



# New York State YMCA Diabetes Prevention Program: Outcomes and Implications

## EXECUTIVE SUMMARY

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Prepared by  
The New York Academy of Medicine,  
Center for Evaluation and Applied Research

New York State Health Foundation

# Executive Summary

## WHY IS DIABETES PREVENTION IMPORTANT TO PROVIDERS AND PAYERS?

Over the past decades, the prevalence of obesity<sup>i</sup> and associated diseases has increased substantially throughout the United States. In 2010, an estimated 8.3% of the population was affected by diabetes; more than one-quarter of adults over the age of 65 had diagnosed or undiagnosed diabetes.<sup>ii</sup> Approximately 79 million adult Americans are living with prediabetes, meaning that they are at a significantly increased risk of developing diabetes in the future.

The rising cost of diabetes is staggering. According to the American Diabetes Association, annual medical expenses and lost productivity associated with diabetes reached \$174 billion in 2007.<sup>iii</sup> In New York, the 2006 estimate was more than \$12 billion—\$8.7 billion in excess medical expenses and \$4.2 billion in lost productivity.<sup>iv</sup> Health insurers are beginning to understand that passively paying claims for people with diabetes is becoming an increasingly unsustainable portion of their budgets and they need to take an active role in preventing diabetes.

Type 2 diabetes is a largely preventable chronic condition. The risk of developing Type 2 diabetes can be reduced through relatively modest lifestyle changes. The National Institutes of Health-sponsored Diabetes Prevention Program (DPP) demonstrated that individuals with prediabetes who achieve a 5–7% reduction in weight, participate in regular physical activity, and lower their caloric intake can reduce their risk of diabetes by 58–71%. Researchers from Indiana University School of Medicine, Diabetes Translational Research Center, translated the DPP into a group-based model at local YMCAs and saw similar results.<sup>v</sup>

## WHAT IS THE YMCA DIABETES PREVENTION PROGRAM (Y-DPP) AND HOW WAS IT IMPLEMENTED IN NEW YORK?

Recognizing the gravity of the diabetes epidemic, and the potential for positive impact, the New York State Health Foundation (NYSHealth) partnered with the New York State Department of Health and the Alliance of New York State YMCAs to implement the YMCA Diabetes Prevention Program (Y-DPP). This 16-week, group-based program is led by trained lifestyle coaches and focuses on nutrition, physical activity, and behavior change. YMCA staff members, who were already leading other health programs at their location, underwent lifestyle coach training by a qualified master trainer in the DPP curriculum. When the Y-DPP was first rolled out in New York State, most of the Y-DPP participants were required to have a clinical diagnosis of prediabetes documented by a health care provider.

The Y-DPP was implemented at 14 sites representing 10 YMCA branches located in urban, suburban, and rural communities throughout New York State: Broome County, the Buffalo-Niagara region, the Capital District, Long Island, Middletown, New York City, Plattsburgh, Rochester, Syracuse, and Watertown. Branches were selected to participate in the program based on the prevalence of diabetes in the communities that they serve, branch capacity to

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deliver evidence-based programs, and ability to ensure the inclusion of Medicaid beneficiaries and individuals living in diverse geographic areas.

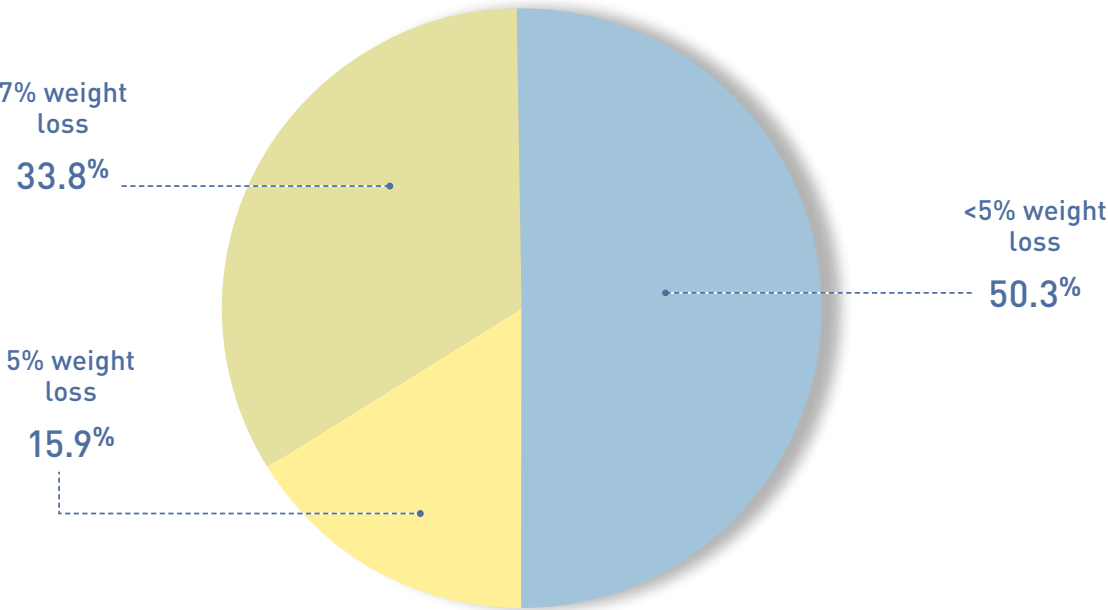
General support and oversight were provided by the Alliance of New York State YMCAs and NYSDOH. Most of the participants of the program were referred by local clinicians, although many self-referred after learning about the Y-DPP through YMCA publicity, media coverage, and word of mouth.

The Center for Evaluation and Applied Research at The New York Academy of Medicine conducted a mixed methods pre-post evaluation of the Y-DPP between 2010 and 2012, focusing on individual-level engagement and outcomes as well as the processes of program implementation.

**HOW HAS THE Y-DPP IMPACTED THE HEALTH OF NEW YORKERS?**

Participants (N=254) were predominantly female (70%), white (79%), and had a mean age of 57. Half of the participants achieved the goal of losing 5% or more of their body weight (**Figure 1**). Participants lost an average of 11 pounds by the end of the program. Most

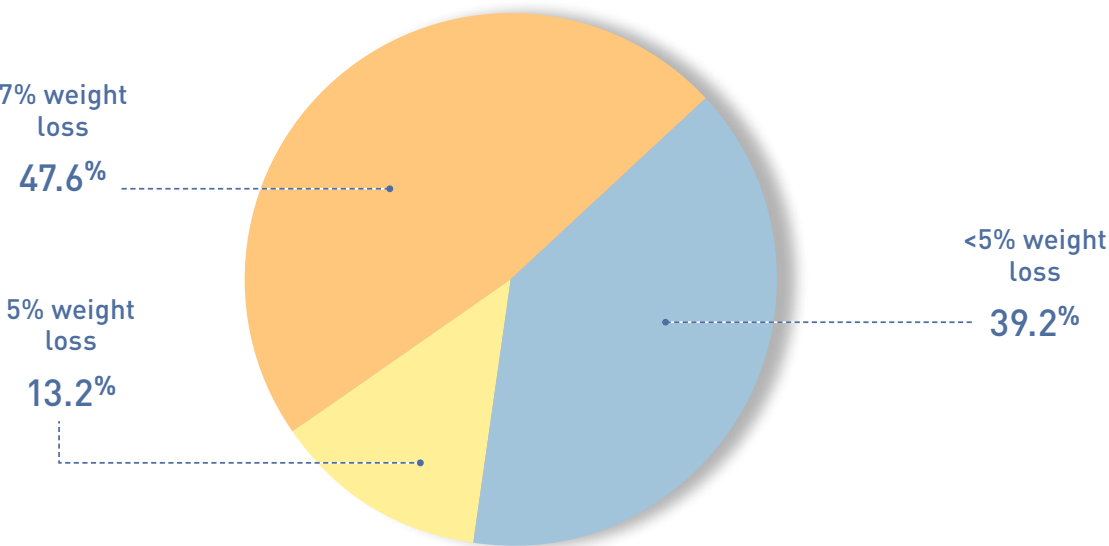
**FIGURE 1.** Proportion of participants achieving 5% and 7% weight loss at 16 weeks, N=195



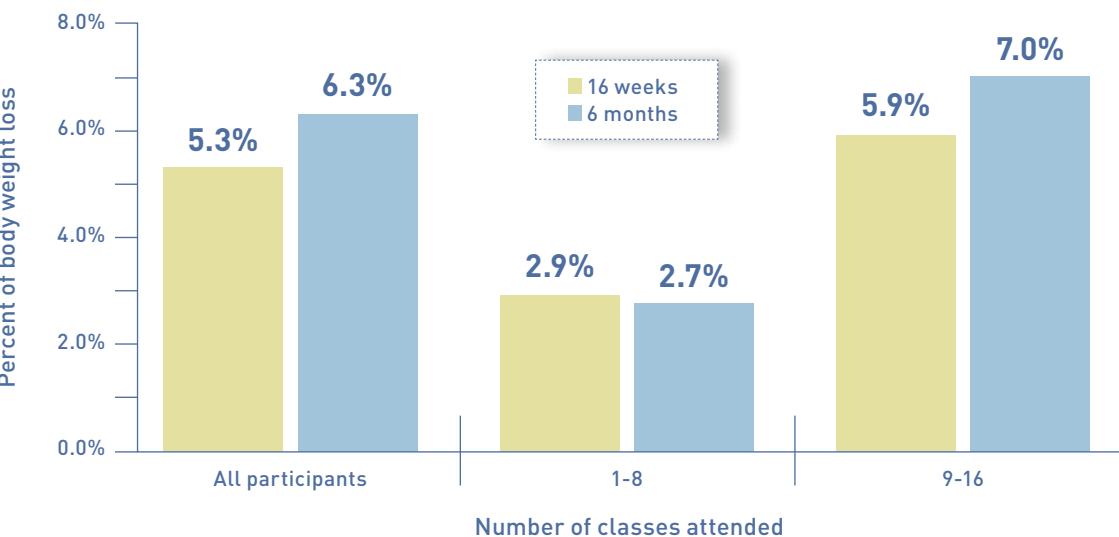
Executive Summary (continued)

participants maintained weight loss or continued to lose weight after the program was completed; 60% of participants achieved and maintained at least 5% weight loss six months after program completion (Figure 2). On average, participants who attended nine or more classes lost a greater percentage of their body weight as compared to other participants (Figure 3).

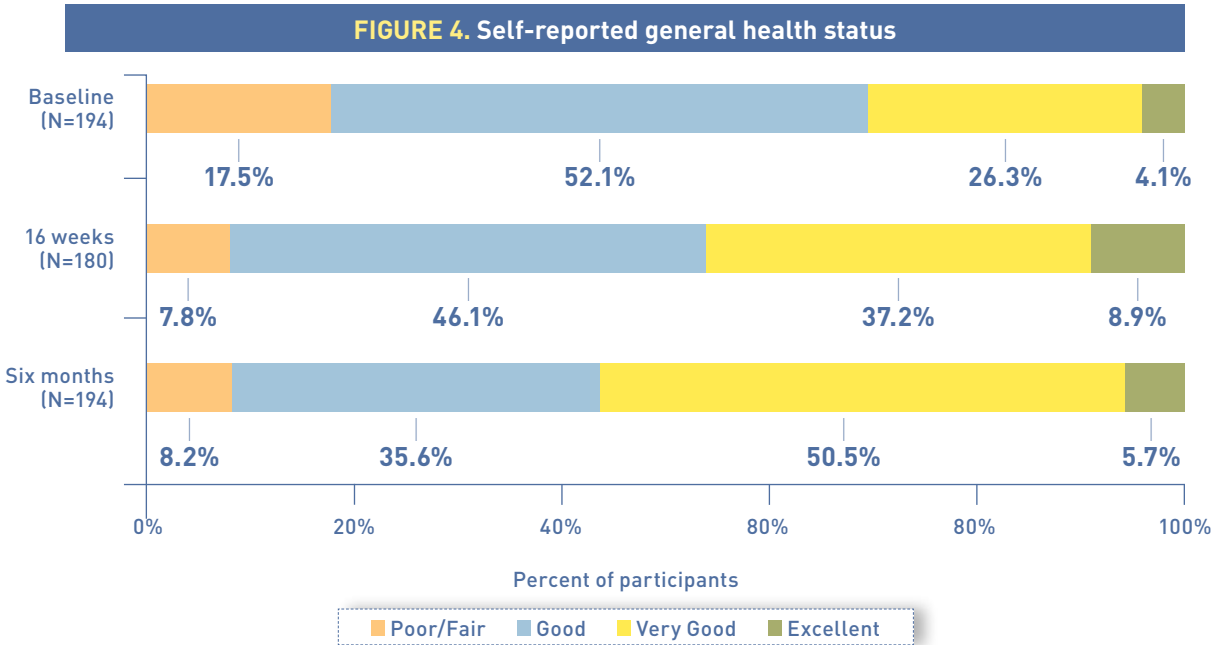
**FIGURE 2.** Proportion of participants achieving 5% and 7% weight loss six months after program completion, N=195



**FIGURE 3.** Percentage of body weight loss by attendance (N=195)



Executive Summary (continued)



Self-reported general health status improved by the end of the program and was sustained at the six-month follow-up. A higher proportion of participants reported that their health was “very good” or “excellent” at the end of the 16 weeks (Figure 4). More than 70% of participants reported at six months that their general health was “much better” or “somewhat better” than before the program.

The majority of Y-DPP coaches administered the curriculum as written and reported high levels of program fidelity. Overall, participants, Y-DPP staff, and clinical partners reported positive perceptions of the Y-DPP, emphasizing the quality of the curriculum and the importance of the YMCA setting in providing fitness resources, a health-promoting environment, and skilled staff.

“If anyone told me I would lose 40 pounds in the coming year, I’d have said: ‘No way!’ But because I had set small ‘stepping-stone’ goals, it was doable. Lose five pounds? Sure, I can do that. When the first five pounds came off, I said, ‘That wasn’t so hard. Now it’s just another two pounds to get into the next decade lower of weight.’ Then it was only a few more pounds until I had lost 10. I reached the program goal of 7% weight loss (for me, 17 pounds) in 12 weeks, but why stop there? Success is self-motivating. Each goal achieved gives a little thrill of victory that encourages me on to the next goal. It also prevents me from backsliding with occasional binges.

Success is also contagious. It helps to do this with your partner, friend, office mates, or a support group. It eases you through the trying times and gives you a lot to celebrate when the scale reports you’re downsizing. Our group found a healthy sense of humor really helps.”

— Y-DPP PARTICIPANT

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### WHAT RESOURCES ARE NEEDED FOR THE PROGRAM?

The most significant cost for program implementation was staff time, which consisted of an average of eight hours per week for coordinators during the start-up phase and four hours per week for coaches during implementation. Coordinators were responsible for program oversight and administration, including recruiting participants into the program. Coaches were responsible for leading the classes at their YMCA. In some cases, the same staff member served as both coordinator and coach. Other costs and resources needed included reproduction costs for program materials and participant incentives. In addition, all YMCAs elected to provide complimentary YMCA membership during the program.

### WHAT ARE THE IMPLICATIONS OF THESE FINDINGS FOR PROVIDERS AND PAYERS?

Diabetes prevention programs, such as the Y-DPP, may be implemented by community organizations and can result in positive health and behavioral changes. Key findings of this evaluation indicate:

- ▶ The Y-DPP resulted in significant weight loss among participants, with nearly half achieving the 5% weight loss goal by the end of the program, which may reduce their risk of developing diabetes by more than 50%.
- ▶ The Y-DPP was implemented by New York State YMCA branches with high levels of fidelity to the national DPP model.
- ▶ On average, participants who attended more classes lost more weight.
- ▶ Most participants maintained weight loss or continued to lose weight six months after the program ended.
- ▶ Participants reported improvements in their overall health status and quality of life.
- ▶ Medicaid beneficiary participation was low (13 of 195), indicating a need to explore other avenues of outreach to this population.

The successful implementation and outcomes of the DPP across geographically diverse regions of the State have demonstrated the potential of the program to be replicated. This is particularly promising given the existing and emerging opportunities for replication.

UnitedHealth Group (UnitedHealth), a commercial insurer, currently reimburses qualified organizations that offer the program to UnitedHealth members. UnitedHealth has established the Diabetes Prevention and Control Alliance to partner with other health insurers and organizations that want to offer the DPP and have completed the Centers for Disease Control and Prevention's Diabetes Prevention Recognition Program. Organizations that deliver the program and yield positive outcomes for UnitedHealth members are eligible for reimbursement.<sup>vi</sup>

Regional payers are also seeing the value in supporting the DPP for members. Because of the successful demonstration of the DPP in western New York, the YMCA was able to secure reimbursement for the program from two local payers, HealthNow and Independent Health.

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The New York State Medicaid Program (NYS-Medicaid) is seeking to make the DPP available for its beneficiaries. Through a five-year grant from the Center for Medicare and Medicaid Innovation, NYS-Medicaid will offer financial incentives to Medicaid beneficiaries who participate in the DPP. Beneficiaries can receive up to \$250 in financial rewards for both participating in the program and achieving weight loss. The New York State Medicaid Redesign Team has also recommended the program become a covered benefit for Medicaid beneficiaries.<sup>vii</sup> The recommendation to offer the DPP to beneficiaries was included in an application to the Centers for Medicare and Medicaid Services (Section 1115 Partnership Plan).<sup>viii</sup> If the waiver is approved, Medicaid would support demonstration projects that test delivery and reimbursement mechanisms in community-based settings. If these demonstrations are successful, the DPP could be considered for inclusion as a Medicaid benefit.

At the Federal level, Medicare is also seeking to add the DPP as a covered benefit for its members. The DPP is very effective in older adults. Adults over the age of 60 who achieve the program's outcomes reduce their risk of developing diabetes by up to 71%.<sup>ix</sup> In July 2012, the Medicare Diabetes Prevention Act (S. 3463) was introduced in the Senate and referred to the Senate Finance Committee.<sup>x</sup> If the bill passes, Medicare would make the DPP a covered benefit and include screening for prediabetes as part of members' annual visits. Members who positively screen for prediabetes could be referred to a program either in the community or at the physician's office.

One of the key steps to scale the DPP and make it more accessible to populations at highest risk for developing diabetes is building up capacity to deliver the program in more diverse community-based settings. Data from the Y-DPP evaluation suggest that despite the success of the program, replication efforts must specifically focus on diverse and underserved populations, which are underrepresented in the current sample. Efforts should be made to target recruitment, as well as ensure the program is available in settings beyond YMCAs. Faith-based organizations, worksites, and community health centers offer tremendous promise as sites where people can participate in this program.

# Endnotes

- <sup>i</sup> Division of Nutrition, Physical Activity, and Obesity, National Center for Chronic Disease Prevention and Health Promotion, "Obesity Trends Among U.S. Adults Between 1985 and 2010," Centers for Disease Control and Prevention, [http://www.cdc.gov/obesity/downloads/obesity\\_trends\\_2010.pdf](http://www.cdc.gov/obesity/downloads/obesity_trends_2010.pdf), accessed September 2012
- <sup>ii</sup> Division of Diabetes Translation, National Center for Chronic Disease Prevention and Health Promotion, "National Diabetes Fact Sheet, 2011," Centers for Disease Control and Prevention, [http://www.cdc.gov/diabetes/pubs/pdf/ndfs\\_2011.pdf](http://www.cdc.gov/diabetes/pubs/pdf/ndfs_2011.pdf), accessed September 2012.
- <sup>iii</sup> American Diabetes Association (2008). Economic Costs of Diabetes in the U.S. in 2007. *Diabetes Care*, 31 (3), 596-615.
- <sup>iv</sup> American Diabetes Association, "The Estimated Prevalence and Cost of Diabetes in New York," American Diabetes Association website, <http://www.diabetesarchive.net/advocacy-and-legalresources/cost-of-diabetes-results.jsp?state=New+York&district=0&DistName=New+York+%28Entire+State%29>, accessed October 2012.
- <sup>v</sup> Ackermann R., Finch E., Brizendine E., Zhou H., Marrero D. (2008). Translating the Diabetes Prevention Program into the Community: The DEPLOY Pilot Study. *American Journal of Preventive Medicine*, 35(4), 357-63.
- <sup>vi</sup> Diabetes Prevention and Control Alliance, UnitedHealth Group, "Diabetes Prevention Program," Diabetes Prevention and Control Alliance website, <http://notme.com/dpca/preventionProgram.html>, accessed September 2012.
- <sup>vii</sup> New York State Department of Health, "A Plan to Transform the Empire State's Medicaid Program: Better Care, Better Health, Lower Costs," [http://www.health.ny.gov/health\\_care/medicaid/redesign/docs/mrtfinalreport.pdf](http://www.health.ny.gov/health_care/medicaid/redesign/docs/mrtfinalreport.pdf), accessed September 2012.
- <sup>viii</sup> New York State Department of Health, "New York State Medicaid Redesign Team (MRT) Waiver Amendment: Achieving the Triple Aim," [http://www.health.ny.gov/health\\_care/medicaid/redesign/docs/2012-08-06\\_waiver\\_amendment\\_request.pdf](http://www.health.ny.gov/health_care/medicaid/redesign/docs/2012-08-06_waiver_amendment_request.pdf), accessed September 2012.
- <sup>ix</sup> National Diabetes Information Clearinghouse, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, "Diabetes Prevention Program: DPP Results," National Institute of Diabetes and Digestive and Kidney Diseases website, <http://diabetes.niddk.nih.gov/dm/pubs/preventionprogram/#results>, accessed on October 2012.
- <sup>x</sup> The Medicare Diabetes Prevention Act of 2012, S. 3463, 112 Congress, [http://www.franken.senate.gov/files/documents/120731\\_Medicare\\_Diabetes\\_Prevention\\_Act.pdf](http://www.franken.senate.gov/files/documents/120731_Medicare_Diabetes_Prevention_Act.pdf), accessed on September 2012.





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VOICE: 212-664-7656

FAX: 646-421-6029

MAIL: 1385 Broadway,  
23rd Floor

New York, NY 10018

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