



# Advancing equity in diabetes prevention for Black or Hispanic women

Lessons learned and action steps

June 2024

Contents

Acknowledgments ..... ii

Executive summary ..... iv

    Introduction ..... iv

    Achieving equity in diabetes prevention ..... iv

    Pathways to achieve equity in diabetes prevention ..... v

    Recommendations for advancing equity and sustainability ..... v

I. Introduction ..... 6

II. Achieving equity in diabetes prevention ..... 8

III. Advancing equity by providing culturally responsive care at each stage of the prediabetes care pathway ..... 10

    A. Promote consistent and effective screening and testing ..... 11

    B. Perform coordinated and inclusive outreach and referrals ..... 13

    C. Integrate social needs screening and referrals to holistically improve participants’ health ..... 20

    D. Engaging and retaining diverse participants in the National DPP LCP..... 25

IV. Recommendations for Advancing Equity Through Sustainable Systems-Based Changes..... 31

    A. Recommendations for advancing health equity in diabetes prevention ..... 31

    B. Recommendations for sustaining diabetes prevention and health equity programs ..... 32

V. Conclusion ..... 34

    A. Summary of key findings ..... 34

    B. Considerations for future funding opportunities..... 35

References..... 36

Appendix A: Summary of key challenges and action steps .....A-1

Appendix B Checklist of Action Steps..... B-1

Appendix C: Methods ..... C-1

Appendix D: Interview guide .....D-1

Exhibits

ES.1. Data sources and methods for the report..... iv

3.1. Pathways to effective and equitable prediabetes care ..... 10

3.2. Action steps to improve diabetes screening and testing for Black or Hispanic women..... 13

3.3. Action steps to refer Black or Hispanic women with prediabetes to the National DPP LCP ..... 19

3.4. Action steps to screen for and address social needs for Black or Hispanic women with  
prediabetes ..... 24

3.5. Action steps to engage and retain Black or Hispanic women in the National DPP LCP ..... 30

4.1. Action steps to advance and sustain health equity in diabetes prevention..... 33

A.1. Summary of key challenges and action steps..... A-1

B.1. Action steps for healthcare organizations to advance equity in diabetes prevention..... B-1

B.2. Action steps for organizations screening for and addressing social needs ..... B-2

B.3. Action steps for organizations providing the National DPP LCP ..... B-3

Acknowledgments

Anita Balan MPH, MCHES, Mary Claire Gugerty, Liana Lianov MD, MPH, and Kate Shreve MPH, from the American College of Preventive Medicine; Madeline Brady MPH, Shannon Haffey MHSA, Tamkeen Khan PhD, and Janet Williams MA from the American Medical Association; and Paula Green-Smith MA and Kimberly Lovelady LCSW, MPH from the Black Women’s Health identified a set of organizations with relevant promising practices in place and provided feedback on the report. Michelle Papali’i PhD, MS and Patricia Shea MPH, MA from the Centers for Disease Control and Prevention provided feedback on the interview guide and report. Raga Ayyagari MS and Sue Felt-Lisk MPA from Mathematica authored this report, Dan Finkelstein PhD provided feedback on an earlier draft of the report and Dorothy Bellow, Kerry Kern, Jon Owolabi, and Sarah Vienneau provided editorial, production, and graphics support.

The development of this resource is supported by the American College of Preventive Medicine through a Cooperative Agreement (CDC-RFA-OT18-1802) with the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling \$750,000 with 100 percent funded by CDC/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by CDC/HHS, or the U.S. Government.

The authors thank all the interview respondents from the grantee project sites including Northeast Valley Health Corporation, University of Texas Southwestern Medical Center/Parkland Health and Hospital System, Baylor Scott and White Health and Wellness Center, University of Washington Valley Medical Center, and the YMCA of Greater Seattle. The authors also thank additional interview respondents including MLK Health Center and Pharmacy, Perfect Lifestyle, and other organizations who chose to

remain anonymous, for sharing their time and insights with us to inform this report.

## Executive summary

### Introduction

This report presents challenges, shares lessons learned, and outlines action steps for healthcare organizations referring to or delivering the National Diabetes Prevention Program (National DPP) lifestyle change program (LCP) who are tailoring type 2 diabetes prevention strategies, including screening, testing, making referrals, and addressing social needs, to be culturally responsive for Black or Hispanic women with prediabetes.<sup>1</sup>

### Exhibit ES.1. Data sources and methods for the report

#### Methods

- **Semi-structured key informant interviews** with nine organizations engaged in intentional efforts to use the National Diabetes Prevention Program (National DPP) lifestyle change program (LCP) to reduce diabetes in Black or Hispanic women as well as other populations. The interviews focused on challenges and lessons learned related to report objectives. The American College of Preventive Medicine, the American Medical Association, and the Black Women's Health Imperative identified these organizations to interview (26 respondents total).
- **Respondent roles** included health system leaders and administrators overseeing and implementing screening and testing for prediabetes and referrals to the National DPP LCP. We also interviewed physicians referring patients to the National DPP LCP, National DPP LCP coordinators, and National DPP LCP coaches.
- **Document review** of reports, presentations, performance data, and evaluations developed as part of a multi-year grant funded by the Centers for Disease Control and Prevention (CDC) documenting these organizations' processes and outcomes.

### Achieving equity in diabetes prevention

#### **Black or Hispanic people experience disproportionate rates of type 2 diabetes and complications.**

Non-Hispanic Black women are 2.3 times as likely and Hispanic women are 1.4 times as likely to die of diabetes compared to non-Hispanic white women (U.S. Department of Health and Human Services Office of Minority Health 2021, 2022). Systemic factors (such as racial discrimination) and social determinants of health (such as financial strain, food insecurity, and housing instability) are associated with disparities in type 2 diabetes (Egede et al. 2023; Hill-Briggs et al. 2020).

**Culturally responsive lifestyle interventions for diabetes prevention can help reduce disparities in outcomes for people with prediabetes and advance health equity for people or groups who have been historically marginalized.** While the National DPP LCP has a large reach overall and has enrolled more than 600,000 people to date, several studies show that attendance is lower overall among Hispanic adults and Black adults. These differences in attendance among groups emphasize the importance of tailoring the program to be culturally responsive and informed by community strengths and structural barriers for these communities (Ritchie et al. 2018; Ely et al. 2017; Centers for Medicare and Medicaid Services 2023; Centers for Disease Control and Prevention 2022a). CDC highlights the importance of

---

<sup>1</sup> This term refers to women who identify as Black, women who identify as Hispanic, and women who identify as both Black and Hispanic. We indicate where the specific findings differ across the groups. There is significant diversity in terms used and identities among people within each racial and ethnic group, so it is important to not generalize. It is important for health systems and other organizations to recognize this diversity and to consider the identities and preferred language for the communities who they work with as they implement strategies to culturally tailor diabetes prevention programming and messaging.

ending health disparities in groups at higher risk of type 2 diabetes by “recognizing and reflecting their unique cultures, customs, traditions, foods, and physical activity practices” (Centers for Disease Control and Prevention 2023).

### Pathways to achieve equity in diabetes prevention

Healthcare organizations play a critical role in advancing equity at every stage of the prediabetes care pathway, including screening, testing, referring patients to the National DPP LCP; engaging and retaining participants in the National DPP LCP; and screening for and addressing social needs.

**Screening and testing.** Healthcare organizations can improve consistency and quality of prediabetes screening and testing for Black or Hispanic women by educating physicians and other healthcare providers about the importance of screening and about health inequities in diabetes prevention. These organizations can track progress toward equity goals by collecting and analyzing data for different demographic subgroups.

**Referrals.** Healthcare organizations can improve referral and enrollment of Black or Hispanic women in the National DPP LCP by using culturally and linguistically responsive marketing materials and conducting outreach in community events and settings. They can also focus on educating physicians and other healthcare providers about the National DPP LCP and its suitability for their patients. In addition, they can engage community health workers and other clinical staff to build rapport with prospective participants and motivate them to enroll.

**Screening for social needs.** Healthcare organizations can remove barriers to participating in the National DPP LCP and support participants in making healthy lifestyle choices by offering social needs screening in different languages and modalities. They can also focus on hiring, retaining, and training diverse staff, including community health workers, social workers, and patient navigators who are representative of the communities they serve. They can advance equity by supporting these National DPP LCP coaches and healthcare professionals in identifying culturally responsive services to address participants’ social needs.

**Engagement and retention in the National DPP LCP.** Healthcare organizations implementing the National DPP LCP can engage and motivate Black or Hispanic women to participate in and complete the National DPP LCP by offering flexibility in timing and modality and providing financial support. They can also focus on training and retaining culturally representative National DPP LCP lifestyle change coaches and tailoring the nutrition and physical activity curriculum to be culturally responsive to participants’ traditional foods and lifestyles. National DPP lifestyle change coaches can foster peer support and offer individualized support. Referring providers can support engagement by following up with participants about their progress in the program and offering encouragement and support.

### Recommendations for advancing equity and sustainability

In order to continue to advance and sustain equitable diabetes prevention processes, healthcare leaders can **support and train their staff to be champions** of the program; **engage in community outreach through partnerships with trusted community-based organizations**, public health agencies, and other health systems; and **set health systems goals** around promoting equity. Systemic changes such as **increased financial reimbursement** through insurance coverage and grants can help sustain processes and partnerships for equity.





## I. Introduction

In 2018, through a cooperative agreement with the Centers for Disease Control and Prevention (CDC)'s Center for State, Tribal, Local and Territorial Support (CSTLTS), the American College of Preventive Medicine (ACPM) received a grant to identify, test, and refer women from underrepresented racial and ethnic groups to CDC-recognized diabetes prevention programs. ACPM, in partnership with the American Medical Association (AMA) and the Black Women's Health Imperative (BWHI), launched the multiyear grant, the "Building Healthcare Provider Capacity to Screen, Test, and Refer Disparate Populations with Prediabetes" project. This project funded three grantees, including the Northeast Valley Health Corporation, the University of Texas Southwestern Medical Center/Parkland Health and Hospital System with support from Baylor Scott and White Health and Wellness Center, and the University of Washington Valley Medical Center, to implement innovative strategies to screen, test, and refer Black or Hispanic women with prediabetes into the National DPP LCP.

In 2022, ACPM, AMA, and BWHI partnered with Mathematica to synthesize promising practices to advance equity in diabetes prevention for Black or Hispanic women. They synthesized findings from the three grantee organizations funded by the grant and four other organizations engaged in intentional efforts to use the National DPP to reduce diabetes among Black or Hispanic women and other populations. This report presents challenges, shares lessons learned, and outlines action steps for tailoring diabetes prevention strategies,<sup>2</sup> including screening, testing, making referrals, and addressing social needs, to be culturally responsive for Black or Hispanic women with prediabetes. The report also provides recommendations for healthcare leaders to advance equity and sustainability in diabetes prevention for Black or Hispanic women.

---

<sup>2</sup> AMA published an article in 2022 that summarizes best practices for diabetes prevention, including organizational support, workforce and funding, promotion and dissemination, clinical integration and support, evaluation and outcomes, and National DPP delivery. The article is available at: <https://www.liebertpub.com/doi/10.1089/pop.2021.0044>

This report describes some practices which are related to those in the AMA article, and also presents findings about integrating social needs and focuses on strategies to tailor approaches to be culturally responsive to Black or Hispanic women with prediabetes.

The sections below synthesize findings from key informant interviews with eight healthcare organizations and one community-based organization that refer to and/or deliver the National DPP LCP to Black or Hispanic women. This report also includes findings from reports, presentations, performance data, and evaluations documenting these organizations' processes and outcomes.

The report is organized as follows:

- Section 2 describes evidence of health disparities in diabetes among Black or Hispanic women and the importance of advancing health equity.
- Section 3 outlines challenges, lessons learned, and action steps for tailoring diabetes prevention strategies.
- Section 4 synthesizes organizations' recommendations for healthcare leaders to advance equity in diabetes prevention for Black or Hispanic women, describes resources, and supports organizations required to sustain the processes and partnerships they developed to advance equity.
- Section 5 provides a summary of lessons learned.
- The appendices provide a summary of key challenges and lessons learned (Appendix A) and action steps organized by role for staff at healthcare and community-based organizations delivering the National DPP LCP (Appendix B). The appendices also provide more details about the methods used in this analysis (Appendix C) and the interview guide (Appendix D).





## II. Achieving equity in diabetes prevention

**Black or Hispanic people face disproportionate rates of type 2 diabetes and complications.** Diabetes is one of the most prevalent and expensive chronic conditions in the United States, affecting 13.2 percent of adults in the United States and costing about \$327 billion in direct medical costs and reduced productivity (Centers for Disease Control and Prevention 2022b; American Diabetes Association 2018). Compared to the national average, Black non-Hispanic adults and Hispanic adults have a higher prevalence and incidence of type 2 diabetes (Centers for Disease Control and Prevention 2022b). Non-Hispanic Black women are 2.3 times as likely and Hispanic women are 1.4 times as likely to die of diabetes compared to non-Hispanic white women (U.S. Department of Health and Human Services Office of Minority Health 2021, 2022). Systemic factors, such as racial discrimination, and social determinants of health (such as financial strain, food insecurity, and housing instability) are associated with disparities in type 2 diabetes (Egede et al. 2023; Hill-Briggs et al. 2020).

**Culturally responsive lifestyle interventions for diabetes prevention can help reduce disparities in outcomes for people with prediabetes and advance health equity<sup>3</sup> for people or groups who have been historically marginalized.** Consistent with statistics for all adults in the United States, about one in three non-Hispanic Black adults (38.6 percent) and Hispanic adults (34.6 percent) have prediabetes, and more than 80 percent do not know that they have it (Centers for Disease Control and Prevention 2022c). Engaging people with prediabetes in prevention programs such as the National DPP LCP can help delay or lower the risk of developing diabetes (National Institute of Diabetes and Digestive and Kidney Diseases 2022). While the National DPP LCP has a large reach overall and enrolled more than 600,000 people to

---

<sup>3</sup> Healthy People 2030 defines “health disparity” as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.” They define “health equity as “the attainment of the highest level of health for all people. Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities.” More information is available here: <https://health.gov/healthypeople/priority-areas/health-equity-healthy-people-2030>.

date, several studies show that attendance and retention is lower overall among Hispanic adults and Black adults. These differences in attendance among groups emphasize the importance of tailoring the program to be culturally responsive and informed by community strengths and structural barriers for these communities (Ritchie et al. 2018; Ely et al. 2017, Centers for Medicare & Medicaid Services 2023; Centers for Disease Control and Prevention 2022a). CDC highlights the importance of ending health disparities in groups at high risk of type 2 diabetes by “recognizing and reflecting their unique cultures, customs, traditions, foods, and physical activity practices” (Centers for Disease Control and Prevention 2023).

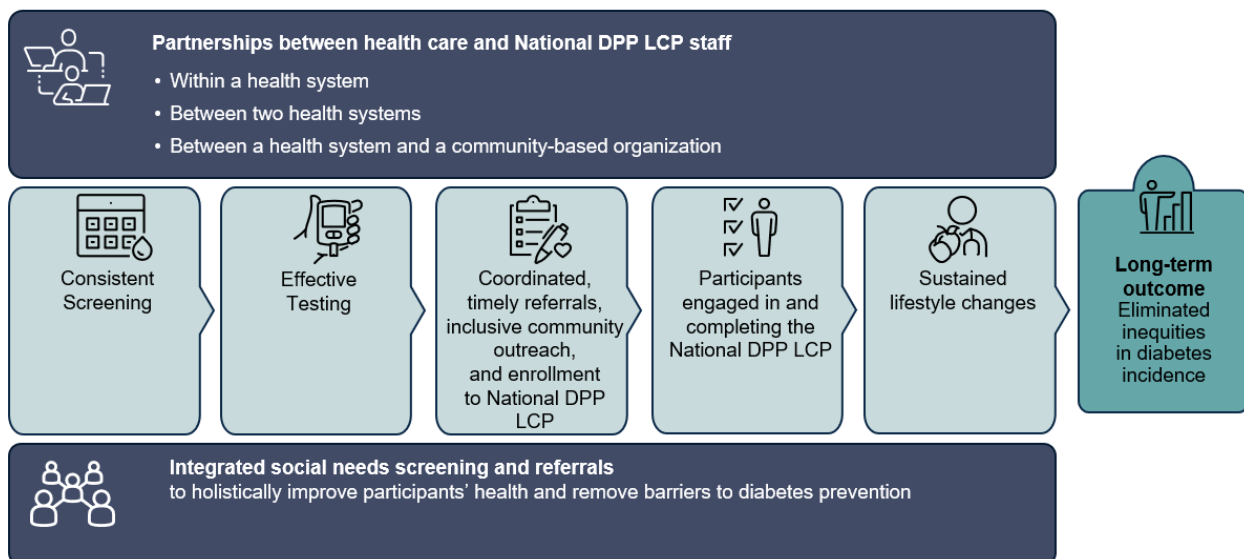
This report describes approaches, challenges, and lessons learned from several healthcare p referring to and implementing the National DPP LCP with a focus on ways to tailor practices to be culturally responsive for Black or Hispanic women.



### III. Advancing equity by providing culturally responsive care at each stage of the prediabetes care pathway

Healthcare providers can integrate equity throughout the prediabetes care pathway, including screening and testing for prediabetes, referring patients to the National DPP LCP, and engaging and retaining participants in the National DPP LCP. Integrating a social needs screening during referral and engagement is an essential equity step to help address barriers to healthy lifestyle changes. Exhibit 3.1 illustrates the pathway.

Exhibit 3.1. Pathways to effective and equitable prediabetes care



While the strategies described below may help other healthcare organizations plan how to better serve Black or Hispanic women at risk of developing type 2 diabetes, it is important to recognize that there is substantial heterogeneity within groups and that each organization's implementation must be adapted to their specific context.



## A. Promote consistent and effective screening and testing

Several<sup>4</sup> of the healthcare organizations that we interviewed for this study integrated diabetes screening and testing into standard clinical workflows, using tests such as HbA1c, fasting glucose, and insulin resistance. Some of the organizations had providers regularly screen during initial visits, annual physicals, or at other regular intervals, while others developed specific algorithms based on clinical risk factors to guide physicians' screening. This section describes the interviewed organizations' key challenges and lessons learned about screening and testing for diabetes.

### Challenges with screening and testing for prediabetes

Organizations shared several challenges related to screening and testing for prediabetes. These challenges include:



**Time constraints for healthcare providers.** Several of the organizations noted that physicians and other healthcare providers often have competing administrative demands on their time. As a result, sometimes they do not have time to prioritize diabetes screening and testing during short clinical visits, which can lead to delays in identifying and referring patients with prediabetes.



**Lack of awareness about racial and ethnic disparities in diabetes.** While screening and testing guidelines may be similar across different racial and ethnic groups, one organization noted that it is important for healthcare providers and leaders to be more aware of disparities in order to promote equity in diabetes prevention.

### Lessons learned about screening and testing for prediabetes

Organizations shared several lessons learned to address these challenges and further enhance screening

---

<sup>4</sup> In the summary, we quantify the organizations who shared information relevant to a theme or strategy. "Some" refers to 2–3 organizations and "Several" refers to 4–8 organizations. "All" refers to all of the organizations in a specified category (e.g., all healthcare organizations or all organizations delivering the National DPP). If the category is not specified, "all" refers to all nine organizations.

and testing practices for prediabetes. These lessons learned include:



**Use clinical decision supports, such as screening algorithms and order sets in electronic health records (EHR), to simplify processes for clinicians.** To maximize physicians' and other healthcare providers' limited time, two organizations developed algorithms that analyze clinical risk factor data to alert healthcare providers about patients who are at risk of developing diabetes and prompt them to test their HbA1c. One organization developed a prediabetes clinical care pathway to guide healthcare providers through workflows for screening and testing. Similarly, two organizations incorporated "order sets" to allow for easy access for providers to order tests. These interventions aim to standardize and streamline healthcare providers' workflows and ensure that they consistently screen and test for diabetes for all patients, including Black or Hispanic women at risk of developing diabetes.



**Raise awareness about screening and testing for the focus population.** Organizations shared various strategies for increasing healthcare providers' focus on the importance of screening and testing for diabetes among Black or Hispanic women. These strategies include:

**Regularly educate physicians and other healthcare providers about health disparities in diabetes prevention.**

Several organizations have community champions, program coordinators, or health education staff host presentations and refresher trainings about screening and testing workflows. Some organizations discuss the increased risk of prediabetes among Black or Hispanic women and the importance of diabetes screening and testing for these communities as part of this education to increase screening and testing overall. Some organizations reported seeing increased numbers of referrals following education sessions and reminders.

"When we do education to the physicians...we talk about the disparities in communities of color...there are disparities according to race [and] ethnicity so that we can know where we should be targeting our efforts toward especially."

~National DPP LCP coordinator

**Use data for population subgroups to track progress and drive quality improvement.**

Several organizations collect self-reported data about language, race, and ethnicity in the EHR. Some organizations look separately at patient reports by race, ethnicity, and language to track rates of screening, testing, and referral for Black or Hispanic women. For instance, one organization uses data for different demographic subgroups to assess the extent to which Black or Hispanic women are receiving testing and to reach out to patients who are due for testing. Some organizations also recommended integrating diabetes prevention into quality improvement projects in which healthcare organizations set specific goals and measure progress to raise care teams' attention to improving screening, testing, and referral rates. A physician respondent from one organization noted that integrating diabetes prevention into quality improvement initiatives as part of continuing medical education requirements may motivate providers to promote the National DPP LCP. A physician respondent from one organization also noted that continuing medical education

"And if we could get... physicians and leaders involved so they can pull that group in and...get their attention. 'Hey, this is an epidemic for our community right now! What are we gonna do?'"

~Community champion



requirements include participating in quality improvement projects, so integrating diabetes prevention into quality improvement initiatives may motivate providers to promote the National DPP LCP.

Exhibit 3.2 summarizes some action steps to improve diabetes screening and testing for Black or Hispanic women.

### Exhibit 3.2. Action steps to improve diabetes screening and testing for Black or Hispanic women

- **Use clinical decision supports**, such as screening algorithms and order sets in EHR, to simplify processes for clinicians and increase rates of screening and testing overall, including for Black or Hispanic women.
- **Discuss the increased risk of prediabetes** among Black or Hispanic women and the importance of diabetes screening and testing for these communities as part of education to increase screening and testing overall.
- Collect **self-reported race, ethnicity, and language data** and use these data to **track screening and testing rates** for Black or Hispanic women.
- **Integrate diabetes prevention into quality improvement projects**, including measurement of outcomes for different demographic subgroups, to improve healthcare providers' awareness to improve screening, testing, and referral rates.



## B. Perform coordinated and inclusive outreach and referrals

Facilitating coordinated, timely referrals and inclusive community outreach is an important step in enrolling Black or Hispanic women in the National DPP LCP. While some health systems offer the National DPP LCP, others refer to other National DPP LCP providers, such as providers located in another health system or within a community-based organization. This section describes the experience of the interviewed organizations' key challenges and lessons learned about processing referrals from healthcare providers and conducting community outreach. It also provides specific challenges and lessons learned for organizations referring patients to National DPP LCP providers in other health systems or community-based organizations.

### Challenges with outreach and referrals

Organizations shared several important challenges related to outreach and referrals that affect Black or



Hispanic women as well as other people. These challenges include:



**Lack of awareness among physicians and other healthcare providers about National DPP LCP eligibility and referral processes.** Some organizations shared that physicians and other healthcare providers may not understand the referral process or the eligibility criteria for referral to the National DPP LCP. Furthermore, one physician respondent shared that they hesitate to refer patients who need language interpretation support to a National DPP LCP because there may not be interpreter services available.



**Limited staff capacity to conduct outreach and process referrals.** During the COVID-19 response, three organizations had to pause non-emergency healthcare or redeploy staff to support COVID-19 response activities, which limited the staff who could conduct outreach and process referrals. In some organizations, a small number of staff handled most or all of the referrals, and when staff shift roles, this can affect the organizations' capacity to process referrals. This limits access to referrals for all patients, including Black or Hispanic women.



**Challenges with communicating about program expectations with patients.** Some organizations mentioned that sometimes patients may not receive information about diabetes prevention or may not fully understand the prediabetes diagnosis and the importance of lifestyle intervention.

Organizations that refer patients to a different health system or to a community-based organization also shared several challenges about communication and coordination between the referring organization(s) and the National DPP LCP provider. These communication and coordination challenges limit access to referrals for all patients, including Black or Hispanic women.

"It's important that you have someone who is bilingual so that they can understand. Whether it's an interpreter or someone who is able to speak Spanish so that they can comprehend it better.... Patients are more reluctant to participate if they don't understand the concept [of prediabetes] ... even if it's in Spanish and they're not understanding; they're thinking they're diabetic. And so, it's beneficial to have someone who can culturally speak their language."

~Medical assistant

These challenges include:



**Lack of patient awareness about the role of different organizations in delivering the program.** Patients who regularly receive care in one health system and receive a referral to the National DPP LCP at another organization may be unfamiliar with the role of other health systems or community-based organizations delivering the National DPP LCP. When the National DPP LCP provider organization follows up on the referral, without adequate context about the collaboration between the health systems, prospective participants may feel distrustful or not respond.



**Limitations in data sharing and interoperability across organizations.** Some organizations faced challenges in getting institutional buy-in for data sharing across health systems. Several organizations

experienced technical limitations where they could not easily access one another's data systems to share demographic or health information across health systems and/or with community-based organizations. As a result, several organizations that are sharing referrals to National DPP LCP providers in other health systems or within a community-based organization need to rely on secure email or faxes rather than automate referrals through the EHR due to a lack of interoperability of data systems.

### Lessons learned for outreach and referrals

Organizations shared several lessons learned to address these challenges and further enhance outreach and referral processes. These lessons learned include:



**Educate physicians and other healthcare providers about the importance of referrals and referral processes.** All the organizations delivering the National DPP LCP receive referrals from physicians and other healthcare professionals (such as medical assistants, dieticians, or nurses), who educate patients about prediabetes and about the National DPP LCP. These healthcare professionals share patients' contact information via the EHR or spreadsheets with the National DPP LCP provider staff for follow-up and enrollment.

Organizations shared two main strategies to educate and engage physicians and other healthcare providers in referring patients to the National DPP LCP:

**Conduct periodic refresher sessions about the referral process.** All the healthcare organizations host refresher sessions to remind physicians and other healthcare providers about the importance and process of referring eligible patients to the National DPP LCP, and several shared that they see the number of referrals increase after refresher sessions about the program. During information sessions, three organizations discussed disparities in diabetes or the importance of referrals to the National DPP LCP that can benefit Black or Hispanic women. Some organizations noted that sharing patient success stories with the program helps reinforce the program's success and improve referrals. During the refresher sessions, several organizations also discuss their referral processes. For example, one organization uses clinical support tools like Smartphrases, which are pre-populated messages in the EHR to promote consistent messaging and support physicians in educating patients about prediabetes as they refer them to the National DPP LCP. Several other organizations use prediabetes registries and databases to identify eligible participants to reach out to via calls or letters for referrals, analyze that information by race and other demographics to identify gaps and trends, and share updates about referrals with physicians and other healthcare providers.

**Support physician and other clinical champions to educate about and get buy-in for the National DPP LCP.** These physician and other clinical champions can answer physician and other healthcare providers' questions about referrals. They can also answer patients' questions about prediabetes and build buy-in for the program among physicians and other healthcare providers. Clinical and community champions can also facilitate

"Our education piece... is continuous. So, working on...for example, our enhancements with the DPP referrals, we would bring information back to the providers, they discuss health disparities. That's a big educational offering that is mandatory. So that gets through everybody from the provider down to our non-clinical staff... everybody's involved with that training, which helps to identify disparities and promotes the referrals as well."

~Health systems administrator

trainings about the importance of improving equity in prediabetes referrals for the focus communities.



**Build staff capacity for referrals.** Organizations shared two key strategies to build staff capacity for physicians and other healthcare providers in referring patients to the National DPP LCP:

**Engage clinical team members who can build rapport while educating prospective participants about the program.** Several organizations engaged care team members such as medical assistants, care managers, and nurse practitioners to connect with patients who were referred by their physicians. These care team members educated prospective participants about prediabetes and the National DPP LCP and answered their questions individually or through group information sessions. Several organizations emphasized the importance of engaging staff who come from similar cultural or linguistic backgrounds as prospective participants to build rapport and address participants' questions. In particular, several of the organizations described the importance of engaging Spanish-speaking staff to support Hispanic participants and using interpreter services. Some organizations shared that they engage Black healthcare professionals and National DPP LCP coordinators to build rapport during information sessions and classes for Black participants.

"I do get a better response with African American referees because I can relate. I can speak in their terms. Where, you know, they understand and they're not as afraid of just the pre[diabetes] diagnosis... it leaves that room for them to say, okay, well, yeah, this is something I can handle. This is something I can do. It's not so hard. And it's not so intimidating coming from their doctor or someone of the other race who, you know, may not be as comfortable or can understand how we handle diagnosis and even pre-diagnosis. So, it is a plus for me."

~Community champion and  
National DPP LCP coordinator

**Hire and train community health workers, community champions, or patient navigators to support community outreach and enrollment.** Several organizations also engage these staff to support outreach, such as posting flyers or giving presentations at community centers, places of worship, libraries, and bus stations. Community health workers affiliated with the National DPP LCP can help invite Black or Hispanic women to health fairs and host events within the neighborhoods they live in to share about the National DPP LCP. For example, several organizations worked with churches to educate Black or Hispanic women about the National DPP LCP. One of these organizations employs an African American community champion, who focuses on outreach about the National DPP LCP to Black women through attending community events, such as a Juneteenth observance.



**Improve the effectiveness and cultural responsiveness of patient education.** In some organizations, healthcare staff from the referring organization reach out to prospective participants to share information about the program and enroll participants. In other programs, National DPP LCP staff, such as National DPP LCP coordinators,

"I think that...is a big game changer: our Hispanic population is more connected if they have a community health worker that is Hispanic. Same thing with our Black women, they feel more comfortable if they're talking to a community health worker that is also of their same race and ethnicity."

~National DPP LCP coordinator

coaches, and health educators conduct the outreach and enrollment. Some organizations match Spanish-speaking prospective participants with Spanish-speaking Lifestyle Coaches or community health workers. Several organizations ask participants to complete intake forms or diabetes risk questionnaires. Healthcare staff and National DPP LCP staff use a wide range of modes to educate prospective participants about the program, including letters, text messages, emails, calls, and flyers. Organizations shared several strategies to improve the effectiveness and cultural responsiveness of patient education materials and information sessions. These strategies include:

**Translate materials into languages other than English.** To share about the National DPP LCP, organizations often posted information through paper flyers in healthcare settings and community centers or in newsletters. All the healthcare organizations translated educational flyers into Spanish to be more accessible to Spanish-speaking prospective participants. Some organizations included a QR code on the flyers to allow participants to select their preferred language and to translate the flyer into other languages through tools such as Google Translate.

**Use images and messaging on marketing materials that are reflective of focus communities.** Several organizations used images on flyers that featured Black or Hispanic families. For instance, one organization used flyers from CDC that featured Black families engaging in physical activity. [BWHI creates TV ads and social media content featuring Black women participating in lifestyle changes, and one organization uses that content for outreach.](#)

Other organizations adapted messaging based on input from BWHI. To market the National DPP LCP more effectively for Black women, one organization is working on reframing the National DPP LCP. Rather than focusing on messaging about disease prevention, the organization is framing the benefits of the program as an opportunity that supports wellness and enables participants to be able to be healthy enough to do what they love.

**Engage past participants as champions for the program during information sessions.** Several organizations host information sessions or health fairs at the clinic or community centers to answer prospective participants' questions about the program. Some organizations hosted these information sessions in both English and Spanish. [Several organizations have or are working on featuring testimonies of past participants in information sessions to communicate the value of the program and answer prospective participants' questions.](#) Click here to see Some organizations highlighted the value of having past participants from similar cultural backgrounds speak about the program to help relate to prospective participants' experiences.

**Assess participants' readiness and motivation to participate in the program.**

Several organizations emphasized the importance of communicating the effects of prediabetes on patients' health and understanding their motivations for making lifestyle changes based on their healthcare provider's recommendation. For instance, one organization uses a readiness assessment to understand participants' willingness and ability to participate in the program, which can inform their

"It's helpful to have someone from their own community speak out and say, 'Hey, I went through this program, I educated myself.' Having a face that can represent them and they can feel like that person's just like me, I identify with them, makes them feel that much more comfortable with doing these types of programs."

~National DPP LCP coach

likeliness to enroll and stay in the program. By being clear and transparent about the program requirements, Lifestyle Coaches and other staff handling referrals can help prospective participants feel more informed and confident in assessing their availability to participate.

Organizations that refer patients to a different health system or to a community-based organization shared several lessons learned to address communication and coordination between the referring organizations and the National DPP LCP provider. While these strategies are more overarching than population-specific, they can improve program delivery and program uptake among participants, including Black or Hispanic women. These lessons learned include:



**Communicate the role of the other health system or community-based organization in delivering the National DPP LCP.** Organizations that refer patients to National DPP LCPs in other organizations shared two main strategies to help patients understand the role of both organizations in the partnership. These strategies include:

**Have the National DPP LCP provider organization be present at the clinical site referring patients to build familiarity.** Some organizations shared the importance of the National DPP LCP provider organization posting flyers, conducting information sessions, and attending health fairs. The organizations also recommended delivering classes at the referring healthcare organization that patients are most familiar with. These strategies helped raise awareness about the role of the National DPP LCP provider organization, built trust and rapport, and increased the likelihood that prospective participants respond when the National DPP LCP provider reaches out to follow up on a referral.

**Co-brand communications with both organizations' information.** Several organizations also noted that including logos of both organizations and including content (such as quotes from the referring healthcare organization) can help build awareness among prospective participants about the role of the two organizations.



**Support ongoing communication between leadership of the two organizations to align on common goals and processes.** Developing and sustaining successful partnerships between a referring healthcare organization and a separate National DPP LCP provider requires leadership buy-in and alignment. Strategies to build this alignment include:

**Convene leaders from both organizations to develop shared goals.** To better align shared goals, two organizations held a quarterly steering committee meeting with leaders and key staff from both organizations. They conducted monthly workgroup meetings with project leaders to discuss progress, identify issues, and develop shared workplans. The organizations also jointly participated in trainings hosted by BWHI. Another organization developed memorandums of understanding with their partner clinics to clearly outline the shared goals and commitment of both organizations.

**Share data about referral tracking and participant outcomes.** [Some organizations also found that sharing information about referrals and participants' outcomes through dashboards,](#) registries, and reports helped teams from both organizations monitor progress, identify workflow barriers, and identify areas for improvement in the referral processes.

Exhibit 3.3 summarizes some action steps to refer Black or Hispanic women with prediabetes. The box also highlights some additional considerations for collaboration between different organizations referring and delivering the National DPP LCP.

### Exhibit 3.3. Action steps to refer Black or Hispanic women with prediabetes to the National DPP LCP

- **Host periodic refresher sessions for physicians and other healthcare professionals** to discuss the importance of referring Black or Hispanic women with prediabetes to the National DPP LCP, clarify the referral process, and share program data such as referral rates and participants' success stories.
- **Support physician and other clinical champions** to facilitate trainings about prediabetes referrals for the focus communities and answer physician and other healthcare providers' questions about referrals. Physicians and other clinical champions can also answer patients' questions about prediabetes; and build buy-in for the program. **Engage clinical team members, such as medical assistants, care coordinators, and nurse practitioners** from similar cultural and linguistic backgrounds as the prospective participants to build rapport and educate participants about the program.
- **Hire and train community health workers, community champions, or patient navigators** to support community outreach through social media and posting flyers and giving presentations in places of worship, libraries, community centers, and bus stations.
- **Translate educational materials** into Spanish and languages other than English.
- **Use images on marketing materials that are responsive to Black or Hispanic communities.** For example, include images of Black or Hispanic families on flyers and social media posts and tailor messaging to focus on wellness promotion.
- **Engage past participants from similar cultural backgrounds** to share their experiences with the National DPP LCP during information sessions and offer information sessions in multiple languages.
- **Assess participants' readiness and motivation to participate in the program** and clearly and transparently communicate the program requirements.

#### ***Additional considerations for organizations that refer to a different health system or to a community-based organization***

- **Have the National DPP LCP provider organization present or host National DPP LCP sessions at the clinical site referring patients** to raise awareness about the National DPP LCP provider's role and build trust among prospective participants.
- **Co-brand communications with both organizations' information** to create cohesive and clear messaging that highlights each organization's role(s) for participants.
- **Convene leaders from both organizations** through regular meetings, workgroups, and shared trainings to align on shared goals, build buy-in for shared processes, and identify and address any workflow issues that arise.
- **Share data about referral tracking and participant outcomes** between organizations through dashboards and reports to help teams from both organizations monitor progress, identify workflow barriers, and identify areas for improvement in the referral processes.





### C. Integrate social needs screening and referrals to holistically improve participants' health

Some Black or Hispanic people experience persistent structural inequities that contribute to social and economic conditions such as food insecurity and poverty. These conditions negatively affect the health outcomes of these communities. An important aspect of improving health equity is effectively screening for and addressing social needs, building on community resilience, resources, and strengths (Kaiser Family Foundation 2022; U.S. Department of Health and Human Services Office of Minority Health 2023). This section describes the experience of the interviewed organizations' key challenges and the lessons learned about screening for and addressing social needs for Black or Hispanic women with prediabetes.

"I am pretty much always looking out for opportunities that I can pass on to my patients... just letting them know that I'm aware of their needs and that I will try to look for some...solution, even if partial, releases some of the stress for them and makes it a little bit easier for them to continue to give it their best effort to lose the weight and stay in the program."

~Physician

#### Screening for social needs

##### *Challenges with screening for social needs*

Organizations shared challenges related to screening for social needs. These challenges include:



**Hesitation or uncertainty about how the information may be used.** Some organizations shared that some Black or Hispanic participants may express hesitation sharing information about their social needs. In particular, one respondent reported some participants fear that disclosing personal information may affect immigration status. Some organizations observed discomfort about sharing personal information about topics such as food insecurity, especially early in the relationship. For instance, one organization found that the families of some of their Hispanic women clients do not want the clients to share about their families' challenges with finances and food insecurity.



**Language or cultural barriers for screening tools.** Another barrier is translating the screening tools to Spanish and languages other than English. One organization shared that when translating the tool from English to Spanish, the dialect did not translate properly, so the organization had to reword the questions before administering the assessment.

### Lessons learned about screening for social needs

Organizations shared several lessons learned to address these challenges and further enhance social needs screening practices. These lessons learned include:



**Build trust with participants and be transparent about how staff will use information to support participants.**

To address hesitation about disclosing personal information, an organization reassures participants that the National DPP LCP staff will only use the information to better support them in their needs and that providing the information will not jeopardize their immigration status. A respondent from a different organization shared that sometimes participants initially feel uncomfortable answering specific questions about social needs. This respondent found it helpful to focus on building trust with the Black women she

“We did have to make sure to connect with our patients and...be honest with them that nothing was going to get released to any... type of authorities or any government agencies, that this is just for us to be able to better support them in any of their needs.”

~Health systems administrator

works with so that they felt more comfortable sharing about their social needs. One way to build trust is to **conduct individual check-ins to gather information about social needs.** In several of the organizations, National DPP LCP Lifestyle Coaches discuss social needs with participants to build trust and follow up with them about whether their needs have been met. In some organizations, Lifestyle Coaches have regular support calls with participants to check in on social needs, and a respondent affirmed that some Black women she works with feel comfortable opening up about social needs during these check-ins. In several organizations, National DPP LCP Lifestyle Coaches and coordinators gather information about social needs informally as participants raise them during National DPP LCP classes or clinic visits.



**Offer social needs screening in different languages and modalities to align with cultural and personal preferences.** Several of the organizations used a screening tool or questionnaire to screen for social needs. Three organizations implemented a modified version of the Protocols for Responding to and Assessing Patients’ Assets, Risks, and Experience (also known as PRAPARE) screener, one used the American Academy of Family Physicians’ Social Needs Screening tool, and three others used screening tools that they administered either via the EHR or as a form for participants to fill out. Examples of social needs covered by the tools include education, food insecurity, housing insecurity, social isolation, transportation, safety, mental health, insurance, tobacco use, and access to childcare. Workflows for administering screening tools varied across organizations. In some organizations, physicians or other healthcare providers screen during clinic visits; in others, National DPP LCP coordinators or Lifestyle Coaches fill out a social needs survey during a National DPP LCP class session.

Several of the organizations have integrated or are in the process of integrating findings from social

needs screening into an EHR. This information is available to different members of the care team (such as physicians and other healthcare providers). In some organizations, National DPP LCP coordinators and Lifestyle Coaches can access the EHR; this helps provide context when participants are enrolling in the program and provides a space to document the social needs information they collect. Organizations shared strategies to adapt screening processes to be more culturally responsive and aligned with participants' preferences. These strategies include:

**Translating social needs screening tools into different languages.** Some organizations offer their social needs screening tool in Spanish to make it accessible for Spanish-speaking participants. Some organizations have interpreters or Spanish-speaking National DPP LCP Lifestyle Coaches who walk through the social needs screening tool with participants to address any questions and help collect information about participants' social needs.

**Offering flexibility in the modality for screening.** Some organizations shared that in addition to addressing language preferences, offering several different ways to complete social needs screening tools can make the process easier for participants. Some organizations integrated a social needs screening tool into text messages, offered paper surveys, or included the tool in the Zoom registration link for the National DPP LCP class to align with participants' preferences.

### Addressing social needs

#### *Challenges with addressing social needs*

Organizations shared challenges related to addressing social needs. These challenges include:



**Limited staff capacity to address social needs.** Some organizations described institutional challenges – including staffing shortages because of COVID-19, staff turnover, and barriers to training – that limited the capacity of staff (i.e., coaches, community health workers, and patient navigators) to address participants' social needs. A respondent from another organization shared that while there are relevant trainings available about National DPP LCP delivery, the cost—which is around \$40 per session—can be prohibitive for some National DPP LCP Lifestyle Coaches.



**Limited awareness about and availability of resources in the community.** One organization mentioned that some resources made available during the COVID-19 pandemic are now expiring, making it challenging for coaches to find resources for participants. Another shared that sometimes they have difficulty finding adequate follow-up connections to address social needs.

### Lessons learned about addressing social needs

Organizations shared several lessons learned to address these challenges and further enhance practices to address social needs. These lessons learned include:



**Build staff capacity to address social needs.** Organizations shared several strategies for building staff capacity to address social needs including:

**Hiring and retaining community health workers, social workers, or patient navigators to refer and connect participants with resources in participants' preferred language.** Several

organizations employ or are working to hire health navigators, social workers, or community health workers to supplement the National DPP LCP Lifestyle Coaches' efforts to help address social needs. Some organizations hired a Spanish-speaking health navigator or community health worker to help Spanish-speaking participants, and another organization employed a Black community health navigator to help screen for social needs and connect participants to resources.

"We walk alongside our patients or our clients to be able to connect them to those resources and we stay with them until...that goal has been met... our Lifestyle Coaches and our community health workers have these lived experiences. So, at times they can identify with our clients by saying, 'We've gone through this, we know what you're going through and it's okay. We're here not to judge but here to help you so that we can continue to move forward together.'"

~National DPP LCP coordinator

**Building staff capacity through training.** Several organizations support staff through trainings on providing social needs screening, equity, implicit bias, and the process of sharing community resources on topics such as mental health services, housing, safety, and food access with participants.



**Identify community resources with capacity to serve participants.** Organizations shared the importance of identifying new resources, building partnerships with community organizations, and ensuring that resources are culturally and linguistically responsive. These strategies and resources include:

**Providing education about available resources.** To help participants address social needs, several of the interviewed organizations provided resources about available services, such as handouts with information about local food banks and community garden resources, newsletters with relevant events, and other education materials. Several use **community resource**

"We do try to tailor the resources to the population that we're providing it to... if you give that number to a patient and they call and no one speaks their language, nothing happens."

~Health systems leader

**platforms** to identify relevant resources, share them with participants, and track referrals. Examples of community resource platforms include [One Degree](#), [FindHelp](#), and [UniteUs](#). One organization found the [One Degree](#) platform effective because it transmits referral information via email, text, and paper printout and allows National DPP LCP staff to know if participants had used the resources.

**Offering services such as access to produce stands, nutrition classes, or produce vouchers.** In addition to referrals to external resources, several organizations also offered services to address food insecurity and access to physical activity. The services included vouchers to purchase fresh fruits and vegetables, on-site fitness classes, on-site nutrition classes, and on-site produce markets. One organization offers online orders and contactless pick-ups for the farm stand produce to make it as easy as possible to access healthy food.

**Offering mental and emotional health support.** Several organizations found that mental and emotional health was a common social need among their participants. To address this, organizations implemented several strategies including having National DPP LCP Lifestyle Coaches talk about mental health, share resources and referrals to behavioral health resources, and connect participants with pastoral care to support their emotional health. One respondent commented that pastoral care to provide emotional support was helpful for program engagement, especially for some of the

program's Black women participants. Similarly, one organization hosts a conference in partnership with a local church that serves many Hispanic people; this combines health education and screenings with church services as a way of building community among participants and addressing their emotional and spiritual needs.

**Develop relationships with other service providers to ensure that they offer culturally responsive services.**

Organizations partner with health systems, physician groups, public health agencies, and community-based organizations to learn about and connect participants to more resources to address their social needs. Several organizations emphasized the importance of ensuring that community resources have Spanish-speaking staff before referring some of their Hispanic participants. One organization shared that they find it helpful to use feedback that they receive from participants about social services to update their resource lists.

"The good thing about the community health workers is they're connected to the community... so they can make sure they're referring to a culturally appropriate...organization for the client or the patient that they're supporting. Within the community resource directory, there are filters where you can filter by neighborhood [and zip code] ... I know specifically for African Americans...we prefer a more...tight knit community where we don't really want to go outside of the neighborhood too much... And then there's a filter to change the language so that we [can] refer patients ...to organizations who can talk to them in their language and support them for their unique needs."

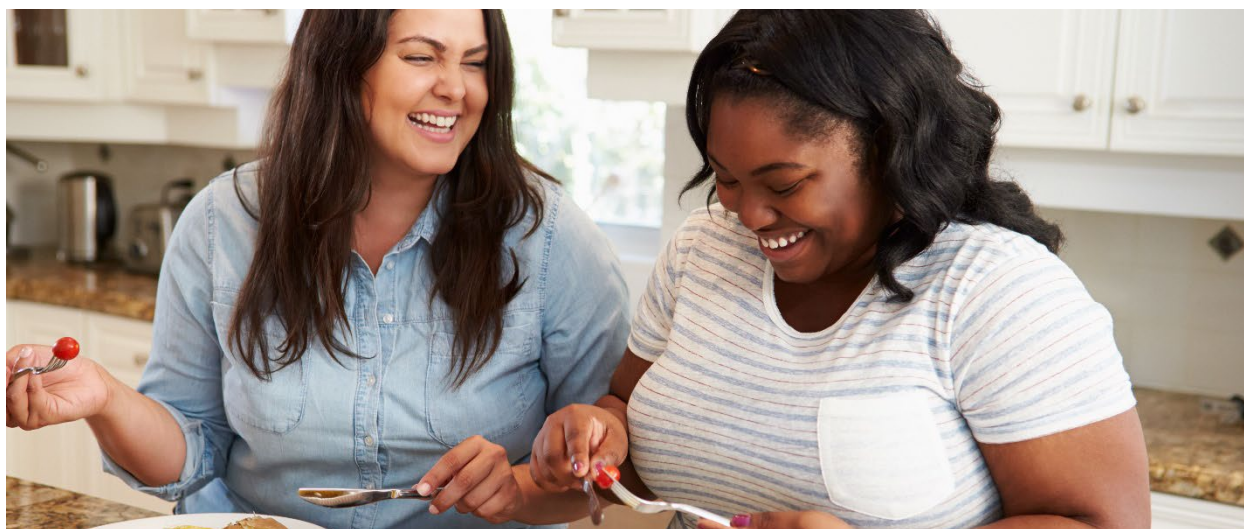
~National DPP LCP coordinator

Exhibit 3.4 summarizes some action steps to screen for and address social needs for Black or Hispanic women with prediabetes.

**Exhibit 3.4. Action steps to screen for and address social needs for Black or Hispanic women with prediabetes**

- **Address concerns about disclosing personal information**, such as stigma and fear of effects on immigration status, by **reassuring participants about how the staff intends to use the information** to address social needs and **providing options for when and how participants share** their social needs.
- **Conduct individual check-ins** with participants to build trust, discuss social needs, and follow up with them about whether the social needs have been met.
- **Translate social needs screening tools** into Spanish and languages other than English and **offer participants support in person or via phone from interpreters and other staff** who speak the participant's language.
- Offer participants **different options of how to share social needs information**, such as **text messaging, paper, phone, and online forms**, to align with participants' preferences.
- **Hire and retain community health workers, social workers, or patient navigators** to refer and connect participants with resources in the participants' preferred language.
- **Build staff capacity through training** strategies to help participants address social needs in a culturally responsive way.
- **Offer services such as access to produce stands, nutrition classes, or produce vouchers** to address food insecurity for Black or Hispanic women.
- **Offer mental and emotional health support** for Black or Hispanic women by providing referrals to culturally responsive behavioral health services and pastoral care, when appropriate.
- **Build relationships with community-based organizations, other health systems, physician groups, and public health agencies** to learn about resources to address participants' needs and **ensure that they offer culturally and linguistically responsive services** for Black or Hispanic women before referring participants. Provide education about available resources in the community through flyers and community resource platforms.





## D. Engaging and retaining diverse participants in the National DPP LCP

Engaging and retaining Black or Hispanic women with prediabetes in the National DPP LCP is an essential aspect of the pathway toward better outcomes shown in Figure 1. This section describes the interviewed organizations' key challenges and lessons learned about ways to address barriers and improve Black or Hispanic women with prediabetes' participation in the National DPP LCP.

### Challenges with enrollment and retention

Organizations shared challenges related to engaging and retaining participants in the National DPP LCP. These challenges include:



**Time constraints for participants.** All the organizations noted that many of the Black or Hispanic women referred to their National DPP LCP experience time constraints with participating in the year-long program. Several of the organizations noted that women in their programs have other competing priorities, such as caregiving and professional responsibilities, which limits their capacity to attend National DPP LCP classes and track their nutrition and weight outcomes.



**Financial constraints and social determinants of health.** In addition to time constraints, several of the organizations noted that some Black or Hispanic women experience financial barriers to participating in the National DPP LCP. Three organizations noted that some of the Black or Hispanic women they work with do not have access to insurance or may not receive information about insurance and other options to cover the cost of the National DPP LCP. The cost of program delivery varies by National DPP LCP provider, averaging around \$500 annually per participant nationally (Centers for Disease Control and Prevention 2021), which can be a barrier to participating in the program. Financial barriers can also affect other social determinants of health (such as access to healthy food, transportation, housing, and access to safe spaces to exercise) that affect participants' capacity to engage in the National DPP LCP and to sustain lifestyle changes.





**Health literacy, language, and cultural barriers.** Even if participants have sufficient time and financial resources to participate, a lack of awareness about prediabetes and a lack of culturally and linguistically responsive services can prevent some participants from engaging in the National DPP LCP. Several organizations noted that lack of education about prediabetes can be a barrier to some Black or Hispanic women participating in the National DPP LCP. While respondents noted that participants are motivated to address their health, they noted that some participants have misperceptions about the causes of prediabetes and the role of social determinants of health (such as food access) in chronic conditions. Some organizations also mentioned that due to resource constraints, they have limited or no capacity to offer classes in languages other than English, which can serve as a barrier for some participants. Similarly, one organization shared challenges with hiring and training coaches of similar racial or cultural background as participants. One organization noted that participants of color sometimes struggle in class when they are the only one of their racial or cultural background in that class.



**Digital barriers for participants to engage in virtual National DPP LCP programs.** Other barriers to engaging in the National DPP LCP include access to technology or comfort level using technology to access classes. Due to the COVID-19 pandemic, all the organizations interviewed transitioned to delivering the National DPP LCP through virtual platforms such as Zoom and Microsoft Teams or hybrid formats. While offering the program virtually reduced transportation barriers and in some cases improved engagement, other participants experienced challenges navigating and learning in the virtual class format. Some participants experienced structural barriers, such as lack of access to the internet or electronic devices, and some participants did not feel comfortable using electronic platforms to participate in classes or to report weight and nutrition data. Some respondents also shared that Lifestyle Coaches struggled to make participants feel connected with one another in a virtual setting rather than an in-person environment, which may have reduced participants' motivation to engage throughout the program. One respondent noted that some of their Spanish-speaking participants experienced literacy barriers that make it difficult for them to connect virtually. Another noted that several of their Hispanic participants preferred to connect to the program in person rather than through video meetings or text messages, while another shared that they found that Hispanic participants preferred connecting virtually to have more flexibility to fit the class into busy lifestyles. These varied experiences suggest the need to offer support and various options for participants to engage based on their preferences and comfort level.

### **Lessons learned about engaging and retaining participants in the National DPP LCP.**

Organizations shared several lessons learned to address these challenges and further enhance practices to engage and retain participants in the National DPP LCP. These lessons learned include:



**Offer flexibility in timing.** Several of the organizations shared that they offer classes at various times of the day to give Black or Hispanic women options about when to participate. To accommodate busy schedules, some organizations offer morning, afternoon, and evening classes and classes over the weekends.



**Offer financial aid or education about payment options.** Several organizations emphasized the importance of making the program financially accessible to all participants. One organization—a free clinic—can offer the program for free due to grant funding and charitable donations. Some other organizations offer financial aid to participants or are working on getting insurance reimbursement from Medicare and other payers. The organizations emphasized the importance of communicating these payment options to the healthcare providers who are referring participants to the program.



**Tailor the program delivery to be culturally and linguistically responsive and offer individualized support.** Several organizations shared that making the program culturally responsive and offering individualized check-ins and support help improve Black or Hispanic women's engagement in the National DPP LCP. They shared lessons learned from various strategies such as:

"And I think we've seen more responsiveness from our patients when we're talking to them about food and the food is something that they recognize... you can talk about chicken and broccoli all day long. But if that's not what they're eating or they don't have access to that, it doesn't mean anything to them. "

~Health system leader

**Tailoring lessons to align with culturally relevant examples, such as traditional foods.** All the organizations emphasized the importance of including cultural or traditional foods when discussing nutrition with participants. For example, some organizations discussed the importance of recognizing that the standard "healthy plate" can look different for people from different cultures. Some organizations include examples in their curriculum of healthy plates with foods that Black or Hispanic women regularly eat and feature these meals in cooking demonstrations or displays to be culturally relevant for the Hispanic and Black participants. One organization also emphasized the importance of recognizing the impacts of traditional herbal supplements or foods, such as cactus, that participants use to reduce blood sugar levels, and discuss those during nutrition sessions. Several organizations also described the importance of respecting that participants' nutritional choices are shaped by generations of cultural context. Rather than asking participants to eliminate foods that are important to their culture but may have high fat or sugar content, respondents recommended working with participants to adjust portion size, adjust frequency, or consider alternate ways to prepare the food. In particular, one organization highlighted the importance of discussing traditional foods for cultural holidays during nutrition classes. In addition to nutrition, organizations described the importance of using culturally relevant examples in program delivery. One organization shared that they use the BWHI's curriculum, which includes additional lessons tailored to topics that are salient for Black women, such as checking for thyroid issues, which are common in this community. Facilitating conversations where participants can discuss topics that affect their communities and share examples of foods they regularly eat can help participants engage

"Having someone that's from their community that speaks their language, that is definitely very key and vital to the program. We have seen that, for example, our Lifestyle Coach, she does speak Spanish, she is of Latinx descent. So, when she does... facilitate the National Diabetes Prevention Program, we do see that our participants feel more comfortable and she's able to relate right to our communities."

~National DPP LCP coordinator

more as they learn about lifestyle changes from one another and from the National DPP LCP Lifestyle Coaches.

**Training and retaining staff who are representative of the communities they serve and can relate to cultural factors that influence lifestyle.** While it is important to recognize the diversity within groups and not assume that people's experiences will be the same based on shared racial or cultural backgrounds, respondents from several organizations noted they observed that participants feel more comfortable when engaging with National DPP LCP Lifestyle Coaches, community workers, or other staff who speak the same language and may be able to relate to cultural factors, such as diet, that influence lifestyle. Examples, paraphrased from the interviews, include (one respondent each):


- Some Hispanic participants felt more comfortable with a National DPP LCP Lifestyle Coach who speaks Spanish and could share about common cultural foods, such as tortillas, in the context of nutrition education.
- Some Black participants appreciated speaking with Black Lifestyle Coaches who could relate to the type of foods they grew up eating.
- Some participants appreciated when organizations brought in experts from similar cultural backgrounds, such as a Black nurse practitioner and a Black community champion, as guest speakers in a National DPP LCP class.
- Having co-facilitators from diverse backgrounds, such as a Hispanic Lifestyle Coach and an African American community health worker, leading a class helped the staff better connect with participants. Hiring and supporting diverse staff gave participants more options to find and build rapport with Lifestyle Coaches who can relate to the factors that contribute to their lifestyle changes.

**Tailoring physical activities to align with busy lifestyles.** To address barriers to physical activity that some Black or Hispanic women face, such as limited time and safe spaces to exercise, organizations emphasized the importance of engaging families and offering creative ways to build in exercise amid busy schedules. Some organizations found that offering exercise classes to Black or Hispanic participants' children and families motivated participants to engage in physical activity. Other strategies to engage Black or Hispanic women to participate in exercise include encouraging participants to walk together in their neighborhoods, build small increments of exercise in between caregiving and professional responsibilities, use exercise videos in their homes if it is unsafe to exercise outdoors, and redefine daily activities (such as vacuuming) as exercise.

**Providing individual support.** Several organizations emphasized the value of individualized support and active listening to help meet Black or Hispanic women where they are, better understand the barriers and facilitators to participate, and promote engagement in the program. National DPP LCP Lifestyle Coaches in several of the organizations meet individually with participants to check in about progress toward goals, offer strategies to overcome barriers to participation (such as access to healthy food), and build rapport. Some organizations use periodic text messages, emails, or other messages to remind participants about upcoming classes. Several organizations also emphasized that **motivational interviewing** is helpful to understand participants' goals for the program, and that **active listening** and understanding body language can help with building trust for Black women to

participate in the program. One organization noted that having physicians and other healthcare providers check in with participants about their experience with the program can also help motivate them to stay engaged and address barriers to participation. Using a nonjudgmental approach and offering individualized support outside of group classes can help build participants' trust and engagement in the program.

**Offering incentives and community support.** In addition to individualized support, organizations shared that offering incentives and fostering peer support can build motivation and accountability for Black or Hispanic women to participate and complete the program. For instance, one organization **offers small incentives** (such as stress balls and measuring cups) at each session. Organizations also noted that **fostering peer support and community** helped keep participants accountable and engaged in the program. For example, some organizations invited participants to create group chats over platforms such as WhatsApp to check in with each other, share successes and challenges, and send motivational messages.

 **Offer support and flexibility to help participants succeed in virtual and hybrid classes.** Several organizations shared strategies to help improve Black or Hispanic women's engagement in virtual or hybrid versions of the National DPP LCP. These strategies include:

**Offering options for virtual, hybrid, and in-person engagement.** All organizations emphasized the value of offering multiple modalities for the class to meet Black or Hispanic women's preferences. Several organizations noted that offering virtual classes helps reduce transportation and cost barriers as well as travel time. They noted, however, that sometimes people prefer in-person classes to develop more peer-to-peer connection or because they may not have access or experience using technology. Where possible, offering different approaches helps participants engage. One organization noted that many of their Hispanic participants preferred in-person classes, whereas many of their Black participants preferred connecting over Zoom. By offering both options, they were able to engage participants in an environment that they felt most comfortable. For participants who are comfortable with using technology, organizations shared that using YouTube videos, social media, and apps for tracking food helped engage participants.

**Offering technical support to access and use technology.** Organizations using technology to deliver the DPP emphasized the importance of offering support to help Black or Hispanic women participating in virtual National DPP LCP programs access and use technology. Some organizations trained Lifestyle Coaches to provide technical support to participants on how to navigate programs like Zoom and Teams and create email accounts. Some organizations offered a tablet loaner program for people to access the class, whereas another helped people find access to the internet through local libraries. One organization emphasized the importance of flexibility, giving people the option to share food logs via paper form or phone if participants preferred not to use a food-tracking app. Offering flexibility and support can help lower barriers to engaging in virtual and hybrid formats.

Exhibit 3.5 summarizes some action steps to engage and retain Black or Hispanic women in the National DPP LCP.

Exhibit 3.5. Action steps to engage and retain Black or Hispanic women in the National DPP LCP

- Offer **flexibility in timing and modality** (in person, hybrid, and virtual) for the National DPP LCP to account for participants' preferences, caregiving and professional demands, and comfort with technology.
- Offer **education about payment options** for the program and, if possible, offer financial aid to make the program financially accessible to all participants.
- Integrate **culturally relevant examples**, such as traditional cultural foods, into National DPP LCP classes and tailor approaches to physical activity to fit participants' schedules and lifestyles.
- Invest in hiring and supporting the workforce of **Black or Hispanic National DPP LCP Lifestyle Coaches and staff**.
- Provide **individualized support** through check-ins and messages to build rapport and discuss goals, motivations, and barriers. Practice **active listening and motivational interviewing** in the individual check-ins to build trust and rapport with participants.
- Offer **incentives and foster peer support** to enhance motivation and accountability to stay in the program.
- Provide **access to technology** where possible and **provide technical support** to help participants access virtual classes and use online food-tracking tools.



## IV. Recommendations for Advancing Equity Through Sustainable Systems-Based Changes

This section provides high-level recommendations for how health systems leaders can advance **equity** in diabetes prevention and **sustain** processes and partnerships to promote equity.

### A. Recommendations for advancing health equity in diabetes prevention

The organizations offered recommendations for systems-level changes health systems leaders can take to promote health equity:



#### **Build trust by offering outreach and National DPP LCP services in community-based settings.**

Several organizations noted that building trust with Black or Hispanic women is essential for increasing engagement with the healthcare system and promoting health equity. Several organizations recommended that healthcare organizations offer outreach, screening, and National DPP LCP classes in community settings, such as churches, so that participants are in a comfortable setting.



#### **Support staff, clinicians, and past National DPP LCP participants to be champions of the program for the communities they serve.**

**Physician and other clinical champions** of all backgrounds who believe in the program can help motivate other physicians and healthcare providers to refer patients to the program. Another strategy for helping staff to serve as champions of the program is to **invest in ongoing training about referrals, providing culturally responsive care, and enhancing**

“The entire staff ... went through the [National] DPP program just so that we could experience the curriculum and experience what it's like to make lifestyle changes.... I think it deepened our empathy as we're coming alongside patients who were trying to make these changes. We can have shared experiences because we've had to set those goals and work toward them, many of us had goals that we didn't quite meet the first time around and have lived through the frustration of setting goals and not quite making it and how do you regroup and reset the goals.”

~Health systems leader



**participants' experiences with the program.** For example, one organization sponsored their entire team to go through the National DPP LCP to experience the curriculum, practice setting goals, and gain empathy about how challenging making lifestyle changes can be for participants. Similarly, another organization drove medical residents through the neighborhoods that their patients live in so that the healthcare providers can see the availability of grocery stores, safety of playgrounds, and other conditions that affect health. Another organization recommended implementing more training about cultural humility in medical schools, nursing programs, and medical assistant programs. By advocating for the program and relating to participants' experiences, champions can increase referrals among Black or Hispanic women and help build trust and rapport for these communities.



**Set health system goals around promoting equity and using data to track progress toward those goals.**

Several organizations emphasized the importance of leaders prioritizing prevention, social determinants of health and health equity through institutional goal setting. For instance, one organization set an institutional goal to improve the rate of completion for Black adults enrolled in the National DPP LCP based on an equity-focused community needs assessment. Several organizations noted that looking at data about referrals and outcomes by demographic subgroup can help assess disparities and progress toward equity goals.

"I think health systems run on data.... What is our data telling us? Are we where we should be? And if we are not, and if one group or more in particular is not getting the same support compared to the whole ... how do you build that into a system-wide initiative to make sure that changes?"

~National DPP LCP coordinator



## **B. Recommendations for sustaining diabetes prevention and health equity programs**



**Develop sustainable financial reimbursement for healthcare organizations and National DPP LCP providers.** Several organizations shared that seeking reimbursement for National DPP LCP can be difficult. Some of the organizations rely on grants to support staff, training, and materials, and this can pose challenges for sustainability after the grants end. Some of the organizations emphasized the need for funding from insurance providers such as Medicaid and commercial payers to support screening, HbA1c testing, and National DPP LCP services. Having more funding would help support the capacity of

health education staff, which may increase the number of classes organizations can offer. Several organizations shared that increased funding can also support resources and investment in marketing and outreach to Black or Hispanic women through community events and advertisements in social media, television, and radio to increase reach.



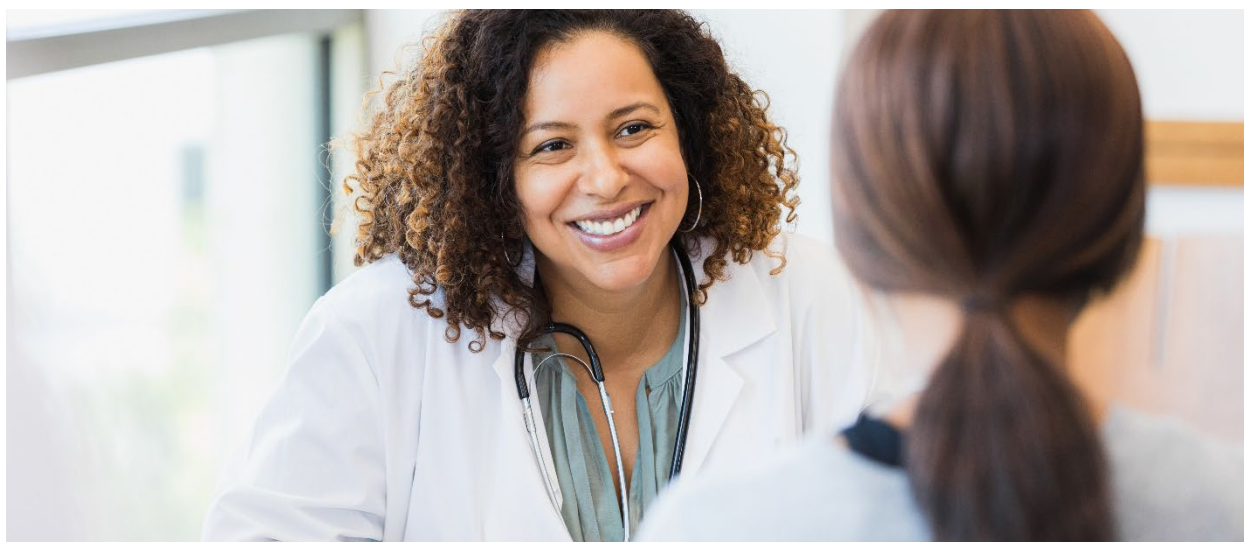
**Provide financial resources for incentives and supports for participants.** Several organizations shared that additional funding, through grants or other sources, can help them purchase small incentives, such as exercise equipment and food preparation materials, to promote engagement and retention in the DPP. Funding to help participants access technology, such as tablets, may also help sustain engagement. In addition, several organizations noted that it is helpful to have resources to do periodic check-ins, support groups, or follow-up exercise videos to help participants sustain the lifestyle changes they developed through the program.



**Build stronger partnerships with community-based organizations, public health agencies, and other healthcare organizations for sustainability.** Several organizations emphasized the importance of investing in partnerships with community-based organizations, public health agencies, and other healthcare organizations to sustain processes for screening, testing, and referring Black or Hispanic women to the National DPP LCP. Several organizations noted the importance of partnering with community-based organizations to address community needs. One organization noted that partnering with public health agencies could elevate the National DPP LCP, foster outreach on a broader scale, and champion prevention. In addition, organizations shared that institutional leadership buy-in is important to develop privacy and legal practices for connecting organizations, using tools like partnership letter templates. Exhibit 4.1 summarizes some action steps to promote sustainability and equity.

### Exhibit 4.1. Action steps to advance and sustain health equity in diabetes prevention

- **Build trust by** offering outreach and National DPP LCP services in community-based settings, such as community centers or places of worship.
- Invest in **ongoing training** about referrals, providing culturally responsive care, and enhancing participants' experiences with the program.
- **Set health system goals around promoting equity** and **use data** for different demographic subgroups to track progress toward those goals.
- **Develop sustainable financial reimbursement** for healthcare organizations and National DPP LCP providers through insurance reimbursements to help cover program expenses, such as staff time, marketing and outreach.
- Provide financial resources to **pay for incentives** to motivate participants to engage in the program, **technology** to help them access classes, and **follow-up resources** to help participants sustain positive lifestyle changes.
- Invest in **building and sustaining partnerships with** community-based organizations, public health agencies, and other healthcare organizations to meet the needs of the communities.



## V. Conclusion

### A. Summary of key findings

Systemic factors, such as racial discrimination, and social determinants of health, such as financial strain, food insecurity, and housing instability, are associated with disparities in type 2 diabetes for Black or Hispanic women (Egede et al. 2023; Hill-Briggs et al. 2020). Healthcare organizations play a critical role in advancing equity throughout the prediabetes care pathway, including screening, testing, and referring patients to the National DPP LCP; engaging and retaining participants in the National DPP LCP; and screening for and addressing social needs.

**Screening and testing.** Healthcare organizations can better improve consistency and quality of prediabetes screening and testing for Black or Hispanic women by educating physicians and other healthcare providers about the importance of screening and about health inequities in diabetes prevention. These organizations can track progress toward equity goals by collecting and analyzing data for different demographic subgroups.

**Referrals.** Healthcare organizations can improve referral and enrollment of Black or Hispanic women in the National DPP LCP by using culturally and linguistically responsive marketing materials and conducting outreach in community events and settings. They can also focus on educating physicians and other healthcare providers about the National DPP LCP and its suitability for their patients. In addition, they can engage community health workers and other clinical staff to build rapport with prospective participants and motivate them to enroll.

**Screening for social needs.** Healthcare organizations can remove barriers to participation in the National DPP LCP and support participants in making healthy lifestyle choices by offering social needs screening in different languages and modalities. They can also focus on hiring, retaining, and training diverse staff including community health workers, social workers, and patient navigators who are representative of the communities they serve. They can advance equity by supporting National DPP LCP coaches and healthcare professionals in identifying culturally responsive services to address participants' social needs.

**Engagement and retention in National DPP LCP.** Healthcare organizations implementing the National DPP LCP can engage and motivate Black or Hispanic women to participate and complete the National DPP LCP by offering flexibility in timing and modality and providing financial support. They can also focus on training and retaining culturally representative National DPP LCP coaches and tailoring nutrition and physical activity curricula to be culturally responsive to participants' traditional foods and lifestyles. National DPP lifestyle change coaches can foster peer support and offer individualized support. Referring providers can support engagement by following up with participants about their progress in the program and offering encouragement and support. In order to continue to advance and sustain equitable diabetes prevention processes, healthcare leaders can **support and train their staff to be champions** of the program; **engage in community outreach through partnerships with trusted community-based organizations**, public health agencies, and other health systems; and **set health systems goals** around promoting equity. Systemic changes, such as **increased financial reimbursement** through insurance coverage and grants can help sustain processes and partnerships for equity.

## **B. Considerations for future funding opportunities**

Participants shared recommendations about workforce investments and supports to improve equity that are beyond the scope of the current project but could inform future funding opportunities. Some organizations noted that **expanding the workforce of Black or Hispanic healthcare professionals** serving as physicians, healthcare leaders, social workers, community health navigators, and National DPP LCP Lifestyle Coaches can promote equity and build trust among participants with similar cultural and linguistic backgrounds. For example, one organization noted that participants appreciated having a Black nurse practitioner who was well respected in the community serve as a guest speaker during the National DPP LCP classes and help answer their questions. Organizations also described the importance of **supporting coaches' behavioral health needs when addressing the social determinants of health and health equity needs of participants**. For instance, one organization shared that they host regular coaching support meetings to help coaches discuss and help participants address social needs without burning out.

## References

- American Diabetes Association. "Economic Costs of Diabetes in the U.S. in 2017." *Diabetes Care*, vol. 41, no. 5, March 2018, pp. 917–928. <https://doi.org/10.2337/dci18-0007>
- Centers for Disease Control and Prevention. "National Diabetes Prevention Program." May 2022a. <https://www.cdc.gov/diabetes/library/reports/reportcard/national-dpp.html#:~:text=As%20of%20March%202022%2C%20CDC,National%20DPP%20lifestyle%20change%20program>. Accessed September 1, 2023.
- Centers for Disease Control and Prevention. "National Diabetes Statistics Report: Appendix Table 1. Age-adjusted prevalence of diagnosed, undiagnosed, and total diabetes among adults aged 18 years or older, United States, 2017–2020." September 2022b. <https://www.cdc.gov/diabetes/data/statistics-report/appendix.html#tabs-1-1>. Accessed July 25, 2023.
- Centers for Disease Control and Prevention. "National Diabetes Statistics Report: Appendix Table 6. Age-adjusted prevalence and awareness of prediabetes among adults aged 18 years or older, United States, 2017–2020." September 2022c. <https://www.cdc.gov/diabetes/data/statistics-report/appendix.html#tabs-1-1>. Accessed July 25, 2023.
- Centers for Disease Control and Prevention. "Advancing Health Equity." May 2023. <https://www.cdc.gov/diabetes/health-equity/index.html>. Accessed July 25, 2023.
- Centers for Disease Control and Prevention. May 2021. "FAQs: Offering a Program." <https://nationaldppcsc.cdc.gov/s/article/FAQ-Offering-a-Program-1525311979893#:~:text=CDC%20estimates%20the%20average%20cost%20of%20program%20delivery,year%2C%20of%20which%20E2%88BC%249%2C600%20is%20attributed%20to%20diabetes>. Accessed July 31, 2023.
- Centers for Medicare and Medicaid Services. "Diabetes Prevention Programs: Equity Tailored Resources." January 2023. <https://edit.cms.gov/files/document/culturally-and-linguistically-tailored-type-2-diabetes-prevention-resource.pdf>
- Egede, L. E., J. A. Campbell, R. J. Walker, and S. Linde. "Structural Racism as an Upstream Social Determinant of Diabetes Outcomes: A Scoping Review." *Diabetes Care*, vol. 46, no. 4, March 2023, pp. 667–677. <https://doi.org/10.2337/dci22-0044>
- Ely, E. K., S. M. Gruss, E. T. Luman, E. W. Gregg, M. K. Ali, K. Nhim, D. B. Rolka, and A. L. Albright. "A National Effort to Prevent type 2 Diabetes: Participant-Level Evaluation of CDC's National Diabetes Prevention Program." *Diabetes Care*, vol. 40, no. 10, 2017, pp. 1331–1341. <https://doi.org/10.2337/dc16-2099>.
- Hill-Briggs, F., N. E. Adler, S. A. Berkowitz, M. H. Chin, T. L. Gary-Webb, A. Navas-Acien, P. L. Thornton, and D. Harjot. "Social Determinants of Health and Diabetes: A Scientific Review." *Diabetes Care*, vol. 44, no. 1, November 2020, pp. 258–279. <https://doi.org/10.2337/dci20-0053>.
- Kaiser Family Foundation. "Disparities in Health and Health Care Among Black People." February 2022. <https://www.kff.org/infographic/disparities-in-health-and-health-care-among-black-people/>. Accessed August 1, 2023.
- National Institute of Diabetes and Digestive and Kidney Diseases. "Diabetes Prevention Program." May 2022. <https://www.niddk.nih.gov/about-niddk/research-areas/diabetes/diabetes-prevention-program-dpp#:~:text=After%20about%203%20years%2C%20the%20DPP%20showed%20that,and%20ethnic%20groups%20and%20both%20men%20and%20women>. Accessed July 25, 2023.
- Ritchie, N. D., L. Christoe-Frazier, K. K. McFann, E. P. Havranek, and R. I. Pereira. "Effect of the National Diabetes Prevention Program on Weight Loss for English- and Spanish-Speaking Latinos." *American Journal of Health Promotion*, vol. 32, no. 3, 2018, pp. 812–815. <https://doi.org/10.1177/089011711769862>
- U.S. Department of Health and Human Services Office of Minority Health. "Diabetes and African Americans." November 2022. <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=18>. Accessed July 25, 2023.
- U.S. Department of Health and Human Services Office of Minority Health. "Diabetes and Hispanic Americans." 2021. <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=4&lvlid=63>. Accessed July 25, 2023.
- U.S. Department of Health and Human Services Office of Minority Health. "Profile: Hispanic/Latino Populations." 2023. <https://minorityhealth.hhs.gov/omh/browse.aspx?lvl=3&lvlid=64>. Accessed August 1, 2023.

## Appendix A: Summary of key challenges and action steps

Exhibit A.1 summarizes key challenges and action steps related to screening, testing, referrals, addressing social needs, and engaging Black or Hispanic women in the National DPP LCP.

Exhibit A.1. Summary of key challenges and action steps

Key challenges	Key action steps
<b>Performing consistent and effective screening and testing</b>	
<b>Time constraints for healthcare providers</b> to screen for and test for diabetes.	<ul style="list-style-type: none"> <li>• <b>Use clinical decision supports</b>, such as screening algorithms and order sets in the EHR, to simplify processes for physicians and other healthcare providers and increase rates of screening and testing overall, including for Black or Hispanic women.</li> </ul>
<b>Lack of awareness about racial and ethnic disparities in diabetes.</b>	<ul style="list-style-type: none"> <li>• <b>Discuss the increased risk of prediabetes</b> among Black or Hispanic women and the importance of diabetes screening and testing for these communities as part of education to increase screening and testing overall.</li> <li>• Collect <b>self-reported race, ethnicity, and language data</b> and use these data to <b>track screening and testing rates</b> for Black or Hispanic women.</li> <li>• <b>Integrate diabetes prevention into quality-improvement projects</b>, including measurement of outcomes for different demographic subgroups, to improve healthcare providers' awareness of engagement with improving screening, testing, and referral rates.</li> </ul>
<b>Performing coordinated and inclusive outreach and referrals</b>	
<b>Lack of awareness among physicians and other healthcare providers</b> about National DPP LCP eligibility and referral processes.	<ul style="list-style-type: none"> <li>• <b>Host periodic refresher sessions for physicians and other healthcare professionals</b> to discuss the importance of referring Black or Hispanic women with prediabetes to the National DPP LCP, clarify the referral process, and share program data such as referral rates and participants' success stories.</li> <li>• <b>Support physician and other clinical champions</b> to facilitate trainings about prediabetes referrals for the focus communities and answer physician and other healthcare providers' questions about referrals. Physician and other clinical champions can also answer patients' questions about prediabetes and build buy-in for the program.</li> </ul>
<b>Limited staff capacity to conduct outreach and process referrals.</b>	<ul style="list-style-type: none"> <li>• <b>Engage clinical team members, such as medical assistants, care coordinators, and nurse practitioners</b> from similar cultural and linguistic backgrounds as the prospective participants to build rapport and educate participants about the program.</li> <li>• <b>Hire and train community health workers, community champions, or patient navigators</b> to support community outreach through social media and posting flyers and giving presentations in places of worship, libraries, community centers, and bus stations.</li> </ul>



Key challenges	Key action steps
<p><b>Challenges with communicating about program expectations with patients.</b></p>	<ul style="list-style-type: none"> <li>• <b>Translate educational materials</b> into Spanish and languages other than English.</li> <li>• <b>Use images on marketing materials which are responsive to Black or Hispanic communities.</b> For example, include images of Black or Hispanic families on flyers and social media posts, and tailor messaging to focus on wellness promotion.</li> <li>• <b>Engage past participants from similar cultural backgrounds</b> to share their experiences with the National DPP LCP during information sessions and offer information sessions in multiple languages.</li> <li>• <b>Assess participants' readiness and motivation to participate in the program</b> and clearly and transparently communicate the program requirements.</li> </ul>
<p><i><b>For organizations that refer to a different health system or to a community-based organization:</b></i></p> <p><b>Lack of patient awareness</b> about the role of different organizations in delivering the program.</p> <p><b>Limitations in data sharing and interoperability</b> across organizations.</p>	<ul style="list-style-type: none"> <li>• <b>Have the National DPP LCP provider organization present or host National DPP LCP classes at the clinical site referring patients</b> to raise awareness about the National DPP LCP provider's role and build trust among prospective participants.</li> <li>• <b>Co-brand communications with both organizations' information</b> to create cohesive and clear messaging that highlights each organization's roles for participants.</li> <li>• <b>Convene leaders from both organizations</b> through regular meetings, workgroups, and shared trainings to align on shared goals, build buy-in for shared processes, and identify and address any workflow issues that arise.</li> <li>• <b>Share data about referral tracking and participant outcomes</b> between organizations through dashboards and reports to help teams from both organizations monitor progress, identify workflow barriers, and identify areas for improvement in the referral processes.</li> </ul>
Screening for and addressing social needs	
<p><b>Hesitation or uncertainty about how the information may be used</b> due to stigma or fear of impacts on immigration status.</p>	<ul style="list-style-type: none"> <li>• <b>Address concerns about disclosing personal information</b> such as stigma and fear of effects on immigration status by <b>reassuring participants about how the staff intends to use the information</b> to address social needs and <b>providing options about when and how participants share</b> their social needs.</li> </ul>
<p><b>Language or cultural barriers for screening tools</b>, including lack of access to screening tools in languages other than English.</p>	<ul style="list-style-type: none"> <li>• <b>Conduct individual check-ins</b> with participants to build trust, discuss social needs, and follow up with them about whether the social needs have been met.</li> <li>• <b>Translate social needs screening tools</b> into Spanish and languages other than English and <b>offer participants support in person or via phone from interpreters and other staff</b> who speak the participant's language.</li> <li>• Offer participants <b>different options of how to share social needs information</b>, such as <b>text messaging, paper, phone, and online forms</b>, to align with participants' preferences.</li> </ul>
<p><b>Limited staff capacity to address social needs</b> including staffing shortages because of COVID-19 and lack of accessible or affordable training.</p>	<ul style="list-style-type: none"> <li>• <b>Hire and retain community health workers, social workers, or patient navigators</b> to refer and connect participants with resources in participants' preferred language.</li> <li>• <b>Build staff capacity through training</b> about strategies to help participants address social needs in a culturally responsive way.</li> </ul>
<p><b>Limited awareness about and availability of resources in the community</b>, including access to culturally responsive services.</p>	<ul style="list-style-type: none"> <li>• <b>Offer services such as access to produce stands, nutrition classes, or produce vouchers</b> to address food insecurity for Black or Hispanic women.</li> </ul>

Key challenges	Key action steps
	<ul style="list-style-type: none"> <li>• <b>Offer mental and emotional health support</b> for Black or Hispanic women by providing referrals to culturally responsive behavioral health services and pastoral care, when appropriate.</li> <li>• Build relationships with community-based organizations, other health systems, physician groups, and public health agencies to learn about resources to address participants' needs and <b>ensure that they offer culturally and linguistically responsive services</b> for Black or Hispanic women before referring participants. Provide education about available resources in the community through flyers and community resource platforms.</li> </ul>
<b>Engaging and retaining diverse participants in the National DPP LCP</b>	
<b>Time constraints for participants</b> due to competing priorities (such as caregiving and professional responsibilities) that limit their capacity to attend National DPP LCP classes and track their nutrition and weight outcomes.	<ul style="list-style-type: none"> <li>• Offer <b>flexibility in timing and modality</b> (in person, hybrid, and virtual) for the National DPP LCP to account for participants' preferences, caregiving and professional demands, and comfort with technology.</li> </ul>
<b>Financial constraints and social determinants of health</b> (including program cost and access to healthy food, transportation, housing, and access to safe spaces to exercise) that affect participants' capacity to participate in the National DPP LCP and to sustain lifestyle changes.	<ul style="list-style-type: none"> <li>• Offer <b>education about payment options</b> for the program and, if possible, offer financial aid to make the program financially accessible to all participants.</li> </ul>
<b>Health literacy, language, and cultural barriers</b> including lack of awareness about prediabetes and lack of culturally and linguistically responsive services can prevent participants from engaging in the National DPP LCP.	<ul style="list-style-type: none"> <li>• Integrate <b>culturally relevant examples</b>, such as traditional cultural foods, into National DPP LCP classes, and tailor approaches to physical activity to fit participants' schedules and lifestyles.</li> <li>• Invest in hiring and supporting the workforce of <b>Black or Hispanic National DPP LCP Lifestyle Coaches and staff</b>.</li> <li>• Provide <b>individualized support</b> through check-ins and messages to build rapport and discuss goals, motivations, and barriers. Practice <b>active listening and motivational interviewing</b> in the individual check-ins to build trust and rapport with participants.</li> <li>• Offer <b>incentives and foster peer support</b> to enhance motivation and accountability to stay in the program.</li> </ul>
<b>Digital barriers for participants to engage in virtual National DPP LCP programs</b> , including access to technology or comfort level using technology to access classes.	<ul style="list-style-type: none"> <li>• Provide <b>access to technology</b>, where possible, and <b>provide technical support</b> to help participants access virtual classes and use online food-tracking tools.</li> </ul>

## Appendix B Checklist of Action Steps

The following exhibits provide action steps to advance equity in diabetes prevention organized by role for healthcare organizations referring to the National DPP LCP and organizations delivering the National DPP LCP. If an action step is relevant across different roles, it is listed under all the applicable roles. We focused on health systems-level action steps in these exhibits, which are facilitated by policy-level changes, such as sustainable financial reimbursement.

### Exhibit B.1. Action steps for healthcare organizations to advance equity in diabetes prevention

#### Action steps by role

##### Physicians and physician leaders

- **Serve as physician and other clinical champions** to facilitate trainings about prediabetes referrals for the focus communities, answer physician and other healthcare providers' questions about referrals, answer patients' questions about prediabetes, and build enthusiasm and buy-in for the program among physicians and other healthcare providers.
- **Discuss the increased risk of prediabetes** among Black or Hispanic women and the importance of diabetes screening and testing for these communities as part of education to increase screening and testing overall.
- **Use clinical decision supports**, such as screening algorithms and order sets in the EHR, to simplify processes for clinicians and increase rates of screening and testing overall, including for Black or Hispanic women.

##### Leaders responsible for quality improvement

- Collect **self-reported race, ethnicity, and language data** and use these data to **track screening and testing rates** for Black or Hispanic women.
- **Integrate diabetes prevention into quality improvement projects**, including measurement of outcomes for different demographic subgroups, to improve healthcare providers' awareness of engagement with improving screening, testing, and referral rates.
- **Host periodic refresher sessions for physicians and other healthcare professionals** to discuss the importance of referring Black or Hispanic women with prediabetes to the National DPP LCP, clarify the referral process, and share program data such as referral rates and participants' success stories.
- **Engage clinical team members, such as medical assistants, care coordinators, and nurse practitioners** from similar cultural and linguistic backgrounds as prospective participants who can build rapport and educate participants about the program.
- **Translate educational materials** into Spanish and languages other than English.
- **Use images on marketing materials that are responsive to Black or Hispanic communities.** For example, include images of Black or Hispanic families on flyers and social media posts and tailor messaging to focus on wellness promotion.

##### *For organizations that refer to a National DPP LCP provider organization based in a different health system or to a community-based organization:*

- **Co-brand communications with both organizations' information** to create cohesive and clear messaging that highlights each organization's roles for participants.
- **Convene leaders from both organizations** through regular meetings, workgroups, and shared trainings, to align on shared goals, build buy-in for shared processes, and identify and address any workflow issues that arise.

### Action steps by role

- **Share data about referral tracking and participant outcomes** between organizations through dashboards and reports to help teams from both organizations monitor progress, identify workflow barriers, and identify areas for improvement in the referral processes.

### Health systems leadership

- **Hire and train community health workers, community champions, or patient navigators** to support community outreach through social media and posting flyers and giving presentations in places of worship, libraries, community centers, and bus stations.
- Invest in **ongoing training** about referrals, providing culturally responsive care, and enhancing participants' experiences with the program.
- **Set health system goals around promoting equity** and **use data** for different demographic characteristics to track progress toward those goals.
- Invest in **building and sustaining partnerships with** community-based organizations, public health agencies, and other healthcare organizations to meet the needs of the communities.

## Exhibit B.2. Action steps for organizations screening for and addressing social needs

### Action steps by role

#### Staff screening for and addressing social needs (in referring organization, National DPP LCP provider organization, or both)

- **Develop a process for screening for and addressing social needs as a part of diabetes prevention.**
- **Address concerns about disclosing personal information**, such as stigma and fear of effects on immigration status, by **reassuring participants about how the staff intends to use the information** to address social needs and **providing options about when and how participants share** their social needs.
- **Conduct individual check-ins** with participants to build trust, discuss social needs, and follow up with them about whether the social needs have been met.
- **Translate social needs screening tools** into Spanish and languages other than English and **offer participants support in person or via phone from interpreters and other staff** who speak the participant's language.
- Offer participants **different options for how to share social needs information**, such as **text messaging, paper, phone, and online forms**, to align with participants' preferences.
- **Hire and retain community health workers, social workers, or patient navigators** to refer and connect participants with resources in participants' preferred language.
- **Build staff capacity through training** strategies to help participants address social needs in a culturally responsive way.
- **Offer services, such as access to produce stands, nutrition classes, or produce vouchers**, to address food insecurity for Black or Hispanic women.
- **Offer mental and emotional health support** for Black or Hispanic women by providing referrals to culturally responsive behavioral health services and pastoral care, when appropriate.
- Build relationships with community-based organizations, other health systems, physician groups, and public health agencies to learn about resources to address participants' needs and **ensure that they offer culturally and linguistically responsive services** for Black or Hispanic women before referring participants. Provide education about available resources in the community through flyers and community resource platforms.

### Exhibit B.3. Action steps for organizations providing the National DPP LCP

#### Action steps by role

##### National DPP LCP coordinators

- **Host periodic refresher sessions for physicians and other healthcare professionals** to discuss the importance of referring Black or Hispanic women with prediabetes to the National DPP LCP, clarify the referral process, and share program data such as referral rates and participants' success stories.
- **Engage clinical team members, such as medical assistants, care coordinators, and nurse practitioners** from similar cultural and linguistic backgrounds as prospective participants who can build rapport and educate participants about the program.
- **Engage past participants from similar cultural backgrounds** to share their experiences with the National DPP LCP during information sessions and offer information sessions in multiple languages.
- **Assess participants' readiness and motivation to participate in the program** and clearly and transparently communicate about the program requirements.
- **Present at or host National DPP LCP classes at the clinical site referring patients** to raise awareness about the National DPP LCP provider's role and build trust among prospective participants.
- **Translate educational materials** into Spanish and languages other than English.
- **Use images on marketing materials that are responsive to Black or Hispanic communities.** For example, include images of Black or Hispanic families on flyers and social media posts and tailor messaging to focus on wellness promotion.
- Offer **flexibility in timing and modality** (in person, hybrid, and virtual) for the National DPP LCP to account for participants' preferences, caregiving and professional demands, and comfort with technology.
- Offer **education about payment options** for the program and, if possible, offer financial aid to make the program financially accessible to all participants.
- Invest in hiring and supporting the workforce of **Black or Hispanic National DPP LCP Lifestyle Coaches and staff.**
- **Build trust by** offering outreach and National DPP LCP services in community-based settings, such as community centers or places of worship.

##### *For organizations that refer to a National DPP LCP provider organization based in a different health system or to a community-based organization:*

- **Co-brand communications with both organizations' information** to create cohesive and clear messaging highlighting each organization's roles for participants.
- **Convene leaders from both organizations** through regular meetings, workgroups, and shared trainings to align on shared goals, build buy-in for shared processes, and identify and address any workflow issues that arise.
- **Share data about referral tracking and participant outcomes** between organizations through dashboards and reports to help teams from both organizations monitor progress, identify workflow barriers, and identify areas for improvement in the referral processes.

##### National DPP LCP coaches

- Integrate **culturally relevant examples**, such as traditional cultural foods, into National DPP LCP classes and tailor approaches to physical activity to fit participants' schedules and lifestyles.
- Provide **individualized support** through check-ins and messages to build rapport and discuss goals, motivations, and barriers. Practice **active listening and motivational interviewing** in the individual check-ins to build trust and rapport with participants.
- Offer **incentives and foster peer support** to enhance motivation and accountability to stay in the program.
- Provide **access to technology** where possible and **provide technical support** to help participants access virtual classes and use online food-tracking tools.

## Appendix C: Methods

This section discusses our methods for collecting and analyzing data from key informant interviews<sup>5</sup> and document reviews.

### Key informant interviews

Mathematica conducted key informant interviews with twenty-five respondents across eight healthcare organizations and one community-based organization. Two organizations screen, test, and refer patients to the National DPP LCP; two organizations deliver the National DPP LCP; and five organizations do both. These organizations range in geographic area, size, scale, and population served. Mathematica spoke with three organizations on the West Coast, two in the Midwest, and four in the South. Organizations ranged in size from smaller free-standing clinics to several large health systems. They included one free clinic, one small free-standing clinic, a community-based organization, as well as seven facilities within nonprofit health systems. All organizations serve both Black patients and Hispanic patients, and four organizations reported that more than 50 percent of their participants are Hispanic.

To schedule interviews, Mathematica reached out to the primary point of contact at each organization as identified by the funding partner organizations (ACPM, AMA, and BWHI) to identify other contacts to speak with. Mathematica spoke with two to five contacts at each organization and spoke with key informants in a range of roles, including health system leaders and administrators overseeing and implementing screening, testing, and referrals to the National DPP LCP; physicians referring to the National DPP LCP; National DPP LCP coordinators; and National DPP LCP coaches.

To facilitate the interviews, Mathematica used an interview guide (Appendix D). To develop the interview guide, Mathematica focused on the following research questions. Mathematica developed a comprehensive question bank across all the roles and tailored the questions based on the information that Mathematica had about the programs from the document review and the respondent's role. The interview guide contains detailed probes to address each of these questions.

1. What actions can health system leaders take to achieve equity in diabetes prevention for Black or Hispanic women through the National DPP LCP?
2. What lessons did healthcare organizations learn about screening, testing, and referral of Black or Hispanic women to diabetes prevention programs?
3. What lessons did healthcare organizations learn about screening and addressing social needs as part of referring and engaging Black or Hispanic women in the National DPP LCP?
4. What lessons did healthcare organizations learn about engaging Black or Hispanic women to participate and complete the National DPP LCP?
5. What supports and resources do healthcare organizations need to sustain processes and partnerships?

Mathematica shared with the interview respondents that they would not attribute specific quotes with specific individuals or organizations in the report to protect confidentiality. Mathematica recorded the

---

<sup>5</sup> The Sterling IRB determined this project to be exempt from IRB review.



interviews with permission from the respondents to ensure accurate documentation and had the report professionally transcribed.

### **Document review**

To prepare for the interviews and to inform the analysis, Mathematica reviewed relevant documentation from the three grantees from ACPM, AMA, and BWHI's Building Healthcare Provider Capacity to Screen, Test, and Refer Disparate Populations with Prediabetes project, including mid-year and annual reports, quarterly referral data, and conference presentations. Mathematica also reviewed background information that the other interviewed non-grantee organizations provided about the populations they serve and processes for screening, testing, referral, and National DPP LCP delivery. For background, Mathematica also referred to relevant literature about disparities in prediabetes and diabetes outcomes and previous evaluation reports authored by AMA and BWHI.

### **Analysis**

Mathematica performed thematic analysis using an Excel-based tool on data from the key informant interview transcripts and documents to identify common challenges, lessons learned, and action steps for each part of the screening, testing, referral, and program engagement pathway. In the analysis, Mathematica focused on strategies to tailor responses to be culturally responsive for Black or Hispanic women, strategies to promote equity in diabetes prevention, and ways to sustain the efforts.

## Appendix D: Interview guide

Appendix D includes the semi-structured interview guide that Mathematica used for the key informant interviews. Mathematica selected a relevant subset of questions based on each respondents' role and tailored the guides based on each organization's program.



## Best Practices for Health Equity in Diabetes Prevention Interview Guide

### Interview details

Information	Response
Respondent name(s) and title(s)	
Organization name	
Date/time of call	

### Background

Thank you for making time to speak with us today.

My name is ... [introduce Mathematica staff/ role].

As we mentioned in our email, we are working with the American College of Preventive Medicine (ACPM), the American Medical Association (AMA), and the Black Women's Health Imperative (BWHI) on a study of promising practices and innovative strategies to screen, test, and refer Black and/or Hispanic women with prediabetes into the National Diabetes Prevention Program (DPP). We are especially interested in strategies to advance health equity in diabetes prevention, including initiatives to screen for and address health-related social needs.

Before we begin, note that your participation is voluntary. Today's interview will last [length as determined after initial conversation or email with key contact]. We plan to report findings combined across all the interviewed organizations and will not attribute information to a specific individual or organization. We will share de-identified transcripts with our research partners within ACPM, AMA, and BWHI, but will not share transcripts with CDC or anyone else. We will plan to use only quotes without names or organizations attached to them in our report to illustrate general points. However, if there is an organization-specific best practice, anecdote, or quote that would be favorable to attribute to your organization, we will ask your permission before attributing it to your organization in the report.

If you have any questions, please feel free to ask me or to reach out to Sue Felt-Lisk, our project director.

Our contact information is on the invitation for the meeting.

**Do you have any questions before we start?**

Do you consent to participate in the interview? (*Interviewer: record respondent's verbal response: **Yes/No**. If NO, we CANNOT conduct the interview. Thank the respondent for their time and end the call.*)

Do we have your permission to record for notes purposes? (*Interviewer: record respondent's verbal response: **Yes/No**. If NO, we can conduct the interview but not record it.*)

**[Hit record if permitted.]**

*[Note to interviewer: The interviewer will prioritize questions to ask based on the roles of the participants. It's possible that one respondent may be able to answer questions from multiple roles or that not all roles will be covered for all sites. **Bolded questions indicate additional emphasis or priority.**]*

**Questions for healthcare organization (HCO) care team members**

*[Note to interviewer: If we already have some of this information about screening, testing, and referral processes before the interviews, then we can skip these probes and proceed to the next questions, particularly about clinician education and screening for social needs.]*

1. Please briefly describe your primary responsibilities at [organization], as well as any other experience related to diabetes prevention programs.
2. Tell us about the demographic characteristics of the communities that your organization serves.
  - a. [If information is available before the interview]: Our understanding based on the information you shared is that approximately X% of your patient population identify as Black women, X% identify as Hispanic women, and X% identify as Black and Hispanic women. [include any additional information we receive before the interview about the demographic information]. **Did I get that right?**
3. How does your HCO identify Black and/or Hispanic women patients at risk of prediabetes, test these patients, and refer them to the National DPP?
  - a. Based on reviewing materials you have shared, our understanding is [include 2-3 sentence summary about screening, testing, and referral information]. **Did I get that right?**
  - b. *[Optional probes]:*
    - i. Who all is involved in screening, testing, and referring patients to the National DPP? Are these physicians, nurse practitioners, physician assistants, medical assistants, or other clinicians?
    - ii. How, if at all, does the HCO use technology to support or automate screening and referrals (for example, using EHR smart phrases or workflows)?
    - iii. How, if at all, does the HCO collect and use race/ethnicity data (for example, through administrative data or in the EHR) to inform referrals? What format does the HCO use to collect this information?
    - iv. How if at all, does the program use warm handoffs when referring patients to the DPP?
    - v. What other techniques does the HCO use for screening, testing, and referring patients?

- vi. How frequently does the HCO communicate with the National DPP provider?
- vii. What feedback does the HCO receive from the National DPP provider about whether patients enrolled, and if so, if they graduated from the program?
- viii. What systems does the HCO use to facilitate data sharing with the National DPP provider?
- c. **[Probe – if not answered above]: What specific approaches does the HCO take to tailor the processes of screening and addressing social needs to be culturally responsive for Black and/or Hispanic women?**
  - i. *[If the HCO primarily serves Black and/or Hispanic women]:* In other words, can you describe what, if anything, you may be doing differently to enroll and engage Black and/or Hispanic women in the National DPP relative to health systems who serve women with different racial/ethnic backgrounds?
  - ii. How did the HCO identify these strategies?
  - iii. How have these strategies changed over time?
- d. In your opinion, what approaches are most effective for screening, testing, and referring Black and/or Hispanic women with prediabetes to the National DPP?
- e. What is challenging about referring Black and/or Hispanic women with prediabetes to the National DPP?
- f. **What lessons learned about screening, testing, or referrals would you share with health systems or other medical practices that are referring Black and/or Hispanic women with prediabetes to the National DPP?**
- 4. **How does the HCO educate physicians [and other clinical roles described above] about providing culturally responsive care and promoting health equity for Black and/or Hispanic women with prediabetes?**
  - a. *[Optional probes]:*
    - i. What strategies does the HCO use to raise awareness about racial and ethnic disparities in prediabetes?
    - ii. How does the HCO build physician [and other clinical roles described above] buy-in for providing culturally responsive care and promoting health equity for Black and/or Hispanic women with prediabetes?
    - iii. How does the HCO provide feedback and updates to physicians [or other clinical roles described above] about their patients' participation in the National DPP?
    - iv. What challenges or barriers does the HCO have in educating and supporting physicians [or other clinical roles described above] in providing culturally responsive care for Black and/or Hispanic women with prediabetes?
    - v. How do these challenges or barriers affect referral of Black and/or Hispanic women with prediabetes to the National DPP LCP?
- 5. **What processes and strategies does the HCO use to screen for and address social needs for Black and/or Hispanic women with prediabetes?**
  - a. Based on reviewing materials you have shared, our understanding is [include 2-3 sentence summary about screening, testing, and referral information]. **Did I get that right?**

- b. *[Optional probes]:*
  - i. Which social needs are most common for Black and/or Hispanic women that your HCO serves?
  - ii. Which social needs does the HCO screen for, and how did the HCO select these needs to focus on?
  - iii. Who conducts the screening?
  - iv. What screening tool is used? How are the results recorded?
  - v. How, if at all, does the HCO communicate with physicians [and other roles described above] about participants' social needs?
  - vi. Who helps participants address [social needs discussed above]? For example, does the program have dedicated community health workers to link participants to community resources?
  - vii. How, if at all, is social needs screening integrated into workflows for screening, testing, and referring Black and Hispanic women with prediabetes to the National DPP?
  - viii. What, if any, incentives, or requirements does the HCO have for social needs screening (e.g., required reporting on social drivers, standards for documenting ICD-10 Z codes, or payment incentives)?
- c. **[Probe – if not answered above]: What specific approaches does the HCO take to tailor the processes of screening and addressing social needs to be culturally responsive for Black and/or Hispanic women?**
  - i. [If the HCO primarily serves Black and/or Hispanic women]: What, if anything, does the HCO do differently for screening and addressing social needs for Black and/or Hispanic women with prediabetes, relative to health systems who serve women with different racial/ethnic backgrounds?
- d. **What lessons learned related to addressing social needs would you share with other health systems or medical practices who are referring Black and/or Hispanic women with prediabetes to the National DPP?**
- 6. **How does the HCO educate and support staff who screen for and help participants address social needs about providing culturally responsive care and promoting health equity for Black and/or Hispanic women with prediabetes?**
  - a. In your opinion, what is most effective about these strategies to build staff capacity to screen for and address the social needs you focus on, such as [social needs discussed above]?
  - b. What is most challenging about building staff capacity to screen for and address the social needs you focus on?
- 7. **[if HCO does not currently screen for and address social needs]: What are some of the barriers for screening and addressing social needs in the HCO context as part of diabetes prevention efforts for Black and/or Hispanic women with prediabetes?**
  - a. What, if any, are the next steps that the organization is considering to further integrate addressing social needs as part of referring and engaging Black and/or Hispanic women in the National DPP?

8. What information does your organization collect to monitor your program's performance related to promoting health equity for Black and/or Hispanic women with prediabetes?
  - a. How do you use this information to identify what is working well and areas for improvement?
9. **In your experience, what are barriers within the healthcare system that lead to inequities in diabetes prevention for Black and/or Hispanic women?**
10. **What additional recommendations, if any, do you have for HCO leaders to increase equitable access to diabetes prevention in healthcare settings for Black and/or Hispanic women?**
11. **What supports or resources do you need to sustain processes and partnerships long-term to sustain equitable access to diabetes prevention for Black and/or Hispanic women? What are potential challenges to sustainability?**
12. Is there anything we haven't asked that you think is important for us to know about best practices to support diabetes prevention for Black and/or Hispanic women?

### **Questions for physicians, nurse practitioners, physician assistants, medical assistants, or other clinical staff screening, testing, and referring patients to the National DPP**

1. Please briefly describe your primary responsibilities at [organization], as well as any other experience related to diabetes prevention programs.
2. Tell us about the demographic characteristics of the communities that your organization serves.
  - a. *[If information is available before the interview]:* Our understanding based on the information you shared is that approximately X% of your patient population identify as Black women, X% identify as Hispanic women, and X% identify as Black and Hispanic women. [include any additional information we receive before the interview about the demographic information]. **Did I get that right?**
3. How do you typically work with work with a Black and/or Hispanic woman potentially at risk for type 2 diabetes during a clinical visit to identify whether the patient is at risk of prediabetes, test them for prediabetes, and refer them to the National DPP provider?
  - a. Based on reviewing materials you have shared, our understanding is [include 2-3 sentence summary about screening, testing, and referral information]. **Did I get that right?**
  - b. *[Optional probes]:*
    - i. How, if at all, do you use technology to support or automate screening and referrals?
    - ii. How, if at all, do you collect and use race/ethnicity data (for example, through administrative data or in the EHR) to inform screening, testing, and referrals? What format does the HCO use to collect this information?
    - iii. How, if at all, do you collect or use information about patients' social needs to inform screening, test, and referrals?
    - iv. How if at all, do you use warm handoffs when referring patients to the National DPP?
  - c. **How do you tailor your outreach and referral process to be culturally responsive for Black and/or Hispanic women?**



- i. How did you identify these strategies?
  - ii. How have these strategies changed over time?
- d. In your opinion, what strategies are most effective for screening, testing, and referring Black and/or Hispanic women with prediabetes to the National DPP?
- e. What are barriers to screening, testing, and referring Black and/or Hispanic women with prediabetes to the National DPP?
  - i. How do you address these barriers in your practice?
- f. **What lessons learned about screening, testing, or referrals would you share with other physicians or other clinicians who are referring Black and/or Hispanic women with prediabetes to the National DPP?**
- g. What feedback do you receive from the National DPP provider about your patients' participation in the National DPP?
  - i. For example, do you receive information about whether your patients enroll in the program?
  - ii. If so, do you receive information about how long they stayed in the program and whether they graduated from the program?
- 4. What education, training, and support do you receive in providing culturally responsive care and promoting health equity for Black and/or Hispanic women with prediabetes?
  - a. *[Optional probes]:*
    - i. What education, training, and support has been most helpful to you in providing culturally responsive care while screening, testing, and referring Black and/or Hispanic women with diabetes to the National DPP?
    - ii. What challenges or barriers do you have in providing culturally responsive care providing for Black and/or Hispanic women with prediabetes?
    - iii. How do these challenges or barriers affect how you refer Black and/or Hispanic women with prediabetes to the National DPP?
    - iv. What additional supports would be helpful for addressing these challenges or barriers?
- 5. **In your experience, what are barriers within the healthcare system that lead to inequities in diabetes prevention for Black and/or Hispanic women?**
- 6. **What additional recommendations, if any, do you have for HCO leaders to increase equitable access to diabetes prevention in healthcare settings for Black and/or Hispanic women?**
- 7. **What supports or resources do you need to sustain processes and partnerships long-term to sustain equitable access to diabetes prevention for Black and/or Hispanic women? What are potential challenges to sustainability?**
- 8. Is there anything we haven't asked that you think is important for us to know about best practices to support diabetes prevention for Black and/or Hispanic women?

## Questions for HCO or National DPP staff who screen for and help participants address social needs

1. Please briefly describe your primary responsibilities at [organization], as well as any other experience related to diabetes prevention programs.
2. Tell us about the demographic characteristics of the communities that your organization serves.
  - a. *[If information is available before the interview]:* Our understanding based on the information you shared is that approximately X% of your patient population identify as Black women, X% identify as Hispanic women, and X% identify as Black and Hispanic women. [include any additional information we receive before the interview about the demographic information]. **Did I get that right?**
3. How do you screen for social needs when screening, testing, and referring Black and/or Hispanic women with prediabetes to the National DPP?
  - a. Based on reviewing materials you have shared, our understanding is [include 2-3 sentence summary about screening for social needs]. **Did I get that right?**
  - b. *[Optional probes]:*
    - i. Which social needs do you screen for?
    - ii. How do you determine which participants to screen for social needs?
    - iii. What tools do you use to screen for social needs?
    - iv. Where, if anywhere, are the results recorded?
    - v. How often do you screen for a participant's social needs?
    - vi. How if at all does the program communicate with physicians [and other roles described above] about participants' social needs?
  - c. ***[Probe – if not answered above]: What specific approaches does the program take to tailor social needs screening processes to be culturally responsive for Black and/or Hispanic women?***
    - i. *[If the HCO primarily serves Black and/or Hispanic women]:* What, if anything, does the HCO do differently for screening for social needs for Black and/or Hispanic women with prediabetes, relative to health systems who serve women with different racial/ethnic backgrounds?
    - ii. How did the program identify these strategies?
    - iii. How have these strategies changed over time?
4. How do you connect Black and/or Hispanic women with prediabetes with resources to address their [social needs discussed above]?
  - a. Based on reviewing materials you have shared, our understanding is [include 2-3 sentence summary about addressing social needs]. **Did I get that right?**
  - b. *[Optional probes]:*
    - i. How do you link participants with community resources?
    - ii. How do follow up with participants to track progress toward addressing social needs?

- c. **[Probe – if not answered above]: What specific approaches do you take to tailor your social needs referral and linkage processes to be culturally responsive for Black and/or Hispanic women?**
    - i. *[If the HCO primarily serves Black and/or Hispanic women]:* What, if anything, does the HCO do differently for addressing social needs for Black and/or Hispanic women with prediabetes, relative to health systems who serve women with different racial/ethnic backgrounds?
    - ii. How did the organization identify these strategies?
    - iii. How have these strategies changed over time?
  - d. How have these strategies to address social needs affected referral, enrollment, and graduation from the National DPP?
  - e. In your opinion, what is most effective about these strategies to address [social needs discussed above]?
  - f. What is most challenging about addressing the social needs you focus on?
  - g. What barriers, if any, do participants face in accessing social services?
  - h. **What lessons learned related to addressing social needs would you share with other health systems or medical practice staff or clinicians who are referring Black and/or Hispanic women with prediabetes to the National DPP?**
5. **What education or training do you receive about screening and addressing social needs for Black and/or Hispanic women with prediabetes?**
- a. *[Optional probes]:*
    - i. What education, training, and support has been most helpful to you in providing culturally responsive care while screening for and addressing social needs for Black and/or Hispanic women with diabetes to the National DPP?
    - ii. What challenges or barriers do you have in providing culturally responsive care while screening for and addressing social needs providing for Black and/or Hispanic women with prediabetes?
    - iii. What additional supports would be helpful for addressing these challenges or barriers?
6. **In your experience, what are barriers within the healthcare system that lead to inequities in diabetes prevention for Black and/or Hispanic women?**
7. **What additional recommendations, if any, do you have for HCO leaders to increase equitable access to diabetes prevention in healthcare settings for Black and/or Hispanic women?**
8. **What supports or resources do you need to sustain processes and partnerships long-term to sustain equitable access to diabetes prevention for Black and/or Hispanic women? What are potential challenges to sustainability?**
9. Is there anything we haven't asked that you think is important for us to know about best practices to support diabetes prevention for Black and/or Hispanic women?

## Questions for program coordinators of teams delivering the National DPP (either within an HCO or external organization)

1. Please briefly describe your primary responsibilities at [organization], as well as any other experience related to diabetes prevention programs.
2. Tell us about the demographic characteristics of the communities that your organization serves.
  - a. [If information is available before the interview]: Our understanding based on the information you shared is that approximately X% of your patient population identify as Black women, X% identify as Hispanic women, and X% identify as Black and Hispanic women. [include any additional information we receive before the interview about the demographic information]. Did I get that right?
3. *[For National DPP programs within HCOs]:* What is your understanding of how clinicians at your HCO identify patients at risk, test, and refer Black and/or Hispanic women with prediabetes to your program?
  - a. *[Optional probes]:*
    - i. How, if at all, does the program use technology to support or automate processing of referrals (for example, using EHR smart phrases or workflows)?
    - ii. What other tools does the program use to receive and process referrals?
  - b. What works well in collaborating with the clinical care team to receive and process referrals?
  - c. What is challenging about collaborating with the clinical care team to receive and process referrals?
  - d. What lessons learned related to collaboration would you share with other National DPP providers receiving referrals from within the same health system?
4. *[For National DPP programs in external organizations]:* How does the National DPP program provider collaborate with HCO partners to receive referrals for Black and/or Hispanic women to participate in the National DPP?
  - a. *[Optional probes]:*
    - i. How, if at all, does the program use technology to support or automate processing of referrals (for example, using EHR smart phrases or workflows)?
    - ii. What other tools does the program use to receive and process referrals?
  - b. In your opinion, what is most effective in collaborating with these HCO partners?
  - c. What is challenging about collaborating with these HCO partners?
  - d. What lessons learned related to collaboration would you share with other National DPP providers?
5. How does your HCO conduct outreach and enroll Black and/or Hispanic women patients in the National DPP?
  - a. Based on reviewing materials you have shared, our understanding is [include 2–3 sentence summary about outreach and enrollment processes]. **Did I get that right?**

- b. **[Probe – if not answered above]: What specific approaches does the program take to tailor outreach and intake to be culturally responsive for Black and/or Hispanic women?**
    - i. How did the program identify these strategies?
    - ii. How have these strategies changed over time?
  - c. In your opinion, what is most effective in getting Black and/or Hispanic women with prediabetes who are referred to the National DPP to enroll in the program?
  - d. What is challenging about getting Black and/or Hispanic women with prediabetes who are referred to the National DPP to enroll in the program?
  - e. **What lessons learned about enrolling participants in the National DPP would you share with other National DPP providers who are recruiting and enrolling Black and/or Hispanic women with prediabetes to the National DPP?**
6. What types of training or support does the program provide National DPP coaches about culturally responsive care for Black and/or Hispanic women with prediabetes?
- a. *[Optional probes]:*
    - i. In your opinion, what is most effective about these strategies to build National DPP coaches' capacity to implement the program?
    - ii. What is most challenging about building National DPP coaches' capacity to implement the program?
    - iii. What lessons learned related to National DPP coach training and supports would you share with other health systems who are referring Black and/or Hispanic women with prediabetes to the National DPP?
7. **In your experience, what are barriers within the healthcare system that lead to inequities in diabetes prevention for Black and/or Hispanic women?**
8. **What additional recommendations, if any, do you have for HCO leaders to increase equitable access to diabetes prevention in healthcare settings for Black and/or Hispanic women?**
9. **What feedback do you receive from Black and/or Hispanic women with prediabetes about their perceptions of and experiences with the National DPP?**
- a. What motivates them to enroll in the National DPP program?
  - b. What barriers prevent them from enrolling in the National DPP program?
  - c. What facilitators help them participate and graduate from the National DPP program?
  - d. What barriers prevent them from participating and graduating from the National DPP program?
  - e. If applicable, how do participants' experiences vary for virtual National DPP programs vs. in person DPP programs?
  - f. What recommendations do participants have for improving the National DPP program?
10. **What supports or resources do you need to sustain processes and partnerships long-term to sustain equitable access to diabetes prevention for Black and/or Hispanic women? What are potential challenges to sustainability?**

11. Is there anything we haven't asked that you think is important for us to know about best practices to support diabetes prevention for Black and/or Hispanic women?

### Questions for National DPP coaches

1. Please briefly describe your primary responsibilities at [organization], as well as any other experience related to diabetes prevention programs.
2. Tell us about the demographic characteristics of the communities that you serve as a coach.
  - a. *[If information is available before the interview]:* Our understanding based on the information you shared is that approximately X% of your participant population identify as Black women, X% identify as Hispanic women, and X% identify as Black and Hispanic women. [include any additional information we receive before the interview about the demographic information]. **Did I get that right?**
3. What strategies do you use to engage Black and/or Hispanic women participating in the program to improve program attendance and completion?
  - a. Based on reviewing materials you have shared, our understanding is [include 2-3 sentence summary about engaging participants in the National DPP]. **Did I get that right?**
  - b. *[Optional probes]:*
    - i. What types of individual and group coaching do you provide for participants?
    - ii. How do you use technology to support or automate aspects of coaching or program delivery?
    - iii. If you transitioned to online classes due to the COVID-19 pandemic, what strategies did you use to engage participants in a virtual setting?
    - iv. How do you collect and use information about participants' social needs to inform how you deliver the National DPP program for individual participants?
  - c. ***[Probe – if not answered above]: What specific approaches did you take to tailor your National DPP program delivery to be culturally responsive for Black and/or Hispanic women?***
    - i. What strategies do you use to build trust with Black and/or Hispanic women with prediabetes participating in your program?
    - ii. How did the organization identify these strategies?
    - iii. How have these strategies changed over time?
  - d. In your opinion, what strategies are most effective for engaging Black and/or Hispanic women to participate and complete the National DPP?
  - e. What is challenging about these strategies for engaging Black and/or Hispanic women to participate and complete the National DPP?
  - f. What lessons learned related to engaging Black and/or Hispanic women in the program would you share with other National DPP programs or healthcare providers, health systems, or clinical care teams?
4. What education, training, and support do you receive in providing culturally responsive coaching and promoting health equity for Black and/or Hispanic women with prediabetes?



- a. *[Optional probes]:*
  - i. What education, training, and support has been most helpful to you in providing culturally responsive coaching for Black and/or Hispanic participants in the National DPP?
  - ii. What challenges or barriers do you have in providing culturally responsive coaching for Black and/or Hispanic women with prediabetes?
  - iii. What additional supports would be helpful for addressing these challenges or barriers?
5. **In your experience, what are barriers within the healthcare system that lead to inequities in diabetes prevention for Black and/or Hispanic women?**
6. **What recommendations do you have for HCO leaders to increase equitable access to diabetes prevention in healthcare settings for Black and/or Hispanic women?**
7. **What feedback do you receive from Black and/or Hispanic women with prediabetes about their perceptions of and experiences with the National DPP?**
  - a. What motivates them to enroll in the National DPP program?
  - b. What barriers prevent them from enrolling in the National DPP program?
  - c. What facilitators help them participate and graduate from the National DPP program?
  - d. What barriers prevent them from participating and graduating from the National DPP program?
  - e. If applicable, how do participants' experiences vary for virtual National DPP programs vs. in-person DPP programs?
  - f. What recommendations do participants have for improving the National DPP program?
8. **What supports or resources do you need to sustain processes and partnerships long-term to sustain equitable access to diabetes prevention for Black and/or Hispanic women? What are potential challenges to sustainability?**
9. Is there anything we haven't asked that you think is important for us to know about best practices to support diabetes prevention for Black and/or Hispanic women?