Evaluating Community-Based Public Health Leadership Training

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Context: Addressing the nation's increasingly complex public health challenges will require more effective multisector collaboration and stronger public health leadership. In 2005, the Healthy Wisconsin Leadership Institute launched an annual, year-long intensive "community teams" program. The goal of this program is to develop collaborative leadership and public health skills among Wisconsin-based multisectoral teams mobilizing their communities to improve public health. **Objective:** To measure the scope of participation and program impacts on individual learning and practice, including application of new knowledge and collective achievements of teams on coalition and short-term community outcomes. **Design:** End-of-year participant program evaluations and follow-up telephone interviews with participants 20 months after program completion. **Setting:** Community-based public health leadership training program. **Participants:** Sixty-eight participants in the Community Teams Program during the years 2006 to 2007 and 2007 to 2008. **Main Outcome Measures:** Professional diversity of program participants; individual learning and practice, including application of new knowledge; and collective achievements of teams, including coalition and short-term community outcomes. **Results:** Participants in the Community Teams Program represent a diversity of sectors, including nonprofit, governmental, academic, business, and local public health. Participation increased knowledge across all public health and leadership competency areas covered in the program. Participating teams reported outcomes, including increased engagement of community leadership, expansion of preventive services, increased media coverage, strengthened community coalitions, and increased grant funding. **Conclusions:** Evaluation of this community-based approach to public health leadership training has shown it to be a promising model for building collaborative and public health leadership skills and initiating sustained community change for health improvement.

KEY WORDS: **collaborative leadership, leadership training, public health, workforce development**

Addressing the nation's increasingly complex public health challenges will require more effective multisector collaboration, increased use of population health approaches grounded in the social and economic determinants of health,[1] and stronger public health leadership.[2,3]

The Healthy Wisconsin Leadership Institute's Community Teams Program is an annual, year-long intensive training program created in 2005 to develop collaborative leadership and public health skills among multisectoral teams mobilizing their communities to solve public health problems.

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In response to calls for qualitative and quantitative evaluation of leadership training programs in public health,[4] this study aims to provide an initial evaluation of the Community Teams Program. We assessed program participation, learning, changes in practice, and coalition and community outcomes in the first 2 cohorts of teams (2006-2007 and 2007-2008).

Program Description

Each year, a request for applications is distributed widely to public and community health organizations in Wisconsin. Between 5 and 15 applications are received annually. Applicants describe their community team members (typically 5 to 9 individuals) and existing community-based coalition that addresses a local health priority. A review committee selects 5 to 9 teams to participate in the institute each year.

The Council on Linkages core competencies for public health professionals,[5] the public health leadership competencies,[6] and the Association of Schools of Public Health master in public health core competencies[7] served as the foundation for the development of the program curriculum (see Table 2, Supplemental Digital Content 1 (available at http://links.lww.com/JPHMP/A12), which summarizes program curriculum, learning methods, and evaluation approach). Additional references that informed the program curriculum can be found in the program's online leadership library.[8] Feedback from key informant interviews and the Leadership Institute's community advisory committee was also incorporated into the development of the program curriculum.

Through workshops, distance learning, technical assistance, and a project chosen by teams early in the program year, the curriculum focuses on community coalition and partnership building, collaborative leadership, communication, policy approaches to community change, social marketing, project action and evaluation planning, sustainability, and grantsmanship. Teams work through this curriculum as they complete projects related to their previously established community health priorities.

Evaluation Methodology

In addition to collecting data on the scope of participation from team program applications, we used end-of-year retrospective pre-post tests to assess changes in individual learning and skill development and follow-up interviews with a sample of program participants to assess individual application of learning in practice, changes in professional roles and responsibilities, and achievements of teams in terms of coalition and community changes.

The Kirkpatrick model—applied extensively in health and education settings to evaluate training programs at 4 levels: reaction, learning, behavior change, and impact—guided this evaluation in targeting multiple outcome levels.[9] Here, we report on participation, learning and skill development, practice changes, and preliminary impact on coalitions and communities.

The institutional review boards of both the University of Wisconsin and the Medical College of Wisconsin reviewed the program evaluation protocol and deemed it qualified for exemption as a research project using standard educational practices.

Retrospective pre- to posttest

At the completion of the final program workshop for each of the 2 cohorts, all participants in attendance were given a program evaluation form to complete, which included a retrospective pre-post test of knowledge and skill in the primary competency areas covered in the program curriculum. Participants were asked to rate their current knowledge or skill as well as their knowledge or skill before the start of the program using a 6-point Likert scale (from no experience/knowledge to exceptional experience/knowledge). Pre-post questions were slightly modified for use with the second-year cohort to better reflect learning objectives based on curricular changes, and the Likert scale was simplified in the second year to a 5-point scale. Depending on the depth of coverage of a competency in the curriculum, 1 or more questions were used to measure each competency area.

The retrospective pre-post design has been proposed as an alternative to the traditional pre-post test design in order to avoid bias from *response shift*, in which respondents apply a different understanding of the measured construct in the pretest and posttest.[10] Given the small sample size, a paired t test was used to analyze differences between pre- and postscores for both the 2006 to 2007 (cohort 1) and 2007 to 2008 (cohort 2) cohorts. Results were also confirmed by using a nonparametric Wilcoxon signed-rank test.

Follow-up interviews

The Community Teams Program is intended to build sustainable collaborative leadership and public health skills among program participants. Interviews were utilized to understand whether individual knowledge and skill development reported at the end of the program resulted in application to professional practice and whether participants associated their team's participation in the program with any changes in their

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TABLE 1 ● Community Teams Program 2006-2007 and 2007-2008 Combined Reported Changes

Topic	No. of Persons Reporting	N = 20, %	Illustrative Participant Comments
Individual changes			
Learning applied in professional practice			
Could you describe anything that you learned through your participation in the program that you have been able to use in your professional practice and activities?			
Working in partnerships and coalitions	11	55	*We now have a solid coalition in place with a governing body and policies and procedures. If we had gone on as we started, we would have folded. We attribute our stability to the program.*
Leadership styles and their implications	6	30	*I use this information all the time, even in my personal life. It helped me to be more sensitive to other leadership styles and made me realize that it takes all types of people.*
Effective communication	5	25	*The media information was great, I used it with a reporter who asked if I had just had training since I touched on all the points she wanted to cover.*
Utilizing evidence-based strategies	4	20	*One of the biggest things we've applied has been looking for evidence-based programs. We look for proven programs, instead of just saying, "this is a good idea, let's try it."*
Changes in professional roles and responsibilities			
In what ways did participation in the Community Teams Program influence the professional roles and responsibilities you have today, if at all?			
New or expanded roles	17	85	*This allowed me to expand my contribution to the community. I actually feel like I'm living up to the Wisconsin idea. . . I feel much more capable of fulfilling that role.*

Topic	No. of Teams Reporting[a]	N = 10, %	Illustrative Participant Comments
Coalition and community changes			
Tangible short-term outcomes			
Could you list any tangible, short-term outcomes that you directly associate with your team's project?			
Strengthened and increased partnership activity	9	90	*We were strengthened as a body and are more diverse. The program helped provide a framework to expand and become stronger.*
Media coverage	7	70	*After participation, we received lots of press coverage and this renewed hope that we could do something about our issue.*
Increased grant funding	6	60	*The increase in confidence in our initial work and our good reputation primed us for additional state funding.*
Coalition or other partnership changes			
Can you describe any changes within your coalition or community partnership that you associate with your team's participation in the program?			
Enhanced structure	7	70	*We became much more organized. . .roles are defined; committees more active, it was almost like a rejuvenation.*
Expanded coalition	7	70	*Sectors that weren't represented before are attending meetings regularly.*
Improved focus or purpose	3	30	*Establishing our project reenergized our partners; it gave more purpose to our overall group.*
Changes in conditions that contribute to community health			
Are there changes in the overall health of your community or in the conditions that contribute to the overall health in your community that you associate with your team's participation in the program?			
Increased service or program delivery	6	60	*We initiated evidence-based prevention programs for youth that will make a difference.* *Now there's better access to treatment; use increased so much that a new clinic needed to be built.*
Engaged local leadership	2	20	*We increased legislators' awareness of health issues for our population.* *We've engaged community leadership to work on long-term health outcomes.*

[a]Reported by at least 1 team member.

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coalitions or partnerships or community conditions that might contribute to health outcomes.

Because the intent of this part of the evaluation was to determine results associated with full program participation, in January to February of 2009 (for cohort 1) and March of 2010 (for cohort 2)—approximately 20 months after program completion—a purposive sample of interview subjects was chosen on the basis of attendance at all workshops and ongoing engagement with program-related distance learning, technical assistance, and team project activities. One member from each of the 5 teams that participated in cohorts 1 and 2, respectively, was asked to participate in a confidential telephonic interview. They were, in turn, asked to identify 1 other member of their team who had also fully participated in the program and provide up-to-date contact information, because more than a year had elapsed since the completion of the program. This made a total of 2 interviews per team in each of the cohorts (n = 20).

An independent evaluator, not associated with the Healthy Wisconsin Leadership Institute, contacted each team member to set up a phone interview. The evaluator obtained consent from all respondents and recorded the interviews. The interviews included questions on the following potential areas of program impact: learning applied in practice; changes in professional roles and responsibilities; tangible short-term outcomes; coalition or other partnership changes; and changes in conditions that contribute to community health. Interviews lasted between 20 and 40 minutes and were tape recorded. The evaluator produced written summaries of the recordings, organizing data into major categories or themes and using illustrative examples or quotes stripped of identifying information.

Results

Program participation

Program participants (n = 68) represented nonprofits (22%); local governmental public health (15%); hospitals and health care systems (21%); colleges and universities (9%); local government (9%); schools (7%); community health centers (6%); businesses (4%); and others (7%), including local residents.

Changes in knowledge and competency reported at end of program

For cohort 1, 78% (28 of 36) completed a final program evaluation. In cohort 2, 72% (23 of 32) completed the evaluation. Across both cohorts, perceived knowledge and skill were statistically significantly improved for all competency areas measured ($P < .001$).

Sustainability, partnership building, applying the social ecological model, and leadership were among those that demonstrated the greatest absolute change in both cohorts postprogram (see Table 3, Supplemental Digital Content 2 (available at http://links.lww.com/JPHMP/A13), which summarizes mean reported changes in perceived knowledge and competency). For participants in cohort 1, action planning and communication were also among the competencies demonstrating the most change, as were grantsmanship and using evidence for cohort 2.

There was considerable overlap in cohort 1 between the competencies with the highest postscores and those that showed the greatest absolute change postprogram. Leadership, partnership building, action planning, and sustainability were in this category. For cohort 2, high scoring items at postprogram that were also among those that showed the greatest absolute change postprogram were leadership and sustainability.

Across both cohorts, social marketing, the social ecological model, and policy were among the lowest scoring competencies postprogram, although all showed significant improvement ($P < .001$) from retrospective pretest to posttest. Use of evidence and evaluation planning were also among the lower postprogram scores for cohort 1; communicating with policymakers and grantsmanship for cohort 2, even though grantsmanship was among those showing the greatest change in this cohort, a reflection of the lower initial score for this competency.

Individual, coalition, and community changes reported at follow-up

For each of the 2 cohorts, all 10 individuals who were contacted (n = 20) agreed to participate in the follow-up interviews. Findings from the 2 cohorts are reported in Table 1 according to the 5 major topics explored in the interviews and organized by the themes that emerged within these topics. Given similarities in findings across the 2 cohorts, responses and illustrative comments are combined.

Discussion

Participants in this Wisconsin-based public health leadership training program represented a broad range of professional sectors, showing promise for the type of collaboration many now consider essential to successful public health practice.[1]

Significant increases in knowledge and skill were reported across all 12 of the key public health and leadership competency areas covered in the program, although room for improvement remains, especially in the competency areas that may be newer to many

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participants such as the application of the social ecological model of health, the use of social marketing and policy approaches to community health improvement.

The vast majority of participants sampled reported changes in their roles and responsibilities after involvement in the program, with many taking on more partnership and public health activities. The parallel shift observed at the team level was the strengthening of partnerships, with greater involvement of individuals and systems in addressing community population health priorities. As 1 participant noted, funders are now beginning to recognize the importance of this sort of shift to more collaborative public health practice: "This was really right on time for me . . . it's so much of my world these days, funders want to fund collaborations not individual agencies."

Finally, reported changes in community conditions such as expanded service provision, improved population health data collection, and increased engagement of community health leadership point to the potential for this community-based public health training approach to impact overall population health.

Limitations in the evaluation of public health leadership training programs include the reliance on participant self-report,[4,11] the primary limitation of the current study. The selection of participants for the follow-up interview portion of the evaluation based on program attendance may limit the generalizability of the results to the most motivated participants; however, since it was our intention to measure impact of full program participation, we considered this purposive sample justified. In addition, literature is mixed on the relative reliability of retrospective and actual pretest results.[10,12] While actual pretests may suffer from the problem of response shift bias, in which respondents not yet exposed to a subject misjudge their knowledge at the outset of the program, retrospective pre-tests may create conditions for respondents to "gild the outcome by tarnishing the past,"[12] in other words, to retrospectively and inaccurately downgrade their assessment of their initial knowledge or skill level in order to show progress. However, given that many of the concepts were expected to be unfamiliar to participants and thus difficult to assess out of context at baseline, the likelihood of response shift bias seemed high, making the retrospective approach an appropriate choice. Comparing the results of true pre-post and retrospective pre-post tests may improve reliability for future evaluations. By going beyond initial participant learning and practice changes to also assess coalition and community changes—albeit through self-report—this article attempts to contribute to a broader evaluation perspective.

As others have recognized, leadership development should be considered neither a 1-time nor a 1-year event.[13] Linking back with program alumni to provide continuous leadership and public health skill development will be important to building on program gains reported here.

Conclusion

The Healthy Wisconsin Leadership Institute's Community Teams Program is a locally formulated response to the need to move beyond "pipeline strategies"[14] to build skills and leadership in the public health workforce.

Members of multisectoral community-based teams that participated in the program reported significant improvements in their leadership and public health skills and new or expanded public health responsibilities. Teams also engaged community leadership in their efforts, leveraged media coverage, strengthened their community coalitions and partnerships, accessed additional resources through grant funding, and increased delivery of programs and services—all promising outcomes with the potential to contribute to improved community health in the future.

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