

# Translation of the National Diabetes Prevention Program to Engage Men in Disadvantaged Neighborhoods in New York City: A Description of Power Up for Health

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## Abstract

The Diabetes Prevention Program (DPP) landmark randomized trial demonstrated that participants with prediabetes could reduce their risk for type 2 diabetes by 58% if they achieved 5%–7% weight loss through healthy eating and increasing physical activity. The National DPP (NDPP) is a group intervention based on the DPP and has been widely disseminated by the Centers for Disease Control and Prevention (CDC) and many healthcare institutions. While data show that the program is effective in diverse populations, enrollment among men from low-income and minority communities is low. Thus, the study piloted a novel adaptation focused on men living in disadvantaged neighborhoods. The study approach to adaptation and implementation used characteristics of participatory research, including input from an expert panel of African American and Latino leaders, ongoing consultation with an Advisory Panel, and focus groups with members of the target population. Discussions with these groups focused on male perspectives regarding health promotion and barriers and facilitators to participation in health programming for men. There was general agreement when reviewing ongoing pilot program implementation that the adapted program should have male-only groups with male coaches, as the Advisory Panel had originally suggested. The pilot programs were implemented at five New York City Department of Parks and Recreation sites in Harlem, the Bronx, and Brooklyn in 2015–2016.

## Keywords

diabetes prevention, men, lifestyle change, weight loss

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The alarming prevalence of overweight and obesity in the United States is well known and disproportionately affects racial/ethnic minority communities. Rates of obesity in 2011–2014 were 48.1% among non-Hispanic Blacks and 42.5% among Hispanics compared to 34.5% among non-Hispanic Whites (Flegal, Kruszon-Moran, Carroll, Fryar, & Ogden, 2016; Ogden, Carroll, Fryar, & Flegal, 2015; Ogden, Carroll, Kit, & Flegal, 2014). Additionally, data from the National Nutrition Examination Survey (NHANES) report age/sex standardized rates of diabetes to be twice as high for non-Hispanic Blacks and Mexican Americans compared to non-Hispanic Whites (Cowie et al., 2010). Thus, approaches that

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target these groups at high risk for obesity and diabetes are critical to combating these epidemics.

In 2002, a trial of the Diabetes Prevention Program (DPP) demonstrated that intensive lifestyle interventions focusing on healthy eating and exercise, in individuals at high risk, may prevent or delay the onset of type 2 diabetes by up to 58% (Knowler et al., 2002). The long-term benefits of this intervention have been demonstrated (Knowler et al., 2009), and the lifestyle program has become the gold standard in the field. Several meta-analyses have summarized a growing body of literature on the effectiveness of the DPP in real-world settings, and therefore, provide a preliminary guide for the development of tailored interventions (Ali, Echouffo-Tcheugui, & Williamson, 2012; Aziz, Absetz, Oldroyd, Pronk, & Oldenburg, 2015; Dunkley et al., 2014; Laws, St George, Rychetnik, & Bauman, 2012; Whittemore, 2011). Many of these have been modeled after the National Diabetes Prevention Program (NDPP) widely disseminated by the Centers for Disease Control and Prevention (CDC). Results demonstrated that change in weight was similar regardless of whether the intervention was delivered by clinically trained professionals or lay educators. Furthermore, a number of studies conducted in urban areas, in community environments, (including faith-based settings), and those that included ethnic minorities demonstrated that the translation of the DPP in different contexts is feasible (Ali et al., 2012; Aziz et al., 2015; Dunkley et al., 2014; Laws et al., 2012; Whittemore, 2011). Sociodemographic information included in translational research suggests that engagement among men from low-income and minority communities is a challenge (Ely et al., 2017). Thus, we developed a novel adaptation of the DPP focused on these populations.

This report describes the process of adapting the NDPP curriculum to be more relevant to men from disadvantaged neighborhoods, training of male lifestyle coaches, and the implementation of the pilot study in recreation centers in disadvantaged neighborhoods of New York City (NYC). This manuscript describes the critical relationship the study team developed with the Advisory Panel, experts in men's health, and male community leaders, who guided us in the process of adapting and implementing the program named by them *Power Up for Health*. The outcomes of the pilot study, as well as qualitative perspectives of participants, are described in companion papers in this journal (Realmuto et al., 2018; Walker et al., 2018).

## Intervention Adaptation and Implementation

### Overview

The male-focused program *Power Up for Health* was adapted from the NDPP 2012 curriculum. Briefly, at the

time the pilot project was implemented, the NDPP was a year-long program, with 16 weekly sessions based on the DPP, followed by monthly maintenance sessions. The NDPP is delivered in group settings by lifestyle coaches who complete a 2-day training on the curriculum by NDPP-certified master trainers. The study focused on the first 16 sessions of NDPP. NDPP curriculum updates announced during this study in 2016 (<https://www.cdc.gov/diabetes/prevention/lifestyle-program/curriculum.html>) do not apply to the program described in this manuscript.

*Power Up for Health* focused on the core sessions of the 2012 NDPP curriculum and was aimed at men in disadvantaged neighborhoods of NYC. The study team with NYC Parks chose areas in Harlem, the Bronx, and Brooklyn that were considered to be low income but also had large numbers of Black and Latino residents. The program was implemented in recreation centers of the NYC Parks and Recreation Department. These sites were selected for several reasons. First, recreation centers are spread throughout NYC, including low-income neighborhoods that were the target of this program. Second, they have gym equipment, swimming pools (at some locations), fitness classes, and health-related programming that would be accessible to *Power Up for Health* program participants. Third, the cost of membership to the recreation centers is reasonable, ranging from \$25 to \$75 for 6 months, depending on type of park facility and the individual's age. Thus, the Parks and Recreation Centers were an accessible setting in which to run a potentially sustainable NDPP program. It was believed that the Parks and Recreation center members would be interested in enrolling in the *Power Up for Health* program.

### Phases of Study Development

The program was developed in several overlapping phases. In 2012, the New York State (NYS) Health Foundation provided a planning grant to several institutions in NYC to collaborate on the development of a NDPP translation study. Noting the low participation of men, particularly men of color, in NDPPs and health promotion programming more generally, the study focused on programming for men. Below, the pilot study is described in four phases: (1) focus groups and community leader discussion, (2) Advisory Panel participation and adaptation of the NDPP curriculum, (3) coach training, and (4) pilot study implementation. It should be noted that there was overlap in the last three phases, allowing early feedback to be incorporated into program development.

*Phase 1: Focus groups and community leader discussion.* From the beginning of the planning phase, the study team recognized the importance of incorporating the

perspectives of the target population and those who know them well, including male community leaders and experts in the field of men's health. Therefore, two focus groups were conducted: one with African American men and one with Latino men. The goals of these focus groups were to learn from participants, who were demographically similar to the target population, about participation in health activities and their perspectives on a male-focused DPP program. Overall, the participants reported that they were interested in learning more about healthy lifestyle strategies and offered recommendations for making the program more accessible, feasible, and interesting to men (see Table 1 for specific recommendations from different stages of the pilot program, including the focus groups). An "expert panel" with African American and Latino male community leaders was facilitated to solicit additional advice on planning the study, including intervention design and marketing approaches. Recommendations included identification of appropriate role models, the importance of incentives, and recognition of the costs and benefits of attendance.

**Phase 2: Advisory panel participation and NDPP curriculum adaptation.** A 10-member Advisory Panel was developed—predominantly men of color—with research expertise and community leadership in men's health. The investigative team chose the Advisory Panel based on their scholarship or community work in men's health, and from recommendations given by NYS Health Foundation staff and other colleagues. Specific areas of expertise of the Advisory Panel included medicine, public health, community programming, and immigrant health. The Advisory Panel met once or twice a year starting in October of 2014 to discuss program design (e.g., wording and images to use in the adapted curriculum; see example in Figure 1), implementation, modifications, and findings. It is important to note that the study team adapted the program, but kept the NDPP core structure and content as required by the CDC Recognition Program for diabetes prevention curricula.

The Advisory Panel was a critical component of this project and its most significant responsibility was to advise the investigative team on curricular adaptations so as to appeal to urban men from disadvantaged communities. The group reviewed two sessions in detail offering advice and recommendations (e.g., incorporating sports quotes and references, and changing the examples of healthy and unhealthy foods to those perceived as more commonly eaten by men, such as chips rather than ice cream). The research team then adapted all of the remaining sessions with input from the Advisory Panel. The adapted curriculum was translated into Spanish by an outside company, Targem Translations (<http://targem-translations.com/>), with additional feedback from our

Advisory Panel members and coaches who were fluent in Spanish.

Certain recommendations put forth by the Advisory Panel were considered, but not all were implemented due to feasibility and/or lack of consistency among recommendations. Those not adopted for the pilot program after consideration by coaches and Advisory Panel included: incorporating friendly competition into the program (groups were considered by the lifestyle coaches to be too small), group exercise before or after the class session (not feasible because of time), and inviting significant others to participate in limited program activities (the importance of the all-male aspect). The Advisory Panel was also a critical sounding board for brainstorming on recruitment, implementation, and retention strategies. Finally, the preliminary and final results from the project were presented to the Advisory Panel and advice was received about next steps.

**Phase 3: Coach training.** The discussions described above supported the importance of male lifestyle coaches. Research staff conducted outreach to existing diabetes prevention programs and the NYC Department of Parks and Recreation for candidates, but were unable to identify male coaches already trained and experienced with the NDPP. Thus, for the first round of implementation, the coaches were two men with experience as group exercise facilitators in other settings who completed a 2-day NDPP training and then a 1-day training on the *Power Up for Health* curriculum, specifically. During the *Power Up for Health* training, the investigators and staff reviewed the full curriculum in detail with the coaches and conducted mock sessions to demonstrate their facilitation style and handling of questions. After the training, the coaches had weekly telephone or email contact with the study principal investigator (EAW), who has significant research experience with the DPP and other health programs using lay coaches. Coaches could contact her for ongoing support as needed. In lieu of creating a separate coach facilitation guide, a set of notes was created for coaches to use for each session. A male observer attended one session facilitated by each coach and noted fidelity to protocol and group interactions. In the second round of implementation (three new sites), newly trained coaches included a *Power Up for Health* participant from the first round of implementation who expressed interest in being trained as a coach, and a bilingual, experienced community outreach educator to facilitate the Spanish language group.

#### **Phase 4: Pilot study implementation**

**Recruitment.** Implementation of the adapted intervention began in two recreation centers, one in Harlem and one in the South Bronx, in September 2015 (first round). In 2016, the program was implemented in three other

**Table 1.** Recommendations for Developing a Male-Focused Adaptation of NDPP by Target Population and Male Community Leaders.

Potential adaptation(s) to NDPP	Target Population Focus group(s) recommendation	Male community leader recommendation	How was it implemented?
Considerations on how to motivate men to participate in an intensive intervention program?	<ul style="list-style-type: none"> <li>• Time and costs would be major issues in participating</li> <li>• Participants would want ample time for group discussions</li> </ul>	<ul style="list-style-type: none"> <li>• Use role models and persons of authority to send messages, particularly for seniors</li> <li>• Might need different strategies for different age groups</li> <li>• Recognize the cost/benefit of attendance</li> <li>• Recognize the need to provide appropriate incentives</li> <li>• Concept of distrust should be approached—Tuskegee study was brought up</li> </ul>	<ul style="list-style-type: none"> <li>• Provided incentive of 6-month parks membership</li> <li>• Provided \$15 for completing baseline and follow-up surveys</li> <li>• Coaches were role-models for participants: either through modeling weight loss efforts or professional expertise in health education or fitness training</li> <li>• Coaches were Black and/or Latino, which might have fostered trust among participants</li> </ul>
How would men feel about male-only aspects of the program?	<ul style="list-style-type: none"> <li>• Men had mixed feelings about women in the group. Some felt they would not be able to openly discuss some issues with women. Others felt it didn't matter</li> </ul>	<ul style="list-style-type: none"> <li>• Concept of masculinity—need to define and discuss</li> <li>• Discuss sexual dysfunction and the way diabetes impacts relationships and quality of life. This is a serious issue for men of color</li> <li>• Consider difficulties that men have in admitting health issues due to societal expectations that discourage weakness</li> </ul>	<ul style="list-style-type: none"> <li>• Recruited only male participants</li> <li>• Trained and used only male lifestyle coaches</li> <li>• Statistics on erectile dysfunction and diabetes incorporated in “quick facts” section</li> </ul>
What are some strategies and ideas to help men be engaged in the intervention program?	<ul style="list-style-type: none"> <li>• Use workouts to make it fun. One hour of workouts, one hr for class</li> <li>• Use a weight loss challenge as a strategy</li> <li>• Location could be gym, churches, community-based organizations, clinic, lunch hour at a worksite</li> </ul>	<ul style="list-style-type: none"> <li>• Incorporate concepts (e.g., sports) that resonate with men (competition and teamwork). Also men relate to sports statistics and rankings. Sports is a team effort, common, and a way to keep people connected</li> <li>• Offer food so they will be comfortable during the meeting</li> </ul>	<ul style="list-style-type: none"> <li>• Intervention sessions conducted within park and recreations sites that were accessible to participants' neighborhood and had exercise resources that could help men adhere to physical activity component of the program</li> <li>• Revised curriculum to incorporate photos, examples, and quotes that would appeal to men</li> <li>• Provided small incentives throughout to increase motivation, including t-shirts, water bottle, pedometer</li> </ul>
Considerations on how to recruit men?	<ul style="list-style-type: none"> <li>• Advertise in gyms, hospitals, Craigslist, barber shops, supermarkets, Village Voice, TV, radio, newspaper train stops</li> </ul>	<ul style="list-style-type: none"> <li>• Community engagement is necessary. Partner with stakeholders such as block associations that can galvanize support</li> </ul>	<ul style="list-style-type: none"> <li>• Advertised in community newspapers, Craigslist, and Facebook</li> <li>• Distributed flyers to community organizations and businesses</li> <li>• Partnered with some health clinics to send letter to patients with prediabetes</li> <li>• Partnered with the NYC Housing Authority to mail flyers to public housing near recreation centers</li> </ul>

Note. NDPP = National Diabetes Prevention Program.



Figure 1. Example of graphics tailored to men of color in *Power Up for Health*.

recreation centers (second round): one in a second Harlem site, one in a second Bronx site, and the third in Crown Heights, Brooklyn. Eligibility criteria for all sessions were consistent with the CDC’s recognition standards for prediabetes (CDC, 2017) including that at least half of the participants had self-reported or documented recent HbA1c in the prediabetes range (5.7%–6.4%).

The study team conducted extensive outreach to recruit participants, including flyer distribution at locations throughout the five neighborhoods, such as recreation

centers, libraries, community centers, senior centers, pharmacies, grocery stores, barbershops, laundromats, medical clinics, and churches. We contacted local community-based organizations to distribute the information through email blasts or direct client interactions. An advertisement was also placed in a weekly newspaper; the study worked with three primary care physicians in the target neighborhoods to send personalized letters to patients with ab HbA1c value in the prediabetes range; placed advertisements on Craigslist; created a Facebook page and

posted recruitment information; and presented on the program at various community board meetings in the targeted neighborhoods. Finally, the study worked with the New York City Housing Authority (NYCHA), the administrator of NYC public housing, to identify and mail flyers to adult male NYCHA residents living near each of the recreation centers. Despite these efforts, participant recruitment proved more difficult than originally anticipated by the Advisory Panel and the investigative team.

The second round of three groups started in the summer of 2016. Noting the recruitment challenges of the first two groups, the study hired two male outreach workers from the targeted neighborhoods, to expand upon the recruitment work done earlier. Outreach workers distributed flyers to barbershops and other local businesses and presented information on the program at community board meetings, senior centers, schools, libraries, and various community-based organizations. Despite this higher intensity strategy, recruitment of men into the pilot study remained a challenge.

### **Program Implementation**

The program was implemented in NYC Parks and Recreation Department recreation centers in five different neighborhoods. As a program incentive, after four completed sessions, participants were given a 6-month NYC Parks membership with access to all of the city's recreation centers (\$25–\$75 value depending on the participant's age). The study provided other participant incentives and materials, including paper trackers for diet and exercise consistent with the national model, a calorie counter book, pedometers, and measuring utensils, but kept expenses low to ensure that the adaptation remained translatable. Additionally, if participants described difficulties attending sessions due to transportation costs, they were given a limited value transit pass.

At the end of each round of men's groups, participants were invited to discuss perceptions and recommendations regarding the curriculum, coaches, and implementation either through individual interviews or focus groups. Qualitative results are presented elsewhere in this journal (Realmuto et al., 2018). The Advisory Panel also reconvened periodically to hear updates on the first cohort and to request guidance regarding recruitment and curriculum modifications for the subsequent pilot groups.

Across the five groups, 29 men enrolled, with 25 completing at least four sessions. To keep men engaged in the program, the study sent weekly reminders by telephone, email, and/or text. When a session was missed, the lifestyle coaches offered to conduct a telephone make-up session, which lasted approximately 20 min. Finally, to assess fidelity to the intervention as designed, a trained male observer conducted one unannounced observation

of each of the five groups, focusing on fidelity to the modified curriculum, participant engagement, and coach facilitation "style." The Study Principal Investigator followed up with coaches to problem solve if fidelity to the protocol was suboptimal and to give positive feedback and encouragement whenever possible.

Overall, the *Power Up for Health* program, which was adapted to appeal to men and used male lifestyle coaches and male-only groups, was successful in producing modest weight loss overall at 16 weeks and acceptable program retention. The program was also successful in improving some healthy eating and physical activity behaviors, as well as depressive symptoms. At the end of the program, all participants reported being satisfied or highly satisfied with the program. Qualitative and quantitative results are described in detail elsewhere (Realmuto et al., 2018; Walker et al., 2018). The weight loss outcome reported in *Power Up for Health* is similar to other DPP translational studies which, on average, produce a 4% weight loss.

### **Next Steps: Potential Adaptations Based on the Pilot Study**

The investigative team, the coaches, and the advisory panel met after the completion of the study to discuss implementation, outcomes, next steps, and lessons learned. From this discussion, several potential adaptations will be considered when testing this model in a larger study (see Table 2). Briefly, these include additional training of and support for coaches, on topics such as addressing social determinants of health (e.g., access to healthy food in neighborhoods with limited options). Other potential adaptations dealt with issues of program implementation. For example, the coaches reported that classes rarely ended on time, and therefore in future sessions, the class time should be extended to accommodate more discussion and other activities. Finally, a resounding theme among coaches was that men wished to have a physical activity component, including instruction, incorporated into the structured class to motivate and energize group participation; this addition requires additional time for each session.

### **Discussion**

The *Power Up for Health* program was successful in engaging men of color at multiple levels. The study was able to get input from the target population before proposing the project and obtaining funding. The Advisory Panel was engaged throughout the entire project from planning, implementation, and dissemination of results. As the male lifestyle coaches were trained, they were included in discussions with the Advisory Panel. Finally,

**Table 2.** Potential Adaptations to *Power Up for Health* Based on the Pilot Study.

Potential adaptations to <i>Power UP for Health</i>	Feedback and recommendations from the coaches and advisory panel
Coaching: training, support and responsibilities	<ul style="list-style-type: none"> <li>○ Include more information on social determinants in coach training. <ul style="list-style-type: none"> <li>▪ It is difficult to ask people to eat healthy without providing accessible options in their neighborhood → perhaps creating a healthy food resource guide, information on community organizations.</li> <li>▪ Social Determinants were not addressed in the 2012 DPP but may be necessary for optimal results.</li> </ul> </li> <li>○ Consider training coaches on how to use gym equipment and how to create a workout for participants.</li> <li>○ Increase coach responsibility by calling the participants; communication between sessions can motivate participants.</li> <li>○ Provide coaches with visual tools to make the curriculum more concrete and hands on, for example: how much fat is in one french fry, how much sugar should you eat per day, how much salt you have to limit yourself to each day, and so on.</li> <li>○ Incorporate a visit to the supermarket to practice how to shop healthy; show participants how to read labels at the supermarket visit.</li> </ul>
Program Implementation: Timing, requirements	<ul style="list-style-type: none"> <li>○ Extend class time—for exercise and/or other issues that come up. <ul style="list-style-type: none"> <li>▪ Classes rarely ended within the hour time frame; some classes went from 6:30 to 7:45 pm, sometimes staying until 8:15 pm.</li> <li>▪ No one complained that the class went too long; it could go at least an extra half hour.</li> <li>▪ Often times discussions went outside the class content → need to develop trust.</li> </ul> </li> <li>○ Have a set call time for coaches to talk with one another and their facilitator. Coaches can provide support to one another.</li> <li>○ Add to the intervention logistical issues including all of the surrounding issues such as how to acclimate to the gym culture, who is making the follow-up calls.</li> </ul>
Meeting Program Goals	<ul style="list-style-type: none"> <li>○ Exercise doesn't have to be a part of every class, but could be incorporated in some sessions; planning for both indoor and outdoor activities (depending on the weather). Fitness component energized the groups. <ul style="list-style-type: none"> <li>▪ Reflection re: where we had the intervention and how to incorporate exercise? How important was it to have the program at the Parks and Recreation centers?</li> </ul> </li> <li>○ Need to push the tracking of diet and exercise component, but make more acceptable/feasible. For example, have resources/guides available to participants for using online tracking apps.</li> <li>○ Be flexible and accommodating to where different people are in terms of defining program success—a stable weight could also be considered success, particularly with other factors considered (e.g., medications).</li> </ul>

Note. DPP = Diabetes Prevention Program.

once male participants were enrolled, most completed the program and reported that they were highly satisfied. Thus, the participatory approach used in the study allowed us to achieve the goals for involving, understanding, and connecting with the target population.

Unfortunately, the study faced a number of challenges in the implementation of the *Power Up for Health* program. Recruitment was the most significant challenge. Despite a high risk of diabetes in the targeted neighborhoods, relatively modest enrollment objectives, and extensive outreach using a broad range of methods, enrollment was lower than anticipated. Several of the recruitment methods, including direct mailings and media exposure, yielded modest responses—although none resulted in more than a few enrollees. The recommendations for

future programs are for more targeted outreach, for example, within preexisting groups of high risk men (e.g., at worksites, social clubs). In addition, a more personalized outreach, with in-person opportunities to learn about the program, may result in greater engagement. Further adaptation might be necessary, including online programs; though this hinder the development of bonds between participants.

More research is needed to better understand why men, particularly men of color, experience poorer health outcomes (Jack Jr & Griffith, 2013). While many policies and programs point to masculinity as the major contributor, scholars working in men's health have urged researchers to think beyond masculinity and more toward the social determinants of health (Elder & Griffith, 2016); for

instance, highlighting differential rates of employment or the limited infrastructure of men's health programs and services as potential contributors to these outcomes. Men's health scholar, Dr. Griffith, discussed the concept of "manhood, the state of being a man is a social status and that men are constrained by gender ideologies and stigmas which are subject to scrutiny and penalty if they deviate from behaviors that approximate a masculine ideal" (Griffith, 2015). Further, being an adult male triggers a variety of social expectations, for example, economic success, that are influenced by environmental and experiential factors. As such, manhood, particularly for men of color, is a social determinant of health across the life course. The approach taken in the *Power Up for Health* program aimed to capitalize on the shared experiences and commonalities among men and on linking participants to resources in the community, such as the recreation centers and helping them to deal with common stressors. Thus, the *Power Up for Health* approach is consistent with approaches to link manhood/masculinity with approaches to address social determinants of health.

To our knowledge, *Power Up for Health* is the only model to translate NDPP for men of color. One of the closest examples to the *Power Up for Health* study was a study by Dean et al., which conducted a 10-week pilot physical activity intervention for African-American men using group-based sessions enhanced by technology (*Men on the Move- Nashville*) (Dean, Griffith, McKissic, Cornish, & Johnson-Lawrence, 2018). Both *Power Up for Health* and *Men on the Move- Nashville* demonstrated that men can be engaged in an on-going intervention study to improve lifestyle behaviors. Based on the outcomes and qualitative results, we believe the model has promise to improve lifestyle and promote weight loss in men, particularly men of color. A larger translational study is needed with a more robust research design, including the CDC Recognition requirements of additional maintenance sessions after the core 16 weeks.

## Conclusion

Given the disproportionate burden of disease for men of color relative to women and to White men, it is essential to find methods to engage this population in activities and programs, such as *Power Up for Health*, that support positive behavior change. The process, which engaged the target population with substantial input from a carefully selected Advisory Panel, facilitated the development of programming that yielded positive results for those who participated and may provide a model for others with similar goals.

The most significant challenge in *Power Up for Health* was recruitment. Approaches to improve recruitment in future studies could include developing

formal partnerships with organizations that engage large numbers of men (e.g., fraternities, sports clubs), certain worksites, and health-care systems. Worksites offer conveniences such as the ability to hold classes during lunch breaks and reduce the potential burden of transportation to classes. In addition, worksites can be selected for key demographic characteristics. Finally, formal partnerships with clinics and hospital systems can provide a steady referral of patients who are identified to be at-risk for diabetes through electronic health records. In addition to these potential strategies, innovation, experimentation, and concentrated efforts—involving input and advice from the target population—are likely necessary to engage men from disadvantaged communities.

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