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Public-Private Partnerships to Lower the Risk of Diabetes Among Black Women Using Cooperative Agreements: The National Diabetes Prevention Program and the Black Women's Health Imperative

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Abstract

The National Diabetes Prevention Program (National DPP) is a partnership of public and private organizations working to build a nationwide delivery system for a lifestyle change program (LCP), which is proved to prevent or delay onset of type 2 diabetes in adults with prediabetes. Through this program, the Centers for Disease Control and Prevention (CDC) establishes partnerships with organizations to prevent or delay the onset of type 2 diabetes by using the evidence-based and audience-tailored LCP. The DP17–1705 cooperative agreement aims to expand the reach of the program in underserved areas and to populations currently underrepresented in the program relative to their risk. This article highlights a successful adaptation of the National DPP PreventT2 curriculum to address the needs of women who are Black funded by this cooperative agreement. The *Change your Lifestyle, Change your Life* (CYL[2]) program resulted from a partnership between CDC and the Black Women's Health Imperative. Successes and challenges associated with this program are highlighted. Lessons learned from these efforts can be used by practitioners to inform future type 2 diabetes prevention initiatives.

Keywords

type 2 diabetes; diabetes prevention; community; health disparities

Introduction

The National Diabetes Prevention Program (National DPP) is a partnership of public and private organizations working to build a nationwide delivery system for an evidence-based lifestyle change program (LCP) that is proved to prevent or delay onset of type 2 diabetes in

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adults with prediabetes developed by the Centers for Disease Control and Prevention (CDC). The LCP specifically focuses on reducing the incidence of type 2 diabetes, particularly among those with prediabetes or at high risk for developing type 2 diabetes. CDC has aimed to increase access to the program to populations disproportionately affected by prediabetes through partnerships with organizations that can provide culturally tailored materials and strategies. The present article will provide an overview of one successful LCP that has been adapted and tailored to Black women residing in various locations within the United States.

Approximately 16 million women in the United States currently have type 2 diabetes and 47 million women are estimated to have prediabetes.[1] Type 2 diabetes and prediabetes disproportionately affect women from populations who are medically underserved; for example, black women are more likely than white women to be diagnosed with diabetes.[2,3] Negative health outcomes resulting from diabetes are also more likely to impact black women. Specifically, black women are more likely than white women to experience visual impairment, lower extremity amputations, end stage renal failure, and death resulting from diabetes complications.[3]

Numerous social and structural factors are linked to the disproportionate prevalence of diabetes among individuals who are black. These factors include reduced access to health care, reduced quality of health care, lower income and education levels, and discrimination experienced navigating the health care system.[4–7] Black women are particularly susceptible to type 2 diabetes because of the combined impact of race, class, and gender on personal health.[8,9] Higher rates of overweight and obesity have been documented among black women, which is a leading risk factor for type 2 diabetes.[10] Increased stress levels have also been associated with increased risk for the development of type 2 diabetes,[11] and black populations often report higher levels of stress than white populations.[12,13]

CDC's DP17–1705: *Scaling the National Diabetes Prevention Program in Underserved Areas* cooperative agreement was created to facilitate partnerships between the CDC and national organizations to build capacity at the local level to enroll and retain populations underrepresented in the program relative to their risk in the LCP. Through this agreement the federal government partners with organizations to collaboratively address key diabetes risk factors among disproportionately affected populations in communities who are underserved. The agreement supports 10 national organizations in their efforts to enroll and deliver the National DPP LCP. This program model—national funding and local delivery—enables CDC to reach audiences through locally known and trusted organizations that are able to enhance LCP promotion and delivery through audience-specific tailoring, thereby increasing LCP reach and effectiveness over the long term.[1]

The purpose of this article is to detail the nature and outcomes of an LCP using a version of the National DPP Prevent T2 curriculum tailored for black women established under the 1705 cooperative agreement which involved a partnership between CDC and the Black Women's Health Imperative (BWHI).

1705 Cooperative Agreement, Public-Private Partnerships, and the National DPP LCP

The 1705 cooperative agreement was created in 2017 to delay or prevent type 2 diabetes in people with prediabetes across the United States.[1] The National DPP LCP intervention focuses on science-based and culturally tailored coaching promoting 5%–7% weight loss through healthy eating and routine physical activity. The year-long program has been found to cut participants' risk of developing type 2 diabetes by 58%.[14] An essential element of the National DPP is the key role public and private partnerships play in engaging participants, enrolling participants, and tailoring program content. Through this agreement, CDC empowers community organizations to tailor program development, program delivery, and marketing strategies to the needs of the populations they serve.

The BWHI has been effective in executing a tailored approach to the National DPP Prevent T2 curriculum. BWHI was established in 1983 by reproductive justice and civil rights pioneer Byllye Avery on the campus of Spelman College, as The National Black Women's Health Project. BWHI is particularly focused on advancing health equity and social justice for black women across their lifespan, through policy, advocacy, education, research, and leadership development. Using evidence-based strategies, the organization develops innovative programs and advocates for health-promoting policies at the national, state, and local levels. BWHI is distinctly focused on providing a space for America's black women and girls to have safe and brave conversations about their health.

In 2012, BWHI was one of six national organizations selected by CDC to take the National DPP LCP to scale. Since then, CDC has continued to partner with BWHI to continue to tailor, adapt, and evolve the program to fit the needs of participant populations. BWHI has taken an innovative approach to meeting the charge of the 1705 cooperative agreement by developing the *Change your Lifestyle. Change your Life.* (CYL^2) version of the National DPP PreventT2 curriculum. This adapted version provides enrolled participants with physical and emotional support in reducing their likelihood of developing multiple chronic conditions such as type 2 diabetes, heart disease, and high blood pressure.

Support provided by the program includes (but is not limited to) (1) the provision of a personal Lifestyle Coach, (2) social support from other enrolled in the programs, (3) assistance in modifying participants' relationship with food consumption and food preparation patterns, (4) support in understanding what triggers eating and addressing the relationship between chronic stress and weight gain, and (5) tips on practicing self-care to help manage stress.

CYL^2 uses a high-touch coaching approach (High-Touch Coaching™) that was inspired by BWHI's founder, Byllye Avery. The high-touch interaction approach was used by Avery when working with black women in individual and group self-help settings. Further, the first CYL^2 Lifestyle Coaches trained by High-Touch Coaching-approved training organizations were also trained by Avery on guiding self-help training principles embraced by BWHI. This intentional grounding of CYL^2 in BWHI's mission and pre-existing focus on self-help and high-touch communication facilitated a situation where community members who were already familiar with and/or engaged with BWHI were likely to have an interest in the type

2 diabetes prevention program because this offering was in direct alignment with the mission of an organization with whom they had a pre-established connection.

Lessons Learned

BWHI encountered various successes and challenges that have contributed to the refinement of the CYL^2 program since its origination. The section below will outline some of the most relevant successes and challenges encountered and BWHI's response. When appropriate, this section will also address the ways in which key lessons learned can be used to inform future work of this nature.

Successes

Since 2013, BWHI has enrolled over 3800 CYL^2 participants, primarily black women, in partnership with 18 community-based organizations (or affiliates) whose visions and missions align with BWHI. These organizations included female-led for-profit organizations and federally qualified health centers. A key reason that the CYL^2 program is successful is BWHI's mission-driven approach in program tailoring and implementation. When given the opportunity to implement an LCP, BWHI incorporated elements of CDC's National DPP PreventT2 curriculum while also tailoring and adapting the program to be grounded in the principles, vision, and history of their organization such as self-help and high-touch coach engagement.

BWHI uses active listening to understand the needs, barriers, and strengths of black women and to empower them to make behavior changes to improve their health. Active listening often comes about through formative research—literature reviews, subject matter expert interviews, and discussions, both one on one and in groups with the audience. All program tailoring and the tailoring of marketing and communication efforts can then be effectively built on this foundation of understanding and interaction. Through these listening activities, community and audience partnerships are built, which will inform and sustain the program over the long-term to achieve desired behavior change and health improvements.

One example of listening and tailored response occurred in the early years of CYL^2 program implementation, when it was discovered that many participants from black and Latina populations were not losing weight at the same rate often achieved by other populations. After identifying this as an issue, BWHI referred to the National DPP research trial and found that similar results.[15] But the literature did not illuminate why this gap occurs. Using BWHI's own research and understanding of this target audience, the Chief Programs Officer (A.F.) worked with partners to implement program modifications that are culturally tailored to engage participants from these populations in a different way to address the weight loss gap. Specifically, coaches worked to create safer spaces for participants to share experiences unrelated to the program, facilitated conversations about what was impacting their weight, and added unique and relevant activities outside of regularly scheduled sessions.

These strategies were all added as supplemental sessions taking place outside of the regularly scheduled class time to ensure the required fidelity to the CDC National DPP PreventT2 curriculum. For example, BWHI's Indianapolis affiliate arranged weekly line dance classes and quarterly cooking demonstrations. The Detroit affiliate established a

partnership with a local lingerie shop and took women there for bra refittings after experiencing weight shifts and hosted healthy eating gatherings where all participants contributed healthy makeovers of traditional recipes. Coaches also encouraged participants to identify activities the group could participate in together outside of class (*e.g.,* going out to dinner and practicing ordering healthy options from the menu; joining planned community walking events).

The PreventT2 curriculum addressed many of the issues participants are challenged with when making behavior changes, such as healthy eating, getting active, managing stress, coping with triggers, and getting support from others. While this curriculum served as a foundation, the purpose of the cooperative agreement was to encourage community organizations to tailor program content, materials, and strategy to fit the needs of the populations they serve. This pathway enabled BWHI to adapt materials to acknowledge participants' multiple intersecting identities as both black and female, their lived experience, and chronic stress as elements that influence and impact their health behavior, habits, beliefs, choices, and decisions. BWHI recognized a need to further adapt these materials after observing that participants were opting to extend their 1-hour curriculum sessions to discuss social and emotional issues that were creating challenges for them, but not covered in the original curriculum.

Social and cultural norms, such as those related to being a woman and black in America, can influence behavior and overall life experience. Geography also plays a role, as the life experience of rural southern black women is often significantly different from that of their northern urban counterparts. Taking into account social determinants of health such as education level, how and when families came to America and from where, regional norms, safety, poverty, and access to health care can improve the effectiveness of the marketing and promotion of programs and their delivery. Providing opportunities to discuss both the barriers unique to the audience program planners are trying to reach and the assets the community brings can lead to genuine understanding, mutual problem solving, and a sense of empowerment to achieve health goals.

To address the intersection between lived experience and health outcomes, BWHI used its High-Touch Coaching model to convert the experiences of participants into personal power that enables them to achieve program and lifestyle change success. The program's Lifestyle Coaches engage participants in ways that build trusting relationships and embody their realities and cultural sensitivities. Coaches are intentionally recruited from communities of which participants are a part to ensure coaches naturally reflect, understand, and value the lived experiences of individuals enrolled in the program. High-Touch Coaching is engaging and authentic; hands on and frequent; built on a high level of trust; and initiated at the time of referral to the CYL^2 program. Overall, BWHI and affiliates' efforts encouraged program enrollment and improved outcomes among black and Latina women.

Another success for BWHI is having created the first CDC-approved LCP curriculum culturally tailored for black women. BWHI also became a CDC-recognized distance learning program provider at that time, delivering the program virtually to enrolled participants in the free-to-use BWHI app. The digital content and the new modules are

culturally tailored, engaging, and responsive to many of the challenges participants and coaches believed needed to be included.

A final and overarching success of this project is what results from relationships established between CDC and community organizations through the 1705 cooperative agreement. The cooperative agreement is one example of how cohesive and constructive partnerships are being established between the federal government and community organizations. These partnerships enable mutually beneficial situations, in which the government invests in evidence-based type 2 diabetes prevention approaches that can be implemented at the community level.

The government can, and in the case of 1705 does, encourage evidence-based efforts invested on a large scale through the provision of funding, audience-tailored localizable marketing and communication tools, resources and training, program tailoring support and guidance, and training and support to evaluate programs. Community organizations match this national investment and bring the program alive through their significant knowledge of and relationships with audiences of focus. Taken together, these efforts can uniquely position programs like the National DPP to reduce the risk of type 2 diabetes among those disproportionately affected by prediabetes.

Challenges

While CYL^2 has experienced many successes, it has not been without implementation challenges. An inherent and necessary challenge to consider was, and continues to be, the cost of this program and the capacity required to complete the high-touch engagement that CYL^2 provides. High-Touch Coaching can be a costly model of outreach because of the time and resources required to establish and maintain consistent contact with populations that can be difficult to reach. Therefore, implementation of similar efforts would be most feasible among community organizations that already serve as trusted resources for disproportionately affected populations and are recognizable within the communities that they serve and excel in achieving the objectives of the National DPP. BWHI has successfully demonstrated how these partnerships with trusted community organizations help to increase the reach of their type 2 diabetes prevention efforts among black and Latina women and local organizations' capacity to deliver impactful evidence-based programming.

An additional challenge stems from historical lack of engagement with the National DPP LCP among primary care providers (physicians and nurse practitioners). Recent research indicates that even though 38% of primary care providers were aware of the CDC-recognized LCP in 2016 and 2017, only 27% of providers screened patients for prediabetes using a risk-test, and only 23% of providers made patient referrals to the program.[16] Trusted health care providers can serve as crucial conduits of information between prospective participants and this program. However, significant gaps exist in providers' recognition of the program and inclination to refer patients to this program as recently as 2017.

Minimal participation from health care providers may highlight the need for participants to get support for program enrollment and engagement through other resources in their lives. Since referrals from health care providers are not required for program enrollment, existing

outreach efforts are focusing on encouraging friends and family members of prospective participants, along with program “graduates” who serve as champions to provide continued support throughout the recruitment, enrollment, and participation process. For instance, marketing efforts can persuade individuals to speak with loved ones about the possibility of individually or collectively enrolling in a local LCP. Program participants can also be encouraged to share their behavior change success with health care providers, thereby increasing provider knowledge of program benefits and willingness to promote the program to other patients at risk for type 2 diabetes.

In many instances, when individuals are referred by their health care provider, prospective enrollees do not follow-up or respond when partners reach out to them. While BWHI has heard many reasons why individuals may hesitate to enroll (*e.g.,* program duration, not ready to change), there remains an opportunity to enrich and improve the understandings around what will move people from awareness to action by enrolling in type 2 diabetes prevention efforts.

Marketing and communication efforts that build on the strengths of local audiences, meeting them where they are on the behavior change continuum, and addressing barriers to participation could be most impactful. The previously described formative research efforts undertaken demonstrate the potential importance of gaining an understanding of the ways audiences prefer to receive information through modalities such as radio, print, word-of-mouth, social media, and their preferred messengers such as community leaders, faith leaders, friends and family, and or health care providers.

Conclusion

Overall, CYL^2 has proved to be an efficacious adaptation of the National DPP LCP with promise to prevent or delay onset of type 2 diabetes among black women. The program, which reflects BWHI’s philosophy of tailoring the intervention and engaging and coaching participants, took intentional efforts to improve health and well-being by empowering program participants to be conscious of their personal health needs. Thus, this program is providing an opportunity for connection and social support among enrollees, and encouraging women to take command of lifestyle choices and environmental factors that could challenge type 2 diabetes prevention. Program creators encountered numerous challenges and successes in the development, implementation, and continued adaptation of this program.

The present article outlined an effective approach to establishing a public-private partnership with the overall goal of promoting health across communities. This model demonstrates that collaborative relationships between federal agencies and organizations have the potential to expand the reach to communities with evidence-based initiatives promoting prevention of type 2 diabetes. Future efforts can use insights drawn from this program to inform additional private-public partnerships focused on health promotion.

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