

# **Executive Summary**

On behalf of the Virginia Department of Health and in partnership with the Virginia Center for Diabetes Prevention and Education, the Weldon Cooper Center's Center for Survey Research (CSR) conducted a multi-phase study to assess National Diabetes Prevention Program Lifestyle Change Programs (DPP) across Virginia with respect to retention, referral, and recruitment.<sup>1</sup>

In the retention study phase, current and past participants of Virginia-based National DPPs were surveyed to identify barriers to participation and determine factors that may support retention and successful completion of the program. For the referral phase, Virginia healthcare providers were surveyed to examine their awareness of National DPP, gather their feedback on how to increase awareness of the program, and better understand their encountered barriers to referral. In the recruitment study phase, Virginians with risk factors for type 2 diabetes were surveyed to measure their awareness and impressions of the program and to determine communication strategies for sharing program information.

Together, the findings from these three study phases are intended to support the Virginia Department of Health in developing evidence-based strategies to improve retention, increase referrals, and expand recruitment for National DPP programs across the state.

# **Key Findings**

#### Retention

### Participant experience

Participants' responses to overall satisfaction and usefulness of the program itself were overwhelmingly favorable. Further, respondents who completed the program fared better in overall health outcomes than those who did not complete the program. Among respondents who completed the program, 43% reported their blood sugar levels improved and they no longer have prediabetes. Of the respondents who did not complete the program, only 27% reported these same outcomes. Additionally, former participants reported success in maintaining healthy eating habits, listening to their body, and improved A1C.

Respondents overwhelmingly emphasized the importance of gathering information about National DPP prior to enrollment, with over 90% indicating that this information was very or somewhat important in their decision to enroll. In particular, receiving one-on-one information from a healthcare provider was considered the most important source for

<sup>&</sup>lt;sup>1</sup> This research was funded through CDC Cooperative Agreement NU58DP006620. The content of this report is solely the responsibility of the authors and does not necessarily represent the official views of the Centers for Disease Control and Prevention.

receiving information in the decision to enroll (Figure 1). Further, healthcare providers were the most common source through which participants first learned about National DPP, and this occurred at an even higher rate among respondents with an annual household income below \$25,000.

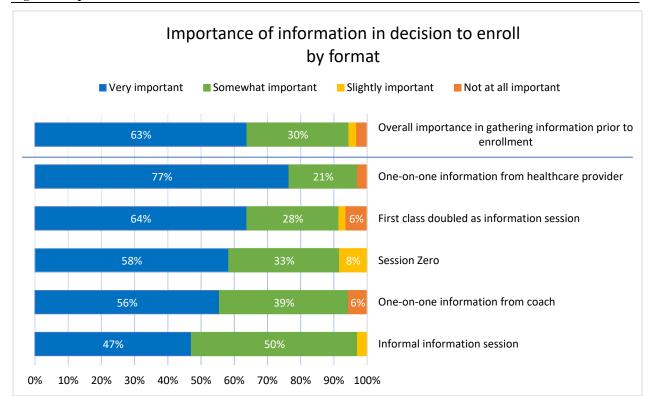


Figure 1: Importance of Source for Information to Enroll

## Contributors to and indicators of program completion

Successful completion of the program varied substantially by program characteristics, participation, and respondents' motivations.

- Virtual-only programs had a considerably lower completion rate (55%) than did inperson (75%) and hybrid (79%) programs. Beyond the delivery format itself, a match in format preference to delivery held even greater importance with 81% of participants whose program's delivery format matched their preferred format successfully completing the program.
- Attendance is a key predictor of completion, with those who maintained regular attendance completing the program at significantly higher rates than those who did not.
- Respondents who reported higher levels of concern about their risk of developing type 2 diabetes completed the program at higher rates (86%) than those who were less concerned (57%), indicating the motivation for participation is a driving factor in program success.

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Additional significant contributors to succeeding in the program include a strong
desire to be healthier, followed by an enthusiasm for learning new information,
enjoying the meetings, and seeing improved health status (Figure 2). Lifestyle
coaches may consider emphasizing these contributors early on and consistently to
program participants as a means of encouragement and motivation.

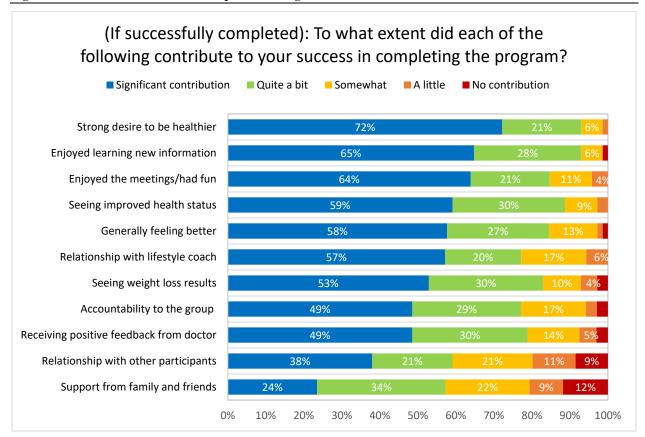


Figure 2. Contributors to Successful Completion of Program

## Barriers to program participation and completion

Respondents who left the program prior to completing were asked about the specific challenges they faced. Not seeing results quickly enough, too frequent of meetings, as well as the length and financial commitment were frequently cited as challenges for completion. In open-ended responses, respondents often noted logistical challenges to participation such as transportation, scheduling, or other factors impacting regular attendance.

Engagement in the first few months of the program also appeared to be consequential as nearly half (46%) of respondents who didn't complete the program left within the first three months, and a total of 71% left within the first six months.

Despite these challenges, over half of respondents who left said they would consider reenrolling (52%), suggesting former participants ought to be considered in future outreach efforts.

#### Referral

**Facility type** 

#### Provider awareness and impressions

Only 22% of responding providers reported they had heard about National DPP prior to taking the survey. Of those providers, only 12% reported they were "very familiar" with the program and just 29% had ever referred a patient to the program.

- Pharmacists, providers from small towns, providers who had been practicing for more than 20 years, and providers who reported that all or most of their patients had significant out-of-pocket healthcare costs were most likely to have previously heard about National DPP.
- Conversely, there was especially limited awareness of National DPP among providers who have been practicing for less than 10 years, providers in urban areas, and providers in hospitals and academic centers (Figure 3).

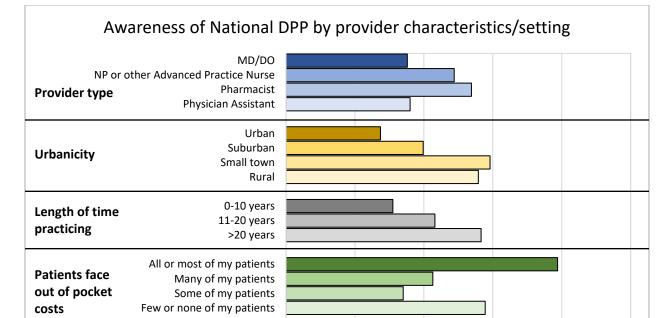


Figure 3: Awareness of National DPP by provider characteristics and care setting

Hospital Academic center Pharmacy

0%

Telemedicine

Non-medical institution-based

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10%

20%

30%

40%

50%

When asked where they had heard about National DPP, providers gave a wide range of answers, and these sources varied across several different provider characteristics. Given these differences in how providers receive their information, VDH will want to ensure a variety of channels and formats are utilized as they continue to raise awareness about National DPP.

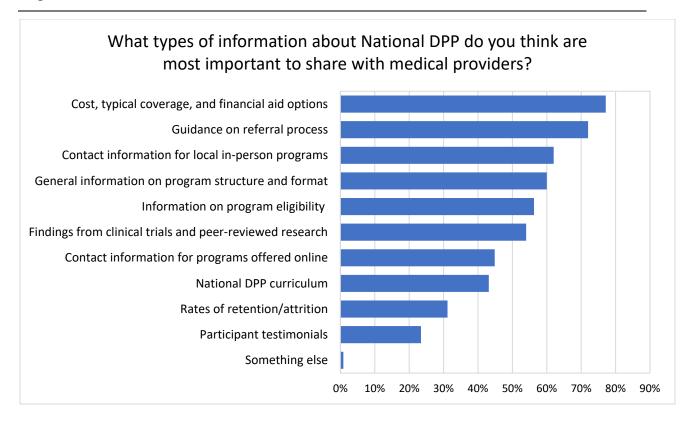
Among the 78% of respondents who were previously unfamiliar with National DPP:

- Over 60% found the provided results of the clinical trials to be "very compelling."
- A combined 88% reported National DPP seemed like either a "very viable" or at least "somewhat viable" strategy for diabetes prevention among their specific patients.
- 77% reported they were either "very likely" or "somewhat likely" to look further into National DPP.

#### Increasing provider awareness

Providers were asked about both the desired content of information shared and recommended methods for sharing this information with other providers across the state.

Regarding the most important content to share, cost, typical insurance coverage, and financial aid options was the most widely selected type of information, followed by guidance on the referral process, contact information for local in-person programs, and general information on the structure and format of the program (Figure 4).



When asked the best ways to share this information and spread awareness among providers, the top responses were direct mailings or distributing informational brochures to providers; through state or regional professional association meetings; and having a National DPP representative provide information sessions at providers' practices or clinics (Figure 5).

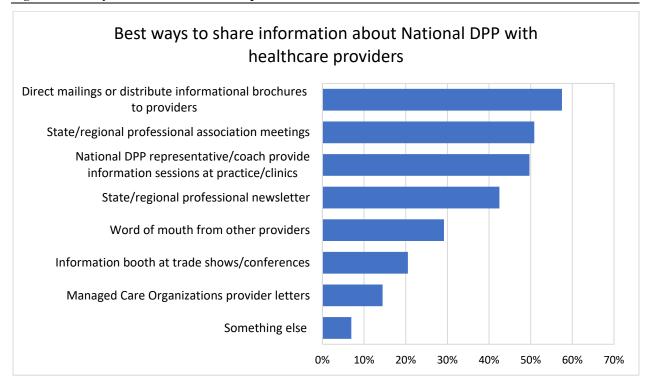


Figure 5: Best ways to share information with providers

### Referrals

Providers were asked about their referral process and specific barriers to referring their patients to National DPP.

- The top barriers to referral are all related to issues around lack of knowledge about National DPP, including being unfamiliar with both the local availability as well as the program in general, uncertainty around how to refer patients to the program, and uncertainty about the cost of the program (Figure 6).
- Further, nearly 60% of respondents did not know if their facility was set up to facilitate referral to local National DPP; just 4% confirmed their facility is set up for this specific referral. Given this high percentage, VDH should consider providing more education and support around the referral process.

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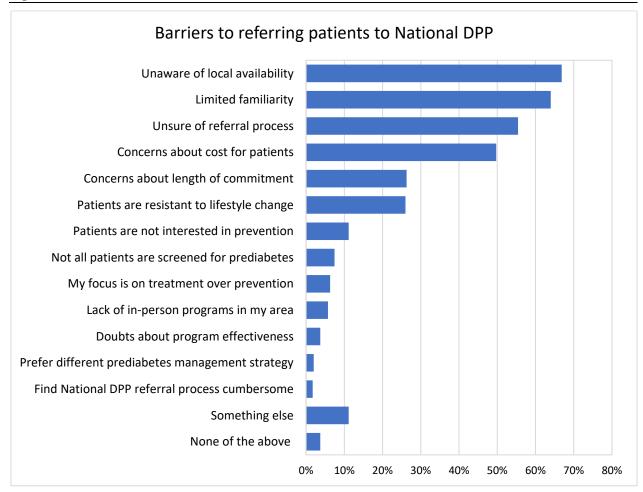


Figure 6: Barriers to National DPP Referral

Thus, to increase referral rates to National DPP, the Virginia Department of Health should focus their efforts on improved support around the referral process and generally increasing awareness about National DPP among providers across the state. In that effort, VDH should maintain a variety of modes of communication, and they may consider customizing both the content and method of sharing the information depending on the provider subpopulation and care setting that they are targeting.

#### Recruitment

To inform strategies related to recruitment, Virginians with known risk factors for developing type 2 diabetes were surveyed using an online survey panel. The sample of respondents was stratified to ensure ethnic and racial diversity and representation of people living in areas of Virginia that have high incidence of diabetes. These respondents provided feedback on their level of awareness and preferences regarding National DPP as well as their current practices for seeking health information and general media consumption.

#### Program awareness and preferences

Approximately one-fourth of respondents had heard of National DPP while 77% had not, but of those who had heard of the program, sentiments were largely positive (a combined 80% had either "positive" or "somewhat positive" impressions).

Among those who knew of National DPP, they most commonly heard about the program from their healthcare provider, followed by hearing about the program from friends or family as well as social media (Figure 7).

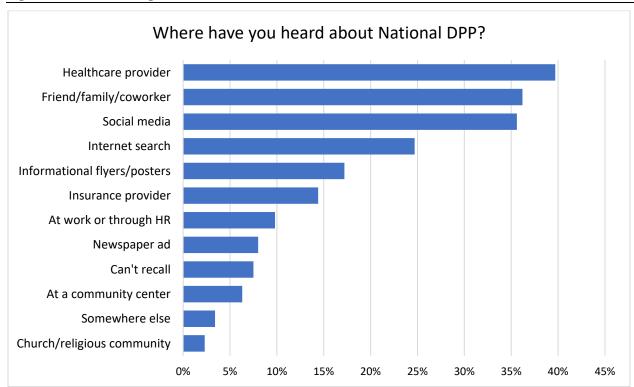


Figure 7: Sources for having learned about National DPP

Across a list of program features, having the program cost covered by insurance was the most highly rated feature, with 58% of respondents considering the feature "very appealing." This was followed by the program's ability to reduce participants' risk of developing type 2 diabetes (53% rated as "very appealing") and the ability to join the program without a referral (52%) (Figure 8).

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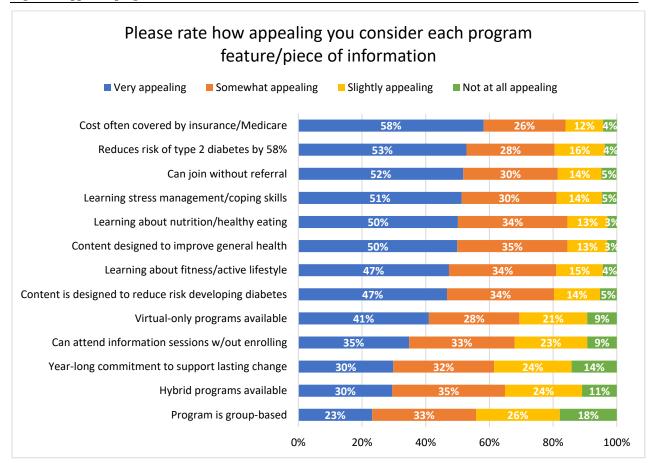


Figure 8: Appeal of program features

The ratings of features did vary by several demographic characteristics:

- Among younger respondents, the availability of hybrid programs, learning stress
  management and coping skills, the option to attend an information session hosted
  by a life-style coach, and the group-based structure were highly rated.
- The availability of virtual-only programs was of most interest to respondents who reported it was very difficult for them to get by on their present income.
- African American and Black respondents more highly rated the features of learning about nutrition, how to improve fitness, the year-long commitment, the groupbased format, and ability to attend information sessions.

In terms of the delivery format of National DPP, virtual was the preferred format (selected by 39%), followed closely by a hybrid, combination format (36%), and lastly in-person (23%). Of note, respondents with relatively lower levels of education preferred an in-person format at a higher rate whereas respondents with higher education levels preferred the hybrid format at a higher rate; virtual remains a frequently selected delivery format across all education levels. A similar pattern is observed across household income levels.

Regarding potential barriers to participation, 77% of respondents considered cost of the program if not covered by insurance to be either a significant challenge or somewhat challenging (Figure 9), and this was even more pronounced among respondents from lower income households. Additionally, 60% of respondents considered the year-long commitment to be either significant or somewhat of a challenge (Figure 10), and this was again more pronounced among respondents from lower income households. Given the potential impact of the year-long commitment on enrollment of lower income participants, messaging around the program should explain why the program is designed for a year and emphasize the benefits of this duration.

Figure 9: Cost as potential barrier to participation

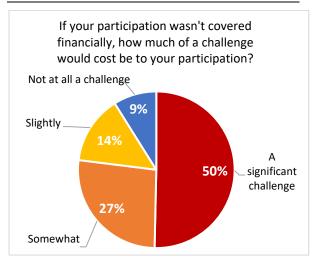
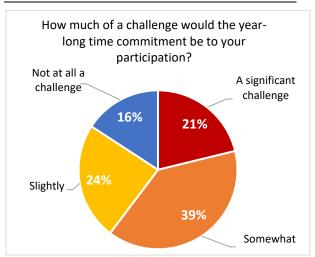


Figure 10: Year-long commitment as potential barrier



When asked about potential interest in joining National DPP, respondents from low income households and those living in rural areas reported relatively lower interest in the program. These findings suggest that VDH should consider additional promotion and outreach in rural and low-income areas to increase interest in joining among these otherwise less interested groups.

### Communication Strategies

In order to develop informed communication strategies geared toward increasing awareness of National DPP across Virginia, respondents were asked about their current health information practices as well as their media habits.

Seventy-seven percent of respondents get their health and medical information from their doctor or other healthcare providers, followed by internet searches (51%), family and friends (35%), television or news programs (26%), and social media (22%) (Figure 11).

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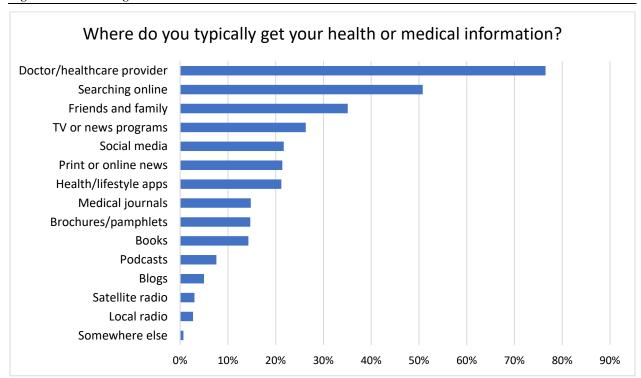


Figure 11: Source for general health or medical information

Eighty-three percent of respondents reported their most trusted source of health information was their doctor (83%), followed by the Virginia Department of Health (49%) and pharmacists (43%) (Figure 12).

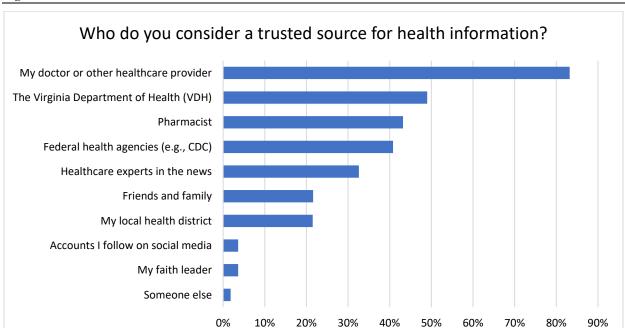


Figure 12: Most trusted sources for health information

When it comes to media platforms used most regularly, 78% of respondents use Facebook, followed next by Instagram (50%), streaming television (49%), and broadcast television (43%) (Figure 13).

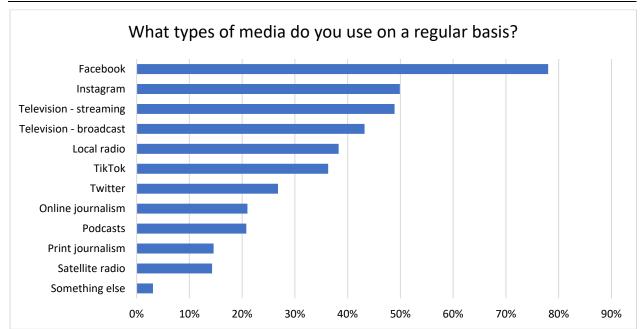


Figure 13: Type of media regularly used

Respondents were asked about the specific National DPP content they want to know more about. Program cost, payment options, and insurance coverage was the most selected piece of information across all respondents (Figure 14).

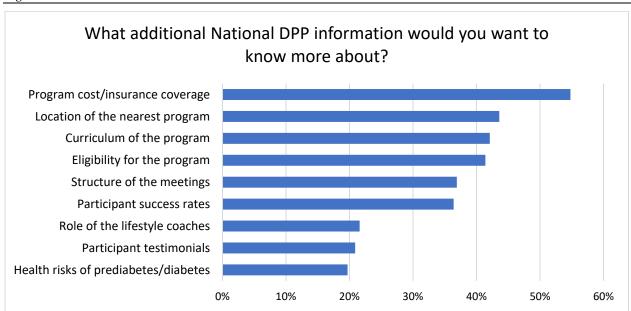


Figure 14: Additional National DPP information desired

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- While cost remained the most selected piece of information regardless of area, respondents from rural and suburban areas next prioritized knowing the location of the nearest program.
- For respondents with up to a high school degree, participant success rates and program eligibility were the next most selected types of information after cost.
- After cost, younger respondents (under 55 years) were more interested in program eligibility whereas older respondents prioritized learning about the location of the nearest program.
- Hispanic/Latinx respondents were next most interested in program eligibility following program cost.

As for the best ways to share information about National DPP, respondents recommended using social media (56%), followed closely by sharing information through local healthcare providers (53%), and through insurance providers (43%). Respondents also felt that insurance providers (43%) and local TV station commercials (33%) would be effective.

Given these findings, increasing awareness of National DPP among Virginians ought to be a top priority for VDH. In this effort, healthcare providers should be mobilized as a key channel for sharing information about National DPP to Virginians at risk for developing diabetes. Additionally, social media, especially Facebook, can be used to further disseminate information about the program. When developing informational materials, program cost and typical coverage should always be mentioned as this was an area of content repeatedly emphasized by survey respondents. VDH should also consider varying the channels of communication as well as the content based on the particular subpopulation whom they are trying to reach, such as residents in rural areas or individuals from lower socioeconomic backgrounds.

For more information about this study, or to access the full report, contact Kara Fitzgibbon, Director Center for Survey Research: ksf5fe@virginia.edu.

# Acknowledgements

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At CSR, Kara Fitzgibbon, Director, had overall responsibility for the project design and direction, including questionnaire development, data analysis, and reporting. Tom Guterbock, Academic Director, led the sampling design in addition to contributing at all stages of the study. Alayna Panzer, Project Manager, contributed to writing the final report and presenting results. Sean Johnson, Operations Manager, oversaw the data collection and tracking with the assistance of the CSR Calling Lab, who performed reminder calling and data entry. Laura White, Research Analyst, assisted in questionnaire development, analysis, and reporting. Shayne Zaslow and Adina Kugler, Research Analysts, assisted in preparing graphs and data tables.

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The Center for Survey Research is responsible for any errors or omissions in this report. Questions may be directed to the Center for Survey Research, P.O. Box 400767, Charlottesville Virginia 22904-4767. CSR also may be reached by phone at 434-243-5232 or email at surveys@virginia.edu.

<sup>&</sup>lt;sup>1</sup> The content of this report is solely the responsibility of the authors and does not necessarily represent the official views of the Centers for Disease Control and Prevention.