A Collaborative Communitywide Health Fair: The Process and Impacts on the Community

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The purpose of this article is to describe the process of conducting a collaborative communitywide health fair, and the impacts of such health intervention programs on community members. A community health fair addresses the health access needs of underserved populations. The success or effectiveness of such community-based programs requires systematic approach to assessment, planning, implementation, and evaluation. The PRECEDE~PROCEED model was used as the guiding framework. The health fair described in this article was coordinated by nurses and drew resources from multiple health providers and organizations. The fair provided opportunities for vulnerable populations to access and utilize appropriate and comprehensive health services, resources and education.

Nurses can provide a model of practice through community engagements by collaboratively planning a health fair that meets the health needs of vulnerable populations. The purpose of this article is to describe the processes and community impacts of a communitywide health fair that was coordinated by nurses and implemented in collaboration with members of an underserved community.

Evidence shows that vulnerable populations disproportionately experience health disparities (Carter, Fournier, Grover, Kiehl, & Sims, 2005; Okie, 2007; Sanchez, et al., 2011). One of the goals of the Healthy People 2020 (2012) is to achieve health equity, eliminate health disparities, and improve the health of all groups. A key obstacle to attaining this goal is lack of access to health care services by a significant number of US populations. Poor access to health services means that an individual is less likely to participate in preventive care, and more likely to delay medical treatment (Agency for Healthcare Research and Quality, 2009). A nurse-managed health fair that targets community’s needs can help fill the health access gap for vulnerable and underserved populations who often experience health inequities.
The process of implementing a health fair began with a trusting partnership between a Nursing and Health Studies Program at a local college and a community agency in North King County, Washington State that caters to the needs of vulnerable populations such as low income, recent immigrant, and ethnically and religiously diverse groups. Nursing students and faculty were involved in health outreach activities through community service-learning projects. Evidence shows that academic–community partnerships have gained increasing acceptance as a model to assess and intervene on complex health problems in disadvantaged communities (Abdulrahim, Shareef, Alameddine, Afifi, & Hammad, 2010). Although the impacts of such partnerships and collaborations and the ensuing community-based programs on students’ educational experiences are well documented (Cangelosi, 2004; Eyler, 2002; Ezeonwu, Berkowitz, & Vlasses, in press; Gazsi & Oriel, 2010; Gillis & MacLellan, 2010; O’Brien-Larivee, 2011; Reising et al., 2008; Sword, Noesgaard, & Majumdar, 1994), scholarly literature that highlights the process and community impacts of such collaborative programs such as health fairs is still relatively uncommon. This article aims to fill this gap by using the PRECEDE–PROCEED model to highlight the assessment, planning, implementation and impact evaluation of a collaborative health fair.

One of the factors most often associated with positive community-based intervention program outcomes relates to “forming and working with coalitions” (Green & Kreuter, 2005, p. 276). An essential part of effective coalitions is a strong collaborative partnership among health providers. When health professionals partner effectively, they merge their perspectives, knowledge, and skills to create synergy, they create something new and valuable (Weiss, Anderson, & Lasker, 2002). The broad and complex nature of public health issues demands coordination of interdisciplinary efforts and joint action in order to exert sustained pressure on the issues. Nurses can play important roles by coordinating and mobilizing interdisciplinary teams to implement community health interventions such as a health fair.

The underlying case for any community-based health promotion activity such as a health fair is the need to improve community members’ access to health services. Goldman and Schmalz (2004) described the health fair as the “greatest outreach tool” used to provide accurate information about specific health problems, and to trigger specific health actions or behavior change (p. 217). A health fair is also characterized as a voluntary community-based, cost-effective event used to detect health problems, identify risk factors, and provide educational information and supportive resources to promote healthy lifestyles of its participants (Dillon & Sternas, 1997). Health fairs provide more comprehensive and coordinated responses to public health issues than any single stakeholder could achieve (Cargo & Mercer, 2008).

Access to health care services is a multidimensional concept encompassing availability and utilization (Gulliford et al., 2002). Because access is a precondition for utilization, health care access is, therefore, “a condition in which health care services locally exist and for which there is no significant financial impediment for their use” (Shaw, 2012, p. 555). Community-based health fairs may address both dimensions of availability and utilization if health providers and their services are available to the community members, and free and acceptable services are provided to the clients in their own familiar community setting.

THE FRAMEWORK

The PRECEDE–PROCEED model (Green & Kreuter, 2005) was used as the organizing framework for planning, implementing and evaluating a community health fair (Figure 1). The PRECEDE component of the model stands for Predisposing, Reinforcing, and Enabling.
Constructs in Educational/Ecological Diagnosis and Evaluation. The PROCEED component stands for Policy, Regulatory, and Organizational Constructs in Educational and Environmental Development. The first four phases of the model (social assessment, epidemiological assessment, educational and ecological assessment, and administrative and policy assessment) systematically identify the community’s health problems and their key determinants. The last four phases (implementation, process, impact, and outcome evaluations) focus on the actual delivery and evaluation of the health intervention. The PRECEDE~PROCEED model guides the program planner to think logically about the desired end point and work backward to achieve that goal (Crosby & Noar, 2011).

With this participatory logic model, the process started with collaborating with the community members to determine their health and quality-of-life (QOL) concerns, and then working backward to determine the behavioral and environmental determinants of those problems, as well as the factors that predispose, reinforce, and enable those behaviors in their environmental context. Comprehensive health needs assessments were conducted in collaboration with community members to systematically identify the community’s problems and their key determinants. The diagnostic data from the assessments provided the rationale for the health fair and guided the setting of the goals and objectives, which were targeted in the implementation phase. Process evaluation was conducted to “ensure the quality” of the planning and implementation processes and impact evaluation was done to monitor progress toward achievement of program goals and objectives (Green & Kreuter, 2005, p. 9).

**APPRAOCH**

**Community Assessment**

Following an existing academic–community partnership, the faculty, undergraduate (RN~BSN), and graduate nursing students worked alongside community members to collaboratively assess
the community’s health needs, their desired health outcomes, and QOL aspirations. Data gathered through observations, environmental assessments, interviews, and focus groups focused on barriers and assets to health, as well as perceived strategies for mitigating the identified problems. Examples of questions that were used to elicit responses from community members include: (a) What are your desired QOL and health goals? (b) What barriers keep you from attaining them? (c) What are your health concerns? (d) What resources do you have to address those concerns? In addition, the organizational and policy contexts of the community were assessed. Assessment data (Figure 2) revealed the community’s health needs and helped stakeholders to sequentially plan and direct efforts toward organizing and assembling appropriate resources and services to address those needs.

**Social assessment.** Social and epidemiological assessments of the community members show that there were general perceptions of poor health status. Community members identified lack of access to, and poor utilization of health services as key issues that impact their QOL. Knowledge deficits related to chronic disease processes and symptoms also emerged as priority areas of health concern.

**Epidemiological assessment.** Additional responses from community residents include increasing cases of chronic diseases, such as heart disease and cancer. There were self-care deficits related to nutrition, exercises, and stress management. Furthermore, the CDC’s Community Health Status Indicators (CHSI; 2009) show that heart disease and cancer remain the...
Nation’s leading killers and in King County, Washington, personal behaviors, lifestyle choices, and risk factors related to diabetes, smoking, high blood pressure, obesity, limited consumption of fruits and vegetables, and lack of exercise lead to increased risk of disease and its effects. Pertinent modifiable behaviors that were related to the community’s health and QOL concerns were identified, including delays in seeking prompt medical care and not engaging in preventive care.

Environmental problems that were most amenable to intervention include absence of appropriate and affordable health services and resources within the proximity of their homes and places of work. Community members experience difficulties gaining physical access to desired and affordable health providers due to lack of adequate means of transportation. In addition, some individuals are unable to afford the cost of health care due to lack of insurance or inadequate insurance coverage.

Educational and ecological assessment. Educational and ecological assessments revealed several factors that could be changed to change the behaviors and environmental conditions. These include (a) predisposing factors that provide rationales for poor health behaviors, such as knowledge deficits, attitudes, beliefs, and values that prevent one from seeking care; and lack of clear understanding of the benefits that result from engaging in preventive and protective health behavior; (b) reinforcing factors that discourage one from engaging in appropriate health behaviors such as languages spoken (other than English) and previous negative experiences with providers and the health care system; and (c) enabling factors that hinder access to services and adoption of healthy behaviors that include health services unavailability, financial hardships, undocumented immigrant status, and lack of social support. This assessment yielded adequate information that guided the planning and implementation of a health promotion event.

Administrative and policy assessment. Discussions of the assessment data with the community agency’s leadership led to the concurrence that a health fair was appropriate because the identified problems were amenable to nursing interventions and broader interdisciplinary efforts through health education and screening activities. Assessment of the administrative and policy constructs of the proposed health fair showed that there were no restrictive organizational policies. The health education components of the fair focused on preventing and managing acute and chronic health problems and aligned well with the predisposing, reinforcing, and enabling factors. Examples of the education components include: Controlling and managing blood sugar levels, blood pressure, weight, and stress; understanding the importance of physical activities, proper nutrition, and home safety; and recognizing common disease processes and early symptoms. In addition, the screening components were determined to address the social, behavioral and environmental health factors.

Planning

Due to the complexity of the community’s health needs, a collaborative approach was needed to address the health care access needs. There was a deliberate effort by nursing students, faculty members, and community agency leadership to reach out to other professionals and local health agencies, businesses, and medical and dental communities to participate in supporting the health promotion efforts. Based on the identified priority health concerns of the community, the
modifiable factors, and the available resources including financial resources, available physical space, and human resources (health providers, general volunteers and support staff), the goals and objectives of the health fair were developed. The goals of the community health fair were:

1. To provide comprehensive health education.
2. To disseminate appropriate health information and resources to participants at a convenient and accessible location.
3. To conduct free health screenings for diabetes, hypertension, heart disease, breast cancer, osteoporosis, vision and dental health.

The objectives of the community health fair were:

1. To recruit and train at least 30 volunteers including nursing students and faculty and community members.
2. To publicize the health fair extensively through various local media sources.
3. To identify resources, partner with, and invite at least 20 local organizations and businesses and health providers.
4. To provide health education, resources, and screenings to at least 250 people by the end of the health fair.

Armed with the program goals and objectives, specific activities that were required to meet each objective of the health fair were identified collaboratively by planners. The entities that will accomplish those tasks were determined (Table 1). Faculty members, students, and the community agency director developed the program agenda, budget, and media campaign slogans. Local businesses and organizations were approached for support in the form of their services, giveaways, food and refreshments, and financial support. Faculty members and students developed appropriate educational materials in different languages.

There were indirect supporters of the fair who worked behind the scenes such as university and community agency staff and media personnel. Booths were set up in the evening before the health fair and a ground map was created to ensure that all participating businesses and agencies were assigned a booth and space. A registration form was created to record participants’ basic demographic information (age, gender, ethnicity, insurance status, exercise and smoking habits, and blood pressure and blood glucose screening history). Dental and breast screenings required preregistration although on-the-spot registration was also available on a limited first come, first served basis. In addition, preapproval by the breast screening agency was required of all registrants, particularly with regards to age and preexisting breast conditions, and senior agency personnel was present at the fair for on-site approvals.

Implementation

The health fair was held at the premises of the community agency and a nearby church in the month of May. Volunteers were assigned to specific tasks to ensure that all fair activities were smooth. Health-screening activities were central to the services provided at the fair. Services provided included mammography; dental screening, treatment and education; bone scans; and blood pressure, blood glucose, height, weight, body mass index and vision acuity checks. Community
TABLE 1
Health Fair Planning Activities and Assigned Entities

<table>
<thead>
<tr>
<th>Health Fair Objective</th>
<th>Specific Activities</th>
<th>Responsible Entity/Partner</th>
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<tr>
<td>Recruit and train at least 30 volunteers including nursing students, faculty and community members</td>
<td>Recruit and train RN-BSN and graduate students, faculty members, community members and community agency staff.</td>
<td>1. Faculty 2. Community agency director</td>
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<tr>
<td>Publicize the health fair extensively through various local media sources</td>
<td>Develop and deliver social marketing campaign through: 1. Door-to-door flier and poster distribution at businesses and congregational settings such as churches, local libraries, community centers, Seattle Housing units, etc. 2. University and community agency press releases 3. Postings in neighborhood blogs 4. Announcements through local TV news websites (King TV, Komo TV, and Kiro TV) 5. Word of mouth.</td>
<td>1. Faculty 2. University media and external relations’ personnel 3. Nursing students 4. Agency Director and staff</td>
</tr>
<tr>
<td>Identify resources, partner with, and invite at least 20 local organizations and businesses, and health providers</td>
<td>1. Visit local businesses and agencies and submit formal written requests for support 2. Request support and participation from local providers through emails and phone calls 3. Conduct follow-up visits, emails and/or phone calls.</td>
<td>1. Faculty 2. Agency Director 3. Nursing students</td>
</tr>
<tr>
<td>Conduct the fair. Provide health education, resources and screenings to at least 250 people by the end of the health fair.</td>
<td>1. Conduct health education on pertinent topics 2. Provide health screenings (blood pressure, cardiovascular screening, diabetes, vision, dental screening and osteoporosis) 3. Provide appropriate resources to health fair participants.</td>
<td>1. Faculty and nursing students 2. Local health providers 3. Local businesses that offer health-related products 4. Local hospitals and clinics</td>
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organizations and providers, along with nursing students, provided the health screenings and education, and referred a number of individuals for follow up care.

There were protocols in place for abnormal and critical screen results. All screen results were carefully explained to each client and those with abnormal values were counseled to follow up with a primary care provider. Lists of providers within the clients’ neighborhoods that provide free or subsidized services were provided. Although there were no critical values obtained throughout the screenings, there was a plan to send symptomatic clients with critical screen results such as very high or very low blood pressures and blood sugars to the nearest hospital emergency room.
Large numbers of immigrants were served at the health fair and interpreters were available to assist with care delivery. Some countries that were represented include Cote d’Ivoire, Morocco, Egypt, United States, Guatemala, Ethiopia, Eritrea, Pakistan, Mexico, Columbia, South Korea, India, Libya, Italy, Jordan, Somalia, Israel, Bulgaria, and Philippines. Demographic data show that some of the clients, particularly immigrants, have never had health screenings before, and a majority had neither a primary care provider nor health insurance, despite the fact that they had significant health concerns including mental health, hypertension, diabetes, diverticulitis, neuropathy, sexually transmitted diseases, emphysema, chronic obstructive pulmonary diseases, and pregnancy.

In addition to health screenings, various health resources and education were provided, ranging from mental health, stress management, and cardiovascular health, to infectious and chronic disease prevention and management. There were information and resources on parenting including teen parenting, life skills, and job training. Numerous education resources were available, such as early childhood education and college resources. There was also information on domestic violence, suicide prevention for youths and parents, food resources and local food banks. Gift items including shopping bags, pens, pencils, food, snacks, and water were donated by local businesses and organizations and given to participants. Activities were tailored to meet the needs of both children and adults. Hand-washing demonstrations using glo worms and infrared lights, and health games provided great entertainment and quality health education for the kids. Toys and cosmetic testing for toxic chemicals was conducted.

EVALUATING THE HEALTH FAIR PROCESSES AND IMPACTS ON COMMUNITY MEMBERS

Process Evaluation

The overall purpose of the communitywide health fair was to provide wellness activities directed at health promotion and disease/illness prevention to the community members. Process evaluation focuses on how implementation of a health program is carried out, and how the outcome or impact was produced (Green & Kreuter, 2005). Furthermore, it presents evidence of the extent to which the objectives of each planning phase were met. It involves continuous review of the plans at each stage including inventories of resources and services, participating organizations and vendors, volunteers, and fair activities.

Process evaluation was conducted throughout the life of this project (from assessment to implementation) to ensure that the planned procedures for the implementation of the health fair were followed, modified, or changed as needed to stay on course. For example, the initial evaluation of the advertisement strategies through press releases, word of mouth, fliers, and announcements at the local television web sites, indicated that more people who were making inquiries about the fair lived farther away than those who lived within the vicinity. In response, efforts to publicize the fair in neighborhood blogs and distribute fliers at neighborhood businesses, churches, public libraries, and community centers were increased. These extra efforts attracted more local inquiries. Furthermore, on-the-ground fair events were monitored, and changes were made as needed to ensure an undisrupted delivery of health services and education to participants.
Impact Evaluation

Evaluating the impact of health fair activities on the population is an essential element of community health education or intervention. Deal (as cited in Hecker, 2000) stated that evaluating the effectiveness of community interventions is a major responsibility for community health nurses. Impact evaluation assesses the immediate effect that a program (or some aspects of it) has on target behaviors and their predisposing, reinforcing, and enabling antecedents, or on influential environmental factors (Green & Kreuter, 2005). The health fair performance could be judged by (a) change in participants’ target behaviors related to delays in seeking health services and not engaging in disease and injury prevention and health promotion activities and (b) participants’ abilities to access and utilize appropriate and desired health services that are delivered at the health fair.

The ultimate purpose of a health program evaluation is to determine whether the program did what it was designed to do (Tomar, 2008). There was measurable evidence that the goals and objectives of the health fair were achieved and exceeded including participation by volunteers, local organizations, and health services vendors. Overall, 42 volunteers participated actively in the health fair including five faculty and three staff members of the university, 26 students, seven agency staff, and a community member. Twenty-seven local agencies and businesses participated in and supported the fair by providing their services and resources for free to health fair participants. An estimated 350 community members utilized the health services and resources provided at the health fair. In addition to screening activities, there were numerous health education sessions and resource materials that were delivered to participants throughout the health fair. In other words, community members accessed and utilized appropriate desired health services during this event.

Different informal approaches were used to determine the impact of the health fair on community members. For example, a short informal on-the-spot survey was conducted by a group of students and faculty who oversaw the toxic chemicals and environmental health booth to measure any change in participants’ behaviors. Visual interactive information was provided to fair participants on the health impacts of toxic chemicals found in toys, cosmetics, and common household items. As part of the health fair advertisement, participants were encouraged to bring their personal items, including beauty products and kids’ toys, from home for testing. After testing, participants were educated about the safety of their products, as well as safer alternatives. All of the 40 participants that participated in this survey noted that the information provided was helpful, half of the participants stated that they did not know the health hazards related to the cosmetics prior to the session and 31 participants affirmed that they would change their buying habits.

Simple exit interviews were conducted by students and faculty members to gauge participants’ health services utilization at the health fair. The following questions were posed to the participants after they have finished visiting the booths: (a) Were all your health-related questions and concerns addressed? (b) Is there anything else we can do for you? Although the responses were not recorded, the goal was to ensure that every participant’s needs were met to the extent possible. Participants with more questions had their questions addressed on the spot or referred back to the appropriate resource booth for follow-up. The responses were positive and showed that their questions and health care needs were addressed.
DISCUSSION

Carrying out a communitywide health fair is a labor-intensive multistep process. The use of appropriate framework such as the PRECEDE~PROCEED model provides a systematic guide to the planning, implementation, and evaluation. Comprehensive health needs assessment is critical in determining the priority needs of the community to ensure maximal utilization of available but very limited resources.

The dynamic, complex, and emerging environment of health care in the United States presents complex health care demands on communities and requires different capabilities in today’s community health nurses and all health care professionals (World Health Organization [WHO], 2010). One of the keys to the success of a community health care system is the practice of promoting and protecting the health of the entire community by utilizing knowledge from two sectors: (a) the academic sector, which relies on nursing, social and public health sciences; and (b) the community’s experiential knowledge of solutions for their own health problems (Nuntaboot as cited in WHO, 2010). This underscores the role of nursing and the importance of strong partnerships and collaborations with community members.

A trusting partnership, strong collaborations, and clear and consistent communication between academic and community partners are fundamental to the success of this community-based health promotion program. Although a health fair is an effective intervention strategy to improve the public’s health, early involvement of community members in the planning process is, in itself a form of intervention because it provides the community with the opportunity for ownership, empowerment, and self-determination—those “difficult-to-measure intangibles” that can make the difference between long-term success and failure (Green & Kreuter, 2005, p. 264). The wide range of health services and education delivered through the health fair could not have been possible without an equitable and horizontal relationship between the academic and community partners, as well as the active support and involvement of other local organizations and agencies.

Evaluating the impacts of a health fair on a population is an essential element of community health intervention. The outcome of some health fair activities, such as health education, would require longer time to evaluate. Therefore, impact evaluation was logical for this project, as it considers the short-term effects on community members, particularly as they relate to changes in their health behaviors and their ability to access and utilize health services and information at the health fair. The fact that lifesaving mammography services, bone density and cardiovascular screenings, dental care, and numerous health education resources were made available to participants who otherwise could not afford them provides evidence that the health fair was effective and had positive impacts on the community.

LESSONS LEARNED

A successful health fair emanates from a solid foundation of relationship building, community-driven workshops, and other pre-health-fair activities that clear the path for the implementation. The process takes time and energy. There are logistical challenges that are inherent in nurturing a good partnership and sorting through differences and conflicts of interests, and coming to a consensus. Despite the fact that scheduling differences between people in academia and community members can be problematic and slow down the planning process, maintaining a clear and open pattern of communication is critical to the success of the health fair.
Although a follow-up health fair is desirable, limited funding and personnel changes at the community agency have made the planning process challenging. However, the first author maintains regular presence at the agency—conducting workshops with RN~BSN students on health topics of interest to the community members. This provides opportunities for continued academic–community interaction and collaboration.

An integrated model of care delivery in community settings can be more effective in addressing the complex health needs of vulnerable populations. Rather than discipline-specific health fairs, mobilizing and collaborating with interdisciplinary teams could be more effective in providing a one-stop shop for multiple health services for community members who could not otherwise access those services at any one time. Reaching out and collaborating with other interdisciplinary teams to enhance the quantity, quality, and complexity of care provided in underserved communities are desirable.

**CONCLUSION**

Collaborative health fairs present a key strategy for mitigating the difficulties experienced by vulnerable groups in accessing health services. The engagement of diverse professionals and care providers in a health fair at a single location ensures that free comprehensive health services and resources are made available to underserved populations at a convenient place thereby addressing health care issues related to access and utilization. The health fair is a strategic health intervention with positive community impacts that outweigh the cost because the resources for health care delivery are limited and health promotion interventions through health fairs have excellent returns on investment.

**REFERENCES**


