school made as a result of the AIM process at a community-wide event highlighting the importance of the school environment in supporting healthy behaviors. Since the AIM process ended, the RMPRC has been called on to provide assistance to three of the five schools. For example, one school's task force morphed into a wellness committee representing elementary through high school. The RMPRC study coordinator was invited and attended three wellness committee meetings. He provided best practice information, participated in brainstorming on ways to keep the school's healthy snack program sustainable, and assisted with grant-writing activities.

At the beginning of the project, when setting up the partnership, the RMPRC asked each principal to commit to 10 task force meetings in the first year and two meetings at the beginning of the second school year. Throughout the 12 meetings and at the conclusion, the RMPRC offered to continue providing assistance in any way that would be helpful. Task force members expressed mixed feelings about the RMPRC leaving after the 12th meeting: some felt they possessed the capacity to carry on independently, whereas others were concerned that all the good work would dissipate. One nurse spoke about her school's capacity to continue the work begun in AIM:

We've accomplished what we wanted to accomplish with them. I don't think it will affect the changes that are already in place. . . . I don't think we'll make as big strides but I think we'll continue in the right direction and maintain what we have. Their coming gave us the impetus to make sure things were done and so the things that aren't quite completed yet then it's going to fall to other people to make sure that that gets pushed through and that we come back. But we're not done with this yet.

However, a principal was concerned about the AIM process coming to an end:

It feels weird; it's a different feeling because we're not meeting regularly, the frequency of communication has ceased. It would be cool rather than having things come to a screeching halt maybe do some goal setting and timelines so that there's some sustainability of this [process].

A food service coordinator appreciated that her school's task force had achieved its goals to introduce recess before lunch, paint the playground, eliminate the pop machine, and write the wellness policy. However, she noted, "Last year was so energetic but now we're like stagnant. . . . It would have been nice to have stayed involved longer." On the other hand, in some of the schools, conversations begun in the task force continued in the year after the AIM meetings. One parent mentioned she monitors the snacks her son receives in his classroom and expresses her and other parents' concerns to the food service coordinator or nurse. Another principal spoke excitedly about the discussions that continue from AIM:

I don't think a week goes by that we don't all talk to each other about something that's going on. [The school secretary] asked me the other day about the status of the signs on the walking track . . . [the school nurse] asked me about sawdust for the track. [A teacher] was talking about lunch recess because she's still really gung ho on it. . . . So the ideas that came forth are still going to happen.

A parent acknowledged the importance of the AIM changes, but felt that without an outside facilitator little more would be done:

I hate to say it but my gut feeling is that it's going to fall apart. I hope it doesn't, I hope that the policies that are instilled now will stay. I hope that the [Coke machine] doesn't come back out, I hope that they continue to have recess before lunch, the snack program's better and they are trying to be a little more healthier in the cafeteria. So I hope that those things stay but I don't know if there will be any more changes, unless [the facilitator] comes and meets with us.

Thus, task force members were split in regards to the RMPRC's departure from their schools. Some expressed doubt about being able to maintain momentum, whereas others felt their school possessed the capacity to continue. Ideally, the task forces would continue to meet independently of the RMPRC. Research currently under way will determine the extent to which the conversations begun in AIM have been sustained in both formal and informal settings.

► DISCUSSION AND CONCLUSIONS

In light of the growing trend to use CBPR approaches in tackling complex health problems such as childhood obesity, processes are needed for collaborative program

planning and implementation. In the School Environment Project, Intervention Mapping was adapted to be used as a CBPR tool. Results from key informant interviews suggest AIM was a process whereby individuals' expertise (e.g., university researchers' knowledge of best practices and access to national resources and school task force members' unique and in-depth knowledge of the community and culture) were brought to the table in a careful planning process aimed at creating school-level environment and policy changes to increase opportunities for physical activity and healthy eating. Participants exchanged information, listened, and learned from each other.

Two key themes that emerged from the qualitative data analysis were a strong appreciation for outside facilitation of the planning process, as well as resources brought to the table. Several task force members talked about the value of the RMPRC bringing data, research, evidence-based practices, and success stories to AIM meetings. They also spoke positively about a level playing field where task force members, regardless of where they stood in the school's organizational hierarchy, felt they had an equal vote and an important voice in the process. In addition, because school administrators and teachers felt overwhelmed with an increasing set of responsibilities and expectations around standards-based curricula and high stakes testing, task force members appreciated being able to walk into a meeting that was planned and led by others. The need for and value of outside facilitation has also been found in other school-based planning processes (Austin, Fung, Cohen-Bearak, Wardle, & Cheung, 2006; Staten et al., 2005).

Power sharing in the AIM process was somewhat content specific. For example, although the AIM facilitators held power with respect to driving the planning process and steering the task force through it, members held all of the decision-making power around which evidence-based changes to make. They also held the responsibility of implementing and sustaining those changes. AIM facilitators remained available to assist task force members throughout the process but ultimately, the responsibility rested with the school. One of the improvements we plan to make to the AIM process is to share the meeting leadership role with one of the task force members. This could lead to several positive outcomes, including increased power sharing that is less content specific, increased leadership and planning capacity in the school setting, and increased likelihood that the task force will continue to meet once the RMPRC reduces its role at the school. We still think the school should hold the power to decide the types of changes it wants to make as this leads to a sense of ownership; furthermore, schools should

continue to be ultimately responsible for implementing changes, with continued assistance offered by the RMPRC, as this makes it more likely schools will choose changes that are feasible for them to implement and sustain over time without overdependence on the RMPRC.

The AIM process fell somewhat short on certain CBPR principles. For example, although the issue of childhood obesity was of top concern to the RMPRC's Community Advisory Board, it was not necessarily the highest priority among school principals (though school nurses, PE teachers, and food service directors tended to consider childhood obesity issues to be important). In addition, the process did not attempt to cultivate capacity within the task force to take over the RMPRC's leadership responsibilities in convening the group after the AIM process was completed. This led to concerns about the future of the task force and in some cases lack of follow through in fully implementing changes. There is a bit of a quandary in that task force members reported not having sufficient time to devote to this project in light of competing priorities and therefore greatly valued having the RMPRC provide a structure, routine, and accountability through its facilitation. This led to varying degrees of dependence on and inadequate "weaning" by the RMPRC.

In retrospect if 20 to 30 min of each meeting had been set aside for task force members to work on components of the program notebook, dependency on the RMPRC might have been lower, and adherence to almost all of the CBPR principles higher. For example, earlier work on the notebook would have contributed to the iterative process, knowledge would have been shared in ways that were more immediately connected to action, task forces would have likely produced more comprehensive notebooks, and program sustainability would likely have been enhanced. If we were to be extremely self-critical, we could view the nutrition and physical activity changes as one set of outcomes and the notebook as another. AIM performed well on the first set but less effectively on the second set.

On the basis of task force member feedback about the planning process, several modifications will be considered for the next iteration of AIM: (a) shortening the process in the spring (Meetings 8-10) because many task force members complained that the process went on too long, (b) building leadership roles within the task force earlier in the process so that members are more confident continuing the process without relying on outside facilitators to keep the momentum going; and (c) introducing and working on the program notebook sooner in the process so that program implementation and sustainability is strengthened.

Although this issue was not raised by school task forces, we feel it is important to note that the actual targets of the effort, children, were not formally included in this CBPR planning process. Most task forces engaged students informally during the needs assessment phase (e.g., taking an informal survey of how many children were eating school breakfast and reasons for not eating it) and intervention implementation phase (e.g., informal discussions with students about the types of playground equipment and/or recess games they would be interested in having). We recently obtained funds to revamp the AIM process by integrating suggestions made by our community partners and formalizing the role of students as key CBPR partners in the AIM process. We will conduct the AIM process in middle schools using a service learning and youth development approach with students.

With continued national attention on the childhood obesity epidemic, schools remain a key setting for health promotion and disease prevention interventions. It is important to recognize that administrators and staff are under significant pressure to focus attention on high stakes testing and other priorities related to academic achievement, making it challenging for them to devote energy and attention to health-related issues. University researchers and the public health workforce have an important role to play in supporting school efforts to create healthier environments and policies. AIM offers both outside facilitation and an array of resources to support schools in their efforts to reduce childhood obesity.

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