

**Scaling-Up Health Promotion/Disease Prevention Programs
in Community Settings:
Barriers, Facilitators, and Initial Recommendations**

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Disclaimer

The findings and opinions presented herein do not represent the views of the University of Alabama at Birmingham or the U.S. Department of Veterans Affairs.

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Foreword

Americans have great faith in research. Surveys show that we respect scientists more than people in other professions and we believe that research is of great value. Reflecting this perspective, Ethel Donaghue gave nearly all of her fortune to create the Donaghue Foundation and to fund medical research that would promote knowledge of practical benefit to preserve, improve and maintain human life.

Increasingly, though, it is clear that research alone won't improve health. Barriers must be overcome and steps must be taken to structure the results of research studies to be usable in clinical and community settings. Particularly for studies that develop and evaluate community-based programs to prevent disease or promote health, the promise of research is too frequently not converted to sustainable programs that reach those goals. For this to happen, knowledge gained from research must be translated into programs that meet local needs and a sustainable financial model has to replace the original research funding, while core components from which the evidence of effectiveness was based are maintained.

Fortunately, there are examples of these conditions being met, resulting in research being converted to action. This paper was commissioned to identify some of these unusual evidence-based health improvement programs and to learn what are the barriers and facilitators in the transition from research to community. For example, we learn that the health programs being researched need to be user-friendly in their intended setting without the more intensive supports of a research project, but there are other factors to be considered, too. What is the role of the original research funder – does it help or hurt the effort to move from a research study to an ongoing program? What characteristics of the community organization that adopts a program based on research improves its chances for ongoing success? What environmental issues, such as regulations or media attention, need to be considered?

We are indebted to the ten community-based health programs for graciously sharing their experience with us and for their time and candor. Because this study uses a small sample, the results are a first step in understanding the forces that effect scale-up. We look forward to incorporating these lessons, and we hope these findings are also useful to others.

Lynne Garner, PhD
Trustee, Donaghue Foundation

Executive Summary

Over the past several decades, researchers, service delivery organizations, foundations, and government agencies have designed and evaluated a broad range of innovative health promotion/disease prevention programs. Many of these programs have been shown to be effective through rigorous research evaluating their impacts and benefits. Routine adoption and spread of programs have been limited, however, and efforts to scale-up innovations have encountered significant barriers, inhibiting their beneficial impact on population health.

The current project was undertaken to examine key barriers and facilitators to scale-up. We conducted semi-structured interviews with representatives of 10 health promotion/disease prevention programs. The programs were selected through an iterative process that included a review of key databases listing such programs as well as suggestions from experts, Donaghue Foundation staff and study team members. Background information on each program was collected from websites and published journal articles prior to the scheduled interviews, and represented the *program profile*. Telephone interviews with each program representative were conducted by the lead investigator; extensive notes were taken by a second project team member. A detailed synopsis of the interview (e.g., *program summary*) was written, reviewed, and revised with input from the research assistants and investigators. Study investigators used a grounded theory approach to identify factors that appeared to facilitate or impede scale-up of the 10 health programs. Findings were used to develop a set of *general recommendations* for facilitating the scale-up of effective health programs and a set of *specific recommendations* to assist the Donaghue Foundation (and similar foundations) in identifying roles they might take to (1) develop more effective grant-making programs and (2) support the scale-up of existing programs developed or studied by their grantees and other innovative health programs.

Scaling-up Health Promotion/Disease Prevention Programs in Community Settings: Barriers, Facilitators, and Initial Recommendations

Background

Over the past several decades, researchers, service delivery organizations, foundations, and government agencies have worked together to create a broad range of health promotion and disease prevention programs. Many of these programs have been shown to be effective through rigorous research evaluating their impacts and benefits, but too few are subsequently adopted and widely used. To assure the full benefits of health promotion programs, researchers, professional organizations, and funding agencies are increasingly turning to *dissemination* and *implementation* research¹ to understand and overcome barriers to program adoption and spread. Increased interest in dissemination and implementation research- and practice-based activities is reflected in new and expanding funding opportunities, research publications and conferences; such activity extends across an array of health conditions (e.g., cancer; diabetes; obesity; HIV/AIDS), settings (e.g., healthcare locations; community-based organizations; workplace settings; schools), and target populations (e.g., veterans; racial/ethnic minorities; women; adolescents).

Issues pertaining specifically to program *scale-up*², however, have received relatively less attention compared to dissemination and implementation. Generally speaking, scale-up activities are broader in scope and reach than small-scale dissemination and implementation efforts, extending beyond a select few sites or

¹ We use the term *dissemination* to refer broadly to “the targeted distribution of information and intervention materials to a specific public health or clinical practice audience” and the term *implementation* to refer to “the use of strategies to adopt and integrate evidence-based health interventions and change practice patterns within specific settings” (see Eccles & Mittman, 2006; NIH PAR-10-038, 2010; Rubenstein & Pugh, 2006).

² We use the term *scale-up* to refer broadly to “deliberate efforts to increase the impact of health service innovations successfully tested in pilot or experimental projects as to benefit more people and to foster policy and program development on a lasting basis” (p. 2, Simmons, Fajans, & Ghiron, 2007).

communities and expanding to the state-, national-, and/or international-level. Despite the need for programs to go-to-scale in order to have a widespread impact on population health, an examination of the multilevel factors that may facilitate or impede program scale-up have received relatively little attention to date.

This report documents a preliminary and exploratory study to identify and characterize factors that may facilitate or impede the scale-up of innovative health promotion/disease prevention programs. Using a *positive deviance approach* (Bradley, Curry, Ramanadhan, Rowe, Nembhard, & Krumholz, 2009; Marsh, Schroeder, Dearden, Sternin, & Sternin, 2004), we identified and collected detailed information on scale-up barriers and facilitators among a small set of health promotion/disease prevention programs (N = 10).

Approach

Identification and Selection of Programs

Several approaches were used to identify the 10 exemplary health promotion/disease prevention programs studied. First, we reviewed several online databases of evidence-based health promotion/disease prevention programs:

- *Research Tested Intervention Programs* (RTIPs; <http://rtips.cancer.gov/rtips/index.do>), a database of evidence-based individual-, group-, provider-, and community-level programs in breast cancer screening promotion, cervical cancer screening promotion, colorectal cancer screening promotion, diet/nutrition, informed decision-making, and physical activity;
- *The Community Guide* (<http://www.thecommunityguide.org/index.html>), a database that provides reviews of the evidence-base in support for various health promotion/disease prevention programs (e.g., adolescent health, nutrition, obesity, physical activity, tobacco, HIV/AIDS, mental health, diabetes, and cancer);
- *Diffusion of Effective Behavioral Interventions* (DEBI: <http://www.effectiveinterventions.org/>), a CDC-sponsored website for evidence-based HIV prevention programs;
- *Canadian Best Practices Portal for Health Promotion and Chronic Disease Prevention* (<http://cbpp-pcpe.phac-aspc.gc.ca/>), a searchable database of evidence-based programs across different health domains (e.g., cardiovascular disease, diet/exercise, alcohol/drug use, mental health, violence prevention, harm reduction) and implementation settings (e.g., schools, workplace, community organizations, home setting, church setting);

- *National Registry of Evidence-based Programs and Practices* (NREPP; <http://www.nrepp.samhsa.gov/>), a SAMHSA-sponsored searchable database of programs specifically targeting mental health and substance use disorders.

After reviewing these databases, a list of potential programs that met study criteria (i.e., evidence-based health promotion/disease prevention programs delivered in community-based settings) was compiled. Programs were purposely selected to represent a myriad of health topics (e.g., HIV, cancer, diabetes, diet/exercise, smoking) and delivered in various community settings (e.g., churches, community-based organizations, community health clinics).

In addition to a review of relevant databases, several experts in the area of health promotion/disease prevention were contacted and asked to suggest potential programs. We contacted Dr. Janet Collins (Director, National Center for Chronic Disease Prevention and Health Promotion, CDC); Dr. Russell Glasgow (Senior Scientist, Institute for Health Research, Kaiser Permanente); Dr. C. Tracy Orleans (Senior Scientist, Robert Wood Johnson Foundation); and Ms. Jacqueline Tetroe (Senior Advisor, Knowledge Translation Portfolio, Canadian Institutes of Health Research). These individuals provided helpful information and guidance for identifying additional programs of interest, and, in some situations, facilitated contact with a program representative. Additional candidate programs were identified by Donaghue Foundation staff and from the study investigators' knowledge of the area.

Ten programs were selected for study, spanning a range of health domains and community-based delivery settings³. Programs included in the present study are noted below.

³ Note that the *Witness Project*, a breast cancer education and screening program for African-American women, was originally included in the final list of programs. Unfortunately, however, and despite several attempts from both parties, we were unable to reschedule an interview prior to the completion of this study.

<i>Program Name</i>	<i>Brief Description</i>
Body & Soul	Diet/nutrition program delivered in church settings
Coordinated Approach to Child Health (CATCH)	Health promotion among children and their families delivered in school settings
Celebrating Families!	Parenting skills promotion and substance abuse prevention delivered in group community-based settings
Community Healthy Activities Model Program for Seniors (CHAMPS)	Physical activity program for seniors in community settings
EnhanceFitness	Physical activity program for older adults delivered in community settings
Improving Mood-Promoting Access to Collaborative Treatment (IMPACT)	Collaborative depression treatment for older adults in health care organizations
Mpowerment	HIV prevention program delivered in community organizations
Pool Cool	Skin cancer prevention program delivered at community pools
Shape Up RI	Statewide physical activity promotion program
North American Quitline Consortium (Quitline/NAQC)	Phone-based smoking cessation program

Interview Schedules

After the final 10 programs were selected, the investigators contacted either the original researcher involved in the research trial or the current contact person for the program. In most circumstances, a member of the original or early-phase research team was involved in ongoing dissemination and implementation activities (e.g., *Body & Soul*, *CATCH*, *CHAMPS*, *EnhanceFitness*, *IMPACT*, *Mpowerment*, *Pool Cool*, and *Shape Up RI*). For one of the programs (*Celebrating Families!*), the contact person was affiliated with a non-profit organization responsible for ongoing program support. In another program (*Quitline/NAQC*), the early-phase research team continued involvement in related-research activities and also became integrated into the affiliated non-profit organization as part of the membership.

Program Profiles

Prior to the phone-based interviews, research assistants reviewed program websites and published articles to compile basic information on each of the programs. These *program profiles* were modeled after those used by Ms. Jacqueline Tetroe and her colleagues in a previous study on a related topic (see Tetroe, Graham, Foy, Robinson, Eccles, Wensing, et al., 2008 for details). Ms. Tetroe shared copies of her past materials with the study team, and also provided input on the content of the program profiles. A draft of the program profile was created and piloted with two programs (e.g., *IMPACT* and *Pool Cool*). Donaghue Foundation staff offered feedback on the profiles, which was subsequently incorporated into the final draft. Research assistants used the program profile template to gather background information on each of the 10 programs, which was collected from various reputable sites, including the program website (where available); published articles; fact sheets; program databases; and government websites.

Semi-Structured Interview Protocol

The investigators created a semi-structured interview protocol to guide the one-hour phone-interviews and ensure that the main objectives of the interview were accomplished. The interview protocol was adapted from materials provided by Ms. Tetroe, and included discussion topics and example questions regarding how the program was able to progress from research-based development and implementation (where applicable) to program scale-up in “real-world” settings across the U.S. (and, in some cases, in international settings). A draft of the protocol was reviewed by study investigators and submitted to the Donaghue Foundation staff for suggestions, feedback, and input. A copy of the semi-structured interview protocol was sent via email to the program interviewee for review several days prior to the call. A copy of the semi-structured interview protocol can be found in Appendix A.

Interviews

Interviews with each program lasted approximately one-hour. One or both of the investigators were present for all of the interviews, as well as at least one research assistant. The research assistant was responsible for taking notes during the call, and the investigator was responsible for guiding the discussion and asking follow-up and clarification questions. The investigator took detailed notes as well. Some phone conversations were audio-recorded (with permission from the interviewee). Recordings were used to allow the research team to clarify any missing or conflicting information between note takers during the program summary write-up process. As needed, the interviewee was also contacted via email with brief follow-up questions or questions of clarification.

After completing each interview, the investigator and research assistant exchanged notes. For most programs, the research assistant created a first draft of the summary, which was informed by both sets of notes. Once drafted, the summary was reviewed, expanded and revised by the lead investigator, again using both sets of notes. Finally, the program summary was sent back to the research assistant for a final check to ensure that the changes, additions, and/or deletions made by the investigator were consistent with the research assistants' notes and recollection of the interview. Any final changes made by the research assistant were accepted or rejected by the investigator, and a final program summary was submitted to the Donaghue Foundation staff and the secondary investigator for review. This iterative process was used to ensure that the program summaries were accurate and complete.

Data Analysis

The first phase of data analysis involved a thorough independent review of the 10 program summary reports by both study investigators. To facilitate this process,

program profiles (i.e., basic background information, mission statement, host organization, implementation activities) and *program summary reports* (i.e., description of the interviews) were assessed by both investigators. Each investigator reviewed the program summaries and profiles several times, looking for factors that appeared to facilitate or impede program scale-up across multiple programs. Statements comprising interview subjects' recommendations for facilitating scale-up were also highlighted. Drawing upon the participants' recommendations and their identification of factors impeding or facilitating scale-up, the investigators drafted additional general recommendations and recommendations specific to the Donaghue Foundation and its interest in facilitating improved scale-up.

After reading through the program profiles and summaries independently several times and summarizing their tentative conclusions and recommendations, the two investigators discussed their conclusions and recommendations until reaching consensus on factors that appeared to affect program scale-up and important recommendations (both general and specific) for facilitating future scale-up efforts.

Findings

Findings are presented in two categories: *barriers and facilitators*⁴. Within each category we discuss specific types of factors that appeared to affect scale-up efforts, including: program-level characteristics; marketing, packaging, and dissemination activities; research/investigator characteristics; collaborating organizational characteristics; funding agency characteristics; external environment characteristics; and sustainability factors. Due to the small sample size and relatively limited range of programs, only a subset of the full list of factors (e.g., program-level characteristics, research/investigator characteristics) is discussed. In addition, some of the text below highlights *atypical* rather than *common* scale-up factors and strategies because they characterize innovative and cutting-edge ways to support future scale-up efforts.

These findings should be viewed in context of study limitations, including the small sample size and exploratory nature of the interviews and data collection. The results may not be representative of the full range of innovative health promotion/disease prevention programs that have been successfully scaled-up in community settings. For example, research-based programs that have developed alliances with commercial, profit-driven organizations (e.g., Health Dialog or Healthways) are not represented in this sample. Additional work is needed to identify the full range of factors that impede or facilitate movement of health promotion/disease prevention programs from research studies into everyday settings, to further articulate and define the concept of “scale-up,” and to develop a comprehensive set of guidelines and recommendations to streamline and accelerate this process. The findings presented below are intended to be an initial step forward in this direction.

⁴ A summary of scale-up barriers and facilitators can be found in Appendix B.

Scale-up Barriers

Several factors appeared to impede the scale-up of effective health programs. The factors we identified were related to characteristics of (a) the collaborating organization(s)⁵ or (b) the funding agency. Note that because we used a positive deviance approach in this study, we examined only programs that were successfully scaled up, and thus we expected to identify only a subset of many barriers that likely impeded scale-up of most programs. Additional research is needed to identify innovative health programs that have been unsuccessful in going-to-scale in order to obtain a more comprehensive assessment of barriers.

Collaborating Organizational Characteristics

Numerous characteristics of the collaborating organizations involved in delivering or supporting evidence-based programs appeared to impede scale-up efforts. Many of the organizations implementing the programs during the initial research studies viewed the programs as experimental and time-limited, and were reluctant to have the program become fully integrated into the organization's routine during or after the study. The representative of one program noted that several organizational staff members were not supportive of maintaining the program following the study and appeared to resent the program's presence because it increased their responsibilities but did not provide compensation. This example illustrates the fact that although an organization may agree to participate in research involving implementation of a health program on a limited basis, sustaining the program after the research may require significant effort to obtain needed

⁵ We refer to *collaborating organizations* as those agencies, organizations, and institutions that were involved in delivering, implementing, and/or distributing the evidence-based health promotion/disease prevention program. Examples of collaborating organizations include community-based organizations, state health departments, churches, and/or community recreation centers.

commitment by organizational leadership and staff, and to identify and address specific barriers.

Another organizational barrier to program scale-up was lack of resources. Several of the programs we studied were originally tested in resource-rich settings. However, when the researchers attempted to spread the program to additional settings following the original study, they quickly found that many organizations in “real-world” setting lacked the resources necessary to implement the program with fidelity, or to implement the program at all. For example, *CHAMPS*, a physical activity program for older adults, was originally delivered by university-based or research-based staff members in an HMO setting. The research team was subsequently unable to implement the program according to protocol in community-based organizations (e.g., senior centers), and had to adapt the program to fit typical organizations with limited resources. This example suggests that health programs should be evaluated in resource-rich and more typical (i.e., resource-constrained) community-based settings in order to reduce the delay and modifications required to adapt programs for going to scale in “real-world,” non-research-based settings.

Another factor that appeared to impede program scale-up was high staff turnover. For example, Dr. Kegeles noted that many HIV-focused community-based organizations (CBOs) implementing *Mpowerment* underwent substantial staff turnover every year. High turnover rates contributed to a lack of institutional memory and lack of sufficiently trained staff members who were familiar with the program and knew how to implement the program correctly.

Leadership changes in organizations also acted as a barrier to scale-up efforts. Interviewees noted that organizational leaders with substantial influence and power over their organization’s activities were a positive factor when they championed program implementation. However, the program was susceptible to being dropped or replaced when a new leader took over.

These examples illustrate how changes within a collaborative organization can impede program implementation, scale-up, and/or sustainability. Although some staff turnover and leadership changes are to be expected, community organizations facing limited resources oftentimes experience excessive staff turnover and leadership transitions, making it increasingly difficult for programs to be sustained over time.

Funding Agency Characteristics

Characteristics and limitations of traditional research grants were identified by several interviewees as barriers to program scale-up. For example, the traditional grant process can be incredibly lengthy: by the time the research team has secured grant money to disseminate and implement a program demonstrated (through a series of previous studies) to be effective, several years may have passed since the initial studies, and, in the interim, relevant organizations are likely to have lost interest in acquiring and adopting the program.

The traditional research process is also often inflexible and not amenable to rapid changes that may occur or be needed in the program and/or within the implementing/collaborating agency. For example, institutional review boards overseeing research studies do not allow research teams to make substantial changes to study procedures without formal (and often lengthy) review and approval. As an example, Mr. Kumar noted that ability of *Shape Up RI* to go-to-scale quickly and effectively was probably due (at least in part) to the fact that the program was *not* funded by traditional research grants, and thus had greater flexibility in adaptation and implementation than research-developed programs.

Several interviewees noted that grant reviewers often hinder dissemination and implementation efforts as well. Many grant reviewers view “rigorous” randomized controlled trials (RCTs) as not only the “gold standard” or best possible design, but as the *only* suitable study design. Many reviewers do not recommend funding research

grants that employ alternative designs (e.g., interrupted time series, practical clinical trials) despite the fact that such approaches are viewed by many experts as better suited for studying dissemination, implementation, and scale-up activities (Glasgow, Magid, Beck, Ritzwoller, & Estabrooks, 2005; West, Duan, Pequegnat, Gaist, Des Jarlais, Holtgrave, et al., 2008). Moreover, grant applications that focus on program adaptation and implementation often receive poor ratings because such research is not considered scientific or sufficiently innovative. For example, one researcher submitted an application to adapt an evidence-based health program developed for one particular target population to another. Despite the clear importance and need for conducting this type of work, the review committee was not appreciative of the study's objective, believing that it was not "innovative" and that there was no need to study issues pertaining to program adaptation and implementation. The application received a low priority score and was not funded. To mitigate this occurrence--and the negative impact it has on advancing dissemination and implementation science--funding agencies must either educate potential grant reviewers in dissemination and implementation science or select grant reviewers that have expertise in this area.

Scale-up Facilitators

Several factors appeared to *facilitate* scale-up efforts, delineated into the following categories: health program characteristics, researcher/research team characteristics, collaborating organizational characteristics, funding agency characteristics, external environment characteristics, and characteristics that influenced program sustainability.

Health Program Characteristics

Several program-level characteristics appeared to facilitate scale-up efforts. First, although most programs in this sample were initiated by researchers in

academic research settings, several programs were originally developed in “real-world” settings (e.g., *Celebrating Families!*, *Shape Up RI*). These programs were not initially research-based, and were formally evaluated only after the program was widely implemented. These programs appeared to be adopted relatively quickly, and also received a lot of positive attention from program participants, implementers, and community leaders. Such programs did not follow the traditional evidence-based health promotion/disease prevention program path, whereby a researcher or research team progresses through the standard stages of program design, efficacy, and then effectiveness research, dissemination and implementation research, and scale-up. Instead, these programs were initiated and subsequently implemented by community members; only later—after the program was already receiving attention and already being implemented—were such programs evaluated for efficacy.

For example, *Celebrating Families!*, a family-based program to strengthen recovery from drug or alcohol abuse and prevent relapse, domestic abuse, and child neglect, was developed in response to a request from a Supervising Judge in Santa Clara County, California. The program was evaluated after it was fully developed and widely implemented in “real-world” settings. The expert evaluation researcher selected to assess its efficacy brought credibility to the program and facilitated further scale-up.

The second program that illustrates a highly effective yet non-traditional approach to widespread dissemination and implementation is *Shape Up Rhode Island* (RI), a statewide exercise and weight loss challenge program. Rajiv Kumar, a medical student at Brown University, was interested in starting a program to help people exercise and lose weight. Rather than seek a research grant to create a program and test it in a research efficacy trial, Mr. Kumar approached several key political and community leaders to obtain their buy-in for developing and implementing a weight loss/exercise program in the community. *Shape Up RI* was not evaluated until its

second year, after it had already been fully designed and implemented in the community with approximately 2,000 participants. The program was indeed found to be effective, which provided support, legitimacy, and endorsement that were instrumental in expanding and continuing the program. *Shape Up RI* has been incredibly successful—over 35,000 participants have engaged in the program in the past four years. Approximately 15,000 individuals participated in the program in 2009, and 20,000-25,000 are expected to participate in 2010. *Shape Up RI* has reached an incredible number of participants in a relatively short time frame compared to most other programs described in this project. The program's success may be due in part to its origins as a non-research based project.

Researcher/Research Team Characteristics

Program leadership and researcher dedication were important factors facilitating dissemination and implementation activities for several programs. Several programs benefited from the sustained involvement of highly committed individuals from the early stage (e.g., initial program design, initial efficacy trial) through scale-up, a period ranging from approximately 5 to more than 15 years total. These individuals were dedicated not only to their program, but were passionate and committed to the cause that the program served (e.g., HIV prevention, human rights, diabetes prevention, etc.).

A good example of the dedication and leadership qualities that helped facilitate scale-up activities is illustrated by Dr. Susan Kegeles of the *Mpowerment* program. Dr. Kegeles is committed to improving the health and well being of young gay men in the U.S, and knows that *Mpowerment* has the ability to help this target population. She has overcome many financial, political, and professional barriers to ensure that the program is disseminated and implemented widely. Another example of program leadership and dedication is Mr. Rajiv Kumar of *Shape Up RI*. Since the beginning of

the program, Mr. Kumar has made many personal and financial sacrifices to support the program. He believes in the ability of the program to improve people's lives, and is dedicated to changing people's health behaviors and reducing the incidence and prevalence of preventable diseases (e.g., diabetes, obesity) in the U.S.

Collaborating Organizational Characteristics

Generally speaking, organizations that had local champions who were invested, dedicated, and interested in the health topic were instrumental in facilitating program implementation and sustainability. Moreover, collaborating organizations with strong ties to the community were better able to adapt and implement the program than those agencies without strong ties in the community. Organizations that were involved in dissemination and implementation activities also appeared to facilitate the process. For example, Dr. Kegeles created a Community Advisory Board (CAB) for *Mpowerment* to ensure that community members' were involved in the process, and were able to provide feedback on proposed program adaptations and program delivery approaches. Organizations that were involved in the dissemination and implementation process may have developed a sense of ownership and pride in the program, to the extent that the research team involved them from the beginning in the project. This, in turn, may have facilitated and supported subsequent dissemination and implementation efforts.

Funding Agency Characteristics

Many of the dissemination and implementation activities for the 10 programs studied were supported at least in part by non-traditional funding sources, such as funds provided by small private foundations and supplements to the core grants issued by larger traditional funding agencies. For example, the California Endowment funded a small dissemination grant for *CHAMPS*, which was critical for future

dissemination and implementation efforts. The California HIV/AIDS Research Program (CHRP) funded a grant to study the translation of *Mpowerment* to practice at a community-based organization. CHRP also funded a grant to adapt the *Mpowerment* program to African-American men who have sex with men (MSM). Both CHRP grants were awarded after Dr. Kegeles was unable to secure funds for dissemination and implementation from larger government research funding agencies. Small private health foundations may be better able to support some direct dissemination and implementation activities (e.g., production of program materials, adaptation research trials) that are oftentimes considered outside the scope of by government research funding agencies.

Another factor that appeared to facilitate dissemination and implementation efforts was an additional year of funding offered by agencies at the end of a research trial. For example, CDC provided an additional year of funding toward the end of the *Pool Cool* trial to create program materials and package the program for future dissemination and to pilot test the dissemination process. Several other interviewees indicated that an optional year of grant support following completion of a program's efficacy trial would facilitate subsequent dissemination efforts, allowing the research team to create program materials and explore potential distribution outlets with various stakeholder groups.

External Environment Characteristics

Although outside of the control of the research team, several external environmental characteristics (e.g., funding, policy, political support, media coverage) appeared to facilitate the widespread dissemination and implementation of health programs.

First, top-down endorsement and support from policy and political leaders was instrumental in scaling-up particular health programs. For example, state-level

political support for establishing *Quitlines* was enhanced by the availability of substantial funds for tobacco cessation and prevention programs, resulting from the Master Settlement Agreement (MSA; November, 1998). Later, in 2004 HHS Secretary Tommy Thompson was a significant proponent of establishing phone-based smoking cessation programs (such as *Quitlines*) throughout the U.S. Secretary Thompson was able to secure federal funds from both CDC and NCI to motivate late adopters. This funding was intended to help states that already had quitlines expand their existing state funding. At the same time, a national foundation, the American Legacy Foundation, provided seed money to launch the North American Quitline Consortium, an organization through which state quitlines and partners work to improve the quality and availability of services.

Second, several health programs were either developed or disseminated and implemented in response to requests for proposals or specific funding opportunities. For example, materials for the *Mpowerment* program were packaged for dissemination in response to a request for proposals issued by CDC to establish the Replicating Effective Programs initiative (http://www.cdc.gov/hiv/topics/prev_prog/rep/index.htm). The initial California *Quitline* trial was a response to a request for proposal issued by the state health department, which received funds for tobacco control programs from Proposition 99, passed by California voters in 1988. Funds made available to other states through the MSA facilitated the dissemination and implementation of *Quitlines* nationwide.

Third, program recognition from prominent national agencies also appeared to play a role in facilitating scale-up efforts. For example, *EnhanceFitness* received national-level recognition from the Archstone Foundation and the National Council on Aging, which helped the program gain credibility and awareness with a broader target audience. In 2006, CDC's Arthritis Program (<http://www.cdc.gov/arthritis>)

recommended and began promoting *EnhanceFitness* as one of several evidence-based programs determined to be safe and effective for people living with arthritis.

Finally, media attention on particular health problems in the U.S. appeared to create recognition and support for the dissemination and implementation of specific health programs. For example, it is likely that increasing media attention on the obesity epidemic in the U.S. in the early 2000s supported and legitimized the development and adoption of diet and exercise programs, including *Shape Up RI*. Media attention on the tobacco industry and the subsequent Master Settlement Agreement also likely played a role in facilitating scale-up of smoking cessation quitlines.

Sustainability Characteristics

Several factors appeared to contribute to the long-term sustainability and implementation of particular health programs. First, programs that linked activities to participants' everyday lives appeared to be more sustainable than other programs. For example, the program *Celebrating Families!* issued "homework assignments" to attendees that they were supposed to complete and report back to the group at the next meeting. For their first assignment, parents were asked to tell their children that they loved them, and children were asked to perform one act of kindness for someone else in their community. In this way, the program was integrated into their daily activities, and not simply a session that they attended once a week. As another example, participants in *Shape Up RI* are encouraged to host and/or attend health-promoting activities in their own community. Throughout Rhode Island, *Shape Up RI* participants host an average of 500 activities per year, including yoga classes, nutrition label information sessions, and weight training sessions. These activities are supported by *Shape Up RI*, but are hosted by attendees in their own community and free-of-charge. Again, these activities, while linked to the larger health program (i.e.,

Shape Up RI), are integrated into participants' everyday lives and are participant-driven.

External feedback and recognition may also facilitate long-term sustainability. For example, the *Pool Cool* program has received substantial national, regional and local (community-level) attention. *Pool Cool* participants and implementers have received local community recognition from news stations, newspapers, and community awards. Such community-level recognition may play a critical role in providing support, feedback, and positive reinforcement for those who are implementing effective health programs, and thus contribute to their long-term success.

Finally, programs that are visible and publicized—and whose results are measurable and tangible—may be sustained longer than programs without these characteristics. Programs whose benefits are clearly visible to participants—and not just to researchers—may provide important feedback and positive reinforcement for continuing and sustaining behavior change. For example, employers can see how their employees (as a group) are performing in *Shape Up RI* relative to participants from other companies. This feedback highlights the benefits of participation to employers, and creates a healthy competitive atmosphere with other employers.

Recommendations

Recommendations for facilitating program scale-up are presented in two categories: *general* and *specific*⁶. Recommendations are based on feedback from interviewees' experiences and from study investigators' review of scale-up barriers and facilitators. *General* recommendations are intended for broad stakeholder groups (e.g., researchers, practitioners, public health agencies, funding agencies), while *specific* recommendations are intended for the Donaghue Foundation and other similar private health foundations.

General Recommendations

General recommendations—intended for broad stakeholder groups—are presented in the following categories: health programs; program marketing, packaging, and dissemination; collaborating organization; and funding agency.

Health Programs

Programs that are flexible and easily adapted to different target populations, implementation settings, and contexts are more likely to be widely adopted than those that are very rigid and require strict adherence to program content and components. For example, *Mpowerment*, a community-level HIV prevention program, has been adapted to several different target populations (e.g., young White gay men, young Black gay men, and young Latino gay men) and has been implemented across the U.S. The core program components can be modified to improve their fit and relevance to the target population and the implementing organization. *Celebrating Families!* is also flexible and adaptable to the needs of participants and the implementing organization. For example, rather than using only professionals to serve as group

⁶ A summary of scale-up recommendations can be found in Appendix C.

facilitators, *Celebrating Families!* relies heavily on volunteers to serve as co-facilitators. Thus, organizations do not have to recruit additional trained professional counselors or staff members or increase the workload of current staff in order to implement the program.⁷ Note too that *Pool Cool* was purposely developed to appeal to a wide range of participants.

Many interviewees suggested that programs be designed from the beginning with input from potential end-users in order to facilitate widespread adoption. Programs are often designed with input from members of the target population in order to increase relevance, cultural appropriateness, acceptability, and feasibility; so too should potential end-users be involved in creating and designing programs for use in their organizational setting. This would facilitate the transition from research to practice by minimizing organizational-level barriers and lack of fit between the program and adopters.

Several interviewees also suggested that programs should be flexible and amenable to rapid changes in response to (a) participants' feedback and (b) outcome monitoring and evaluation data. For example, changes made to *Shape Up RI* were made in response to participant's feedback and data collected in real-time. *IMPACT* encouraged sites to make changes to the program as long as they were supported by outcome data collected in real-time. In *EnhanceFitness*, all participants undergo fitness checks upon enrollment in the program and approximately four months thereafter and then annually; this information is sent back to the participating sites so they can demonstrate program efficacy to their funders. The use of real-time data to inform what changes—if any—should be made to the program to (a) improve the fit

⁷ Although programs designed to be flexible and adaptable appear to be more amenable to dissemination and implementation, we have relatively little empirical data to help us identify which program components can be changed, altered, and/or deleted without having a negative impact on intervention efficacy. Future research is needed to identify what components of programs are necessary and critical for efficacy, what components can be altered and to what extent without impacting efficacy, and what components may be viewed as optional or suggested but not critical to program efficacy.

with the implementing organization and/or (b) improve the program's efficacy with the target population is uncommon but appears to facilitate program adoption and sustainability.

Program Marketing, Packaging, and Dissemination

Interviewees provided several recommendations for how to market, package, and disseminate evidence-based programs to increase the likelihood of being able to go-to-scale. These recommendations are detailed below.

Program materials should be available online and easily accessible. These materials may include downloadable copies of training manuals, facilitator guides, meeting guides, video clips, planning tools, evaluation field guides and instruments, program tools, logic models, job descriptions, and/or estimated program start-up and maintenance costs. Materials should be written in non-technical language, and should be developed with input from community end-users. Most of the programs included in this project had very sophisticated websites that were easy to identify on the Internet, and provided easily accessible links for downloadable materials (e.g., *Mpowerment*: <http://www.mpowerment.org/>; *IMPACT*: <http://impact-uw.org/>). Researchers should consider contracting with professional organizations that are experts in designing and packaging program materials (e.g., FlagHouse, Inc., <http://www.flaghouse.com/CatchPE.asp>, produces, sells, and distributes materials for *CATCH*).

Programs should be branded and marketed so that they are visible to potential participants and end-users. For example, *Shape Up RI* distributes branded wristbands and pedometers to participants in the start-up packets. Participants are supposed to wear the wristbands in order to show support for the cause and also as a reminder of one's participation in the program.

Programs should be marketed to potential end-users in non-research settings. For example, the research team marketed *Pool Cool* to potential end-users and collaborating sites by placing an “advertorial” (a cross between an advertisement and an editorial) in the National Recreation and Parks Association (NRPA) newsletter. The coordinator for *Celebrating Families!* presents the program at a variety of non-research venues, such as community forums, state associations for substance abuse providers, and professional societies.

In addition to highlighting program efficacy, it is important to a) identify and b) explicitly state the benefits of the program to potential implementers and target organizations. For example, *Celebrating Families!* is marketed as an effective program not only with the ability to improve client-level outcomes, but also with the potential to reduce the implementer and implementing agency’s workload and become more mission-driven, to the extent that the program is effective at reducing substance use, family violence, and child abuse/neglect. As another example, *Pool Cool* was purposely marketed not only as an effective skin cancer prevention program, but also as a career development opportunity for program implementers (e.g., sometimes high school students preparing for college or career recreation managers). *Pool Cool* thus provided an opportunity for young adults to learn important management, leadership, and communication skills that they could use and reference in the future for school (e.g., college applications) or work (e.g., job applications) in addition to helping prevent skin cancer among pool attendees.

Collaborating Organizations

Interviewees, as well as the study investigators, provided many recommendations for how to work with collaborating organizations to facilitate program scale-up. First, several interviewees suggested partnering with a collaborative organization or agency that is nationally-recognized and has an existing

infrastructure to disseminate, adopt, and implement the program. For example, *Pool Cool* developed an excellent partnership with the National Recreation and Parks Association (NRPA), which already had a nationwide infrastructure that could be utilized for dissemination activities. Moreover, the Director of Program at the NRPA was very enthusiastic about promoting healthy behaviors, and was very interested in and receptive to the idea of disseminating *Pool Cool* widely throughout NRPA sites.

Interviewees also noted the importance of partnering with an agency that has local implementation support and access to the community, in addition to having regional- or national-level infrastructure. Partnering with agencies that have local, on-the-ground access to communities is important for implementation and sustainability efforts. For example, both NRPA and the American Cancer Society (ACS) have local chapters nested within communities across the U.S. with the capacity to assist with implementation activities onsite (e.g., *Pool Cool* and *Body & Soul*). Funding agencies, on the other hand, rarely have local sites or staff members who can assist with program dissemination and implementation.

Additionally, it is also important to identify a partner with similar short- and long-term interests in the objective of the health program. For example, the partnership between NRPA and *Pool Cool* is a very appropriate fit, insofar as NRPA is responsible for local pools, and *Pool Cool* is a sun-safety program implemented by lifeguards. The research team for *Celebrating Families!* spent almost a year interviewing potential program distributors for a strong “fit” before selecting the National Association for Children of Alcoholics (NACoA). Note, however, that agencies evolve over time. Such changes may be beneficial if they lead to additional support and endorsement for the program, or detrimental if they result in an agency moving away from the program. For example, after approaching and funding the research team to develop a church-based program to increase fruit and vegetable intake, ACS experienced changes in organizational priorities and subsequently did not support

scale-up activities for *Body & Soul* (however, see Resnicow, Campbell, Carr, McCarty, Wang, Periasamy, et al., 2004 for details on the collaboration between ACS and NCI for the dissemination research trial).

Finally, several interviewees noted the importance—and occasional difficulty—of working with multiple stakeholder groups to facilitate scale-up. Involving multiple stakeholder groups can be beneficial insofar as limited resources (both financial and human) can be used more effectively and can help eliminate (or at least reduce) duplicative efforts. Moreover, commitment by multiple organizations and stakeholder groups provides support and legitimacy for implementing a program. Involvement of multiple organizations can also lead to disagreements and conflicts, however. Maintaining a strong focus on the main objective of the collaboration (i.e., to improve public health and/or a particular target population) can help reduce or minimize such conflicts.

Funding Agency Recommendations

Interviewees, as well as the study investigators, identified several general recommendations for how funding agencies can facilitate program scale-up efforts. First, funding agencies should consider supplementing the traditional grant-funding period with an additional 6-months or one-year of funding to programs that demonstrate efficacy and warrant dissemination. This additional funding period should be used to plan for, or initiate, program dissemination and implementation, such as planning for additional research necessary to prepare for large-scale dissemination or implementation, or—if scale-up is appropriate without further research—creating dissemination-ready program materials and packages, publicizing the program to potential end-users (e.g., press releases, presentations, and/or forums in non-research communities), creating a program website (e.g., downloadable materials, contact information, outcome assessment questionnaires and measures), and/or

hosting meetings with community stakeholders to solicit ideas for future program dissemination activities. Funding agencies should also consider extending grants beyond their planned end date to allow study teams to examine issues relevant to program implementation and sustainability for programs found to be effective during the initial study period.

Second, funding agencies should consider adapting the grant review process to dissemination and implementation research, and expediting the grant application process for follow-up studies needed to facilitate scale-up. Expedited grant timelines are critically important when programs are demonstrated to be effective but funding for a follow-up dissemination and implementation grant is required. The lengthy delay associated with the traditional grant review process can be especially problematic to the extent that interested collaborating organizations may have lost interest in continued research (along with critical staff and expertise) if a lengthy delay occurs between completion of the first study and launch of follow-up research.

Specific Recommendations

Specific recommendations for facilitating program scale-up—intended for the Donaghue Foundation and other similar private health foundations—are presented in the following categories: health programs and partnerships.

Health Programs

1. Provide monetary support during the program planning and developmental phase to ensure that community stakeholders, agencies, and research teams work together and are compensated for their time. Community agencies and leaders are often interested in developing programs with the potential for widespread use, including use in their own settings, but simply do not have extra time to devote to such projects without financial compensation.

2. Provide funding or in-kind support to research teams and community agencies to work together after a program has been shown to be effective to develop program materials (e.g., training manuals, flyers, posters, evaluation guides, etc.) for widespread dissemination. Research grants typically do not provide time or funds for the development of attractive, user-friendly program manuals and training protocols; funds are needed to support this type of work and to ensure that community agencies and organizations have a collaborative role in developing and refining such materials.
3. Provide research funds to identify and evaluate programs that are currently being implemented in “real-world” settings but have not yet been evaluated. Such programs may be more amenable to widespread dissemination and implementation compared to those developed by traditional, academic-based research teams.
4. Provide research funds to conduct rigorous research trials to identify core program components. Although many programs specify core program components that cannot be adapted or removed from the program, such guidance is typically informed by the research team on the basis of implicit judgment or theoretical guidance rather than empirical findings. Organizations need to know what components are essential and what components can be viewed as peripheral; this information should be informed by empirical research in addition to researcher’s expertise.
5. Provide research funds to identify the most effective and efficient ways to train staff members in health promotion/disease prevention programs. For example, research is needed to compare whether or not an in-person, ‘train-the-trainer’ approach is more effective at increasing adoption and uptake than a web-based training or telephone-based training. Additional research is also needed to identify

which training approaches are most effective for program implementation and sustainability, as well as which are most cost effective.

Partnerships

1. Create a funding mechanism to support long-term, community-academic partnerships. These partnerships would work collaboratively on multiple projects over time; they would not be developed for one specific research project or program trial. Instead, they would serve as a way for researchers to maintain ties with the community and vice versa, in order to create productive and scientific yet “real-world” programs with minimal adaptations needed for widespread use. Examples of this type of network include the NIH-funded Resource Centers for Minority Aging Research (RCMAR; <http://www.rcmar.ucla.edu/mission.php>) and Practice Based Research Networks (PBRNs; <http://pbrn.ahrq.gov/portal/server.pt>).
2. Provide an outlet (e.g., annual meeting, regional forums, online networks) for researchers, organizations, community members, and funding agencies to share their “real-world” experiences with program dissemination, implementation, and scale-up. This type of information is rarely presented at professional conferences and there are too few outlets for such information to be shared.

References

- Bradley, E.H., Curry, L.A., Ramanadhan, S., Rowe, L., Nembhard, I.M., & Krumholz, H.M. (2009). Research in action: Using positive deviance to improve quality of health care. *Implementation Science*, 4, 25.
- Eccles, M. P., & Mittman, B.S. (2006). Welcome to Implementation Science. *Implementation Science*, 1, 1.
- Glasgow, R.E., Magid, D.J., Beck, A., Ritzwoller, D., & Estabrooks, P.A. (2005). Practical clinical trials for translating research to practice: Design and measurement recommendations. *Medical Care*, 43(6), 551-557.
- Marsh, D.R., Schroeder, D.G., Dearden, K.A., Sternin, J., & Sternin, M. (2004). The power of positive deviance. *British Medical Journal*, 329, 1177-1179.
- National Institutes of Health (2010). *Dissemination and Implementation Research in Health (R01)*. PAR-10-038. Available at: <http://grants.nih.gov/grants/guide/pa-files/PAR-10-038.html>.
- Resnicow K, Campbell MK, Carr C, McCarty F, Wang T, Periasamy S, Rahotep S, Doyle C, Williams A, Stables G. (2004). Body and soul. A dietary intervention conducted through African-American churches. *Am J Prev Med*, 27 (2), 97-105.
- Rubenstein, L.V., & Pugh, J. (2006). Strategies for promoting organizational and practice change by advancing implementation research. *Journal of General Internal Medicine*, 21(Suppl 2), S58-S64.
- Simmons, R., Fajans, P., & Ghiron, L. Eds. (2007). Scaling up health service delivery: From pilot innovations to policies and programmes. Geneva, World Health Organization.
- Tetroe, J.M., Graham, I.D., Foy, R., Robinson, N., Eccles, M.P., Wensing, M., et al. (2008). Health research funding agencies' support and promotion of knowledge translation: An international study. *Milbank Quarterly*, 86(1), 125-155.
- West, S.G., Duan, N., Pequegnat, W., Gaist, P., Des Jarlais, D.C., Holtgrave, D., Szapocznik, J., Fishbein, M., Rapkin, B., Clatts, M., & Mullen, P.D. (2008). *Alternatives to the randomized controlled trial*. American Journal of Public Health, 98(8), 1359-1366.

Appendix A: Semi-Structured Interview Protocol

Primary Objective

To understand and characterize how select evidence-based interventions delivered in community settings successfully progressed from initial research trials to widespread dissemination and implementation (i.e., scale-up) at the regional, national, and/or international level.

Phase	Example Questions
<i>Initial Efficacy Trial</i>	<ul style="list-style-type: none"> • What was the impetus for the project (e.g., investigator inquiry, community demand, funding announcement, etc.)? • Was the intervention originally developed “with dissemination in mind”? If so, how? • What was the original funding agency’s perspective on dissemination/implementation activities (pending supportive outcome data)? • Were D/I activities incorporated into the application or part of the original research objectives?
<i>Outcome of Efficacy Trial</i>	<ul style="list-style-type: none"> • Was the intervention efficacy trial purposely published in a journal with broad readership to facilitate D/I? • What conference presentations resulted from the trial, and were these purposely selected to facilitate future D/I? • What additional dissemination activities did the research team engage in to promote D/I? • What dissemination activities did the funding agency engage in to promote the research findings/intervention?
<i>Post-Efficacy Trial Research- and Practice based Activities</i> (e.g., demonstration projects; dissemination/implementation projects; effectiveness trials; technical assistance; materials/protocols; promotion of intervention via internet, flyers, lectures, etc.)	<ul style="list-style-type: none"> • What was the sequence of events that followed the initial efficacy trial, and how did it facilitate subsequent D/I activities? • What key players were involved in subsequent D/I activities? Were some stakeholders more helpful or supportive in the D/I process than others? • What characteristics of the <i>intervention</i> made it easy/difficult to facilitate D/I activities? (e.g., relative advantage, complexity, “fit,” cost-effective, impact, reach, flexibility/adaptability, etc.) • What characteristics or qualities of the <i>collaborative organizations</i> (e.g., CBOs, clinics, sites, etc.) made it easy/difficult to facilitate D/I activities? (e.g., “fit,” organizational leadership, demand from community, community engagement/awareness, human and financial resources, etc.) • What characteristics or qualities of the <i>funding organization(s)</i> made it easy/difficult to facilitate D/I activities? (e.g., leadership; involvement;

	<p>collaborative relationship; investment; mission statement, etc.)</p> <ul style="list-style-type: none"> • What characteristics or qualities of the <i>external environment</i> made it easy/difficult to facilitate D/I activities? (e.g., community awareness; demand; political support; professional endorsement; availability of funds; scientific advancements, etc.)
<i>Current Activities</i>	<ul style="list-style-type: none"> • What is the role of the original research team in current D/I activities? • Who funds current D/I activities? Through what mechanism (e.g., grant to PI; NGO; private donations; federal funds, etc.)? • How is intervention fidelity/integrity maintained? Copyright issues? Licensing issues? • How many staff members facilitate D/I activities, and what are their roles? • What dissemination activities are available and how are they delivered to potential end-users? • What implementation activities are available and how are they delivered to potential end-users? • What have been some of the more prominent barriers to widespread D/I of the intervention? • What do you think were the critical success factors in this process? • What recommendations would you have for others who are interested in disseminating and implementing evidence-based, community-delivered interventions widely?
<i>Planned/Future Activities</i> (e.g., maintenance; sustainability; national/international scale-up, etc.)	<ul style="list-style-type: none"> • What are the next steps for the intervention? • How will this intervention be maintained and sustained in the next 1, 5, and 10 years? • What is being done to secure future funding? • Is there a plan in place for transitioning the intervention to another host/implementing agency if needed

Note. D/I = dissemination/implementation

Appendix B: Summary of Scale-up Barriers & Facilitators

Scale-Up Barriers

A. Collaborating Organization Characteristics

- Organizational reluctance to fully integrate a new program into its routines
- Limited generalizability of programs designed for research-rich organizations
- High rates of turnover among key staff and leaders

B. Funding Agency/Program Characteristics

- Excessive length of the research grant process
- Inflexibility of the research grant process
- Reviewer lack of expertise in scale-up research and lack of recognition of its value

Scale-Up Facilitators

A. Health Prevention/Promotion Program Characteristics

- Community/practice origins of a program (rather than research origins)

B. Researcher/Research Team Characteristics

- Researcher commitment and passion for a program or health problem

C. Collaborating Organizational Characteristics

- Presence of organizational champions dedicated to a program or health problem

D. Funding Agency Characteristics

- Non-traditional (non-governmental) funding for research on a program, including funding for direct dissemination and implementation activities
- Supplemental funding to plan for (or initiate) dissemination/implementation/scale-up activities

E. External Environment Characteristics

- Endorsement and support from policy and political leaders
- Targeted funding opportunities and requests for proposals
- Media attention to relevant health problems

F. Sustainability Characteristics

- Program activities linked to participants' everyday lives
- External feedback and recognition for program participants
- Program visibility and publicity
- Measurable and tangible program impacts

Appendix C: Summary of Scale-up Recommendations

General Recommendations

A. Health Prevention/Promotion Program Characteristics

- Design programs to be flexible and easily adapted to different target populations, implementation settings, and contexts.
- Design programs to be amenable to rapid changes in response to a) participants' feedback and b) outcome monitoring and evaluation data.
- Design programs with input from potential end-users.

B. Program Marketing, Packaging, and Dissemination

- Program materials should be available online and easily accessible.
- Programs should be branded and marketed so that they are visible to potential participants and end-users.
- Programs should be marketed to potential end-users in non-research settings.
- Program benefits should be identified and explicitly stated to potential implementers and implementing organizations.

C. Collaborating Organizations

- Program developers should partner with a collaborative organization or agency that is nationally-recognized and has an existing infrastructure to adopt and disseminate the program.
- Program developers should partner with an agency that has local implementation support and access to the community as well as regional- or national-level infrastructure.
- Program developers should identify a partner with similar short- and long-term interests in the program's objectives.
- Program developers should work with multiple stakeholder groups to facilitate scale-up.

D. Funding Agencies

- Funding agencies should provide supplemental funding (i.e., additional 6-months to one-year) to programs that demonstrate efficacy and warrant dissemination.
- Funding agencies should provide supplemental funding to allow research on program implementation and sustainability for programs found to be effective.
- Funding agencies should better adapt the grant review process to dissemination/implementation research and expedite the grant application and review process for follow-up studies needed to facilitate scale-up.

Specific Recommendations

A. Health Prevention/Promotion Program Characteristics

- Donahue should support program planning and developmental activities to ensure that community stakeholders, agencies, and research teams have sufficient time and resources to effectively collaborate to design and implement effective programs.
- Donaghue should provide funding to allow research teams and community agencies to work together after a program has been shown to be effective to

develop program materials (e.g., training manuals, flyers, posters, evaluation guides, etc.) to facilitate scale-up.

- Donaghue should fund efforts to identify and evaluate programs that are currently implemented in real-world settings and appear effective but have not yet been formally evaluated.
- Donaghue should support rigorous studies to identify the core program components of effective programs.
- Donaghue should fund efforts to identify, develop and compare strategies for training staff and community organizations to use evidence-based health promotion/disease prevention programs.

B. Partnerships

- Donaghue should create a funding mechanism to support ongoing, long-term, community-academic partnerships.
- Donaghue should support opportunities (e.g., regional forums, online networks and discussion groups) for researchers, organizations, community members, and funding agencies to share their “real-world” experiences with program dissemination and implementation.