



Creating a Budget Projection – Medicaid Version

The National Diabetes Prevention Program (National DPP) lifestyle change program is an evidence-based program focused on reducing or delaying the participant’s risk for developing Type 2 diabetes by helping participants make positive lifestyle changes such as eating healthier, reducing stress, and getting more physical activity. When implementing the program, remaining within budget is important to achieving cost neutrality or cost savings, and creating a budget projection will help the user understand the costs that will be involved.



The National DPP lifestyle change program is a year-long program that is delivered in person, online, or through a combination approach. It includes at least 16 weekly sessions during the first 6 months, referred to as core sessions, and at least 6 monthly sessions during the second 6 months, referred to as core maintenance sessions.

This worksheet is meant to assist in developing a budget projection by estimating the cost to the payer of offering the program to eligible members. It identifies the data that will be needed and walks through three steps to estimate the cost. There are two budget templates in an accompanying workbook that may be used. Step one helps the user decide which template is most appropriate for their state. Steps two and three guides the user as they fill in the data on the template. Once completed, the template will provide the total estimated cost of providing the program as well as an estimated average cost per participant.

These two estimates can help the user develop their budget when adding the National DPP lifestyle change program as a newly covered benefit. They may also be used to determine an estimated return on investment (ROI), when used in combination with a diabetes cost avoidance calculation (which is not included in this document). These estimates may also be used to budget for future years and to negotiate and set rates with CDC-recognized organizations.

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Step #1: Choose a Reimbursement Model

The typical formula for estimating total cost of the program is enrollment multiplied by cost per enrollee. Although straightforward, this formula becomes more complex as different reimbursement models are used.

$$\text{Estimated total cost of the program} = [\text{Cost per member}] \times [\text{\# of Enrollees}]$$

Multiple reimbursement models have been used by payers in the National DPP lifestyle change program. Although the models vary, there are generally three main components that create the reimbursement framework. These components may be used discretely or in combination with one another (see also the [Reimbursement Models for Medicaid Agencies and MCOs](#) section of the Coverage Toolkit):

- **Fee-for-service component:** Fixed reimbursement amount for each service or session provided
- **Attendance milestone component:** Fixed fees that are reimbursed once attendance has reached pre-determined levels (e.g., 1st session, 4th session, 9th session, 16th session)
- **Performance-based component:** Fixed reimbursement based on outcome achievement, such as weight loss

Generally, a fee-for-service model is used discretely, while the attendance milestone and performance-based components are used in combination. Two budget projection templates have been provided in the accompanying workbook that reflect these two basic models. If the user's state prefers to reimburse CDC-recognized organizations for each session that is held, the Fee-for-Service Model may be appropriate. If the state wishes to develop a model that encourages CDC-recognized organizations to focus on attendance and outcomes, the Attendance Milestone and Performance-Based Combination Model may be the best fit.

Once a template has been chosen that is most appropriate for the state, steps 2 and 3 will help the user determine how to fill in the reimbursement fees and enrollment statistics in the template to calculate an estimated program cost.

Template A:

Fee-for-Service Model

Template B:

Attendance Milestone and
Performance-Based Combination
Model

Step #2: Determine Reimbursement Fees

Different reimbursement models will have differing configurations of payment to CDC-recognized organizations. The user may use the model templates provided in the accompanying workbook or customize the templates to fit their state's model. The subsections below provide example fees that may be used to fill in the templates, or state-determined fees may be used to estimate a more accurate cost projection.

Additional examples of reimbursement models used in other states, such as California, Maryland, and Oregon, can be found on the [Reimbursement Models for Medicaid Agencies and MCOs](#) page of the Coverage Toolkit.

Template A: Fee-for-Service Model

In this model, CDC-recognized organizations may receive a fixed amount for the initial enrollment, each core session, and for each core maintenance session provided. It may be the same dollar amount regardless of session type, or different fees may be provided for the different types of sessions.

If using the Fee-for-Service Model template, the user may fill in customized fees of their choice, or some examples are provided below.

	Minnesota	Montana
Fee per core session	\$13.62	\$29.10
Fee per core maintenance session	\$13.62	\$29.10

Template B: Attendance Milestone and Performance-Based Combination Model

Attendance Milestone

In this component, CDC-recognized organizations may receive a fixed amount after specified attendance milestones have been met. For example, instead of being paid after each single session provided, reimbursement would be received on four different occasions: after the first session, after the fourth session, after the ninth session, and after the first core maintenance session.

In the Attendance Milestone and Performance-Based Combination Model template in the accompanying workbook, the user may fill in customized fees of their choice, or an example has been provided below, based on the Medicare Diabetes Prevention Program (MDPP).

	MDPP
Fee for initial enrollment	\$26
Fee after the 4 th session	\$52
Fee after the 9 th session	\$94
Fee after the 16 th session	Varies depending on weight loss (see combination table below)

Performance-Based Component

In this model component, CDC-recognized organizations may receive a pre-determined reimbursement amount if specified outcomes have been met. There are multiple designs to carry this out. Under one example, once an enrollee achieves 5 percent weight loss from baseline weight, the provider will be reimbursed; however, if weight loss is not achieved, no reimbursement may be given for providing the sessions. Under a different example, the provider may be reimbursed on a sliding scale, and as each additional percentage of weight is lost from the baseline, a level of pre-determined reimbursement amount will be given. It may be difficult to use this component as a discrete model. As such, a combination model is typically favored, such as the Attendance Milestone and Performance-Based Combination Model, which provides payment for attendance along with a performance incentive bonus.

In the Attendance Milestone and Performance-Based Combination Model template in the accompanying workbook, the user may fill in customized fees of their choice, or an example is provided below.

Example:

- **Medicare Diabetes Prevention Program:**
 - \$168 for the first 5 percent body weight lost
 - \$26 when 9 percent body weight is achieved

Note: Although the MDPP includes an additional payment once 9 percent weight loss is achieved, the National DPP lifestyle change program does not include a 9 percent weight loss outcome. As a result, it has not been included in Template B in the accompanying workbook.

Combining Attendance and Performance

As mentioned previously, the attendance milestone and performance-based components are often combined into one reimbursement model. The MDPP is one example in which this combination can be seen; the MDPP reimbursement model is shown below. Additional details about the MDPP can be found in the [Medicare](#) section of the Coverage Toolkit. Examples of states using attendance milestone and performance-based components in a reimbursement model can be found on the [Reimbursement Models for Medicaid Agencies and MCOs](#) page of the Coverage Toolkit.

Note: while the CDC-recognized National DPP lifestyle change program is only one year in length, the MDPP is two years. The second year includes ongoing maintenance sessions that are not included in the National DPP lifestyle change program. As such, the Attendance Milestone and Performance-Based Combination Model Template provided in this document (Template B) only includes the fees throughout the first year.

MDPP Reimbursement Model:

Performance Goal	Payment (with minimum weight loss)	Payment (without minimum weight loss)
Core Sessions		
1 st Core session attended		\$26
4 Total core sessions attended		\$52
9 Total core sessions attended		\$94
Maximum Total Payment for Core Sessions		\$172
Core Maintenance Sessions		
2 Sessions attended in months 7 – 9	\$63	\$15
2 Sessions attended in months 10 – 12	\$63	\$15
Maximum Total Payment for Core Maintenance Sessions	\$126	\$30
Ongoing Maintenance Sessions*		
2 Sessions attended in one ongoing maintenance interval of 3 months (and each of the 3 subsequent intervals)	\$52-\$53	\$0
Maximum Total Payment for Ongoing Maintenance Sessions	\$210**	\$0
Weight Loss Performance Payments		
5% Weight loss achieved (months 1–12)	\$168	\$0
9% Weight loss achieved (at any point during months 1–24)	+\$26	\$0
Maximum Additional Weight Loss Performance Payments	\$194	\$0
Maximum Performance Payments	\$702	\$202

* As noted above, the ongoing maintenance sessions are for year 2 of MDPP and are not included in the cost estimates for this Budget Projection Template.

**\$52 will be received for each ongoing maintenance interval for which the requirements have been met in months 13-15 and 16-18. \$53 will be received for each ongoing maintenance interval for which the

requirements have been met in months 19-21 and 22-24. With a maximum of 4 ongoing maintenance intervals, a total of \$210 may be received if requirements for all 4 intervals have been met.

Step #3: Determine Estimated Enrollment

The last step needed to calculate projected program cost is estimating the number of members who will be enrolled and remain throughout the program. This requires an estimation of the 1) number of program-eligible Medicaid beneficiaries, 2) number of beneficiaries who will enroll after recruitment efforts, and 3) rate of retention.

Program-Eligible Medicaid Beneficiaries

This is an estimation of adult Medicaid beneficiaries who meet the eligibility criteria, found in the [Screening and Identification](#) section in the Coverage Toolkit, and is the largest number of enrollees possible for the program. There are two suggested methods to calculate this number:

- **State Medicaid claims or Electronic Health Records (EHR) data extraction.** Through the data extraction, the user will be able to pull the exact number of Medicaid beneficiaries in their state who meet the eligibility criteria. It is the most accurate method to estimate the total number of eligible beneficiaries. Helpful suggestions for this method are found in the [Screening and Identification](#) section of the Coverage Toolkit.
- **1/3 of the adult Medicaid population.** When state-specific Medicaid claims data or EHR data is inaccessible, the user may use a substitute calculation of 1/3 of the adult Medicaid population in their state. This is the approximate rate of the national adult population who has prediabetes. Because the Medicaid population may be more likely to have prediabetes than the non-Medicaid population, this calculation may underestimate the total number of eligible beneficiaries. However, it may still be used as an estimate. Note: this calculation also requires pulling the state’s total adult (18+) Medicaid enrollment number.

The state may choose to reach out to all National DPP lifestyle change program-eligible beneficiaries (shown as “high” and “very high” risk in the table below) or to narrow its focus to those at “very high” risk of being diagnosed with type 2 diabetes. The program will likely have the largest impact upon those at the highest risk level. The table below indicates the approximate stratification of risk for type 2 diabetes. If the state chooses to focus on a narrower percentage of the eligible population (i.e., “very high risk”), this should be reflected in the enrollment number.

Risk Level	Percentage of Individuals with Prediabetes	10-Year Diabetes Risk	Risk Indicators	Recommended Intervention
Very High	15%	>30%	A1c > 5.7% FPG > 110	Structured lifestyle intervention in a community setting
High	20%	20% - 30%	FPG > 100 National DPP score 9+	
Moderate	30%	10% - 20%	2+ risk factors	Risk counseling
Low	35%	0% - 10%	0-1 risk factors	Build healthy communities

Enrolled Beneficiaries

Although recruitment efforts will be made to enroll the greatest number of targeted, program-eligible beneficiaries as possible, not all will enroll in the program. There are many strategies states can use to maximize enrollment. Some strategies include reaching patients through multiple avenues, such as mailings, phone calls, community events, newsletters, or local advertisements. Other strategies include creating relationships with primary care physicians to secure support and referrals. For additional tips on participant recruitment, see the [Recruitment and Referral](#) section in the Coverage Toolkit. For more information on enrollment, please see the [Enrollment, Incentives, & Retention](#) section.

The number of enrolled beneficiaries are those individuals who attend at least one session (not including session zero, which is an informational session often used to assess readiness and commitment to the program). When estimating this number, the following estimations may be used:

- **User Choice.** Given the user's understanding of their Medicaid population, they may be able to estimate the percentage of beneficiaries who will enroll in a year-long lifestyle change program after recruitment efforts have been made.
- **15.6 percent.** Denver Health, Colorado's primary safety net institution, implemented the National DPP lifestyle change program in 2013. It has found that 15.6% of recruited eligible beneficiaries enrolled in its diabetes prevention program. However, it found that one in two prospective participants signed up if the caller mentioned that the patient's provider had asked them to call, versus one in ten from cold calls.¹
- **15.4 percent, 20.4 percent, or 25.1 percent.** Across three different time periods, the Kentucky Employee Health Plan had 15.4, 20.4, and 25.1 percent of individuals enrolled and actively engaged in the program of those who had agreed to talk with a nurse during outreach.²
- **82.9 percent.** Minnesota's employee health plan identified just over 5,000 program-eligible individuals through an electronic risk test. Of those eligible, almost 83 percent enrolled.³

¹ Ritchie, N., Swigert, T. "Establishing an Effective Primary Care Provider Referral Network for the National Diabetes Prevention Program." *AADE in Practice*. 4: 4, pg. 20-25. Accessed here:

<http://journals.sagepub.com/doi/abs/10.1177/2325160316647707?journalCode=aipa>

² CDC. Emerging Practices in Diabetes Prevention and Control: Promoting the National Diabetes Prevention Program as a Covered Benefit for State Employees. July 2016. Accessed here:

https://www.cdc.gov/diabetes/pdfs/programs/stateandlocal/emerging_practices-ndpp.pdf

³ CDC. Emerging Practices in Diabetes Prevention and Control: Promoting the National Diabetes Prevention Program as a Covered Benefit for State Employees. July 2016. Accessed here:

https://www.cdc.gov/diabetes/pdfs/programs/stateandlocal/emerging_practices-ndpp.pdf

Rate of Retention

The rate of retention is the percentage of individuals who remain active participants in the program from the first class through the end. Retention will have an impact upon the total cost of the program as well as the benefits gained by both the state and participants. For individuals at higher risk of diabetes diagnosis, steadier participation in the program will result in a higher rate of diabetes cost avoidance over time. For more information on retention, please see the [Enrollment, Incentives, & Retention](#) section.

When estimating this number, the table below provides examples of retention rates based on two sources. The first source is the [YMCA of the USA DPP model test⁴](#), supported by the Centers for Medicare and Medicaid Innovation’s Health Care Innovation Awards, and the second source is the [Medicaid Coverage for the National DPP Demonstration Project](#), supported by CDC’s Division of Diabetes Translation, managed by NACDD, and implemented in Maryland and Oregon.

Session	YMCA Retention Rate	Medicaid Demonstration Project Retention Rate*
Enrollees in session 1	6,874	856
Attended 4+ sessions	83%	71.6%
Attended 9+ sessions	63%	53.7%
Attended >16 sessions	25%	28.6%

*The rates for the Medicaid Coverage for the National DPP Demonstration Project are based on total session attendance over the course of the evaluation period. Some enrollees were enrolled for as little as five months at the data collection deadline so rates are potentially lower than what would be expected during an actual implementation.

There are unique considerations for Medicare⁵ and Medicaid⁶ populations that could impact projected retention rates. For example, the eligible Medicaid population is younger and more diverse than the Medicare population, and experiences higher rates of unemployment and partial employment than the general population. To achieve retention rates comparable to the Medicare population, organizations delivering the National DPP lifestyle change program to the Medicaid population will need to tailor programs to specific racial/ethnic populations and to address competing priorities like childcare, transportation, and mobility issues.

⁴Evaluation of the Health Care Innovation Awards: Community Resource Planning, Prevention, and Monitoring, Annual Report 2015: <https://innovation.cms.gov/Files/reports/hcia-ymcadpp-evalrpt.pdf>

⁵ Diabetes Prevention Recognition Program Working with Medicare Beneficiaries Guide for CDC-Recognized Organizations: <https://www.cdc.gov/diabetes/prevention/pdf/ta/Implementation-Guide-Medicare.pdf>

⁶ Diabetes Prevention Recognition Program Working with Medicaid Beneficiaries Guide for CDC-Recognized Organizations: <https://www.cdc.gov/diabetes/prevention/pdf/ta/Implementation-Guide-Medicaid.pdf>

Weight Loss Achievement

When using a performance-based component in the program reimbursement model (Template B), it is important to estimate the percentage of participants achieving the 5 percent weight loss outcome.

As the number of sessions attended increases, the percent of body weight loss generally increases as well. A report analyzing participant results from the first four years of the National DPP lifestyle change program indicated that participants who attended more than 16 sessions achieved a median weight loss of ≥ 5 percent.⁷ Therefore, to estimate the percentage of participants who achieve the desired weight loss goal, the following estimation may be used:

- A percent equal to the percent used for participant retention in >16 sessions. (If using the example in the Rate of Retention section above, it would be 25 percent.)

Conclusion

Once the three steps are completed, the results—as seen in Templates A and B—are total estimated cost and average cost per participant. The first calculation is the total estimated cost of providing the program. The latter, average cost per participant, breaks down the total cost to create an average cost at the participant level. For example, there may be some participants that cost more and some that cost less due to their individual performance. This total takes all costs and computes this as an average cost across all participants.

These two estimates can help the user develop their budget when adding the National DPP lifestyle change program as a newly covered benefit. They may also be used to determine an estimated return on investment (ROI), when used in combination with a diabetes cost avoidance calculation (which is not included in this document). These estimates may also be used to budget for future years and to negotiate and set rates with CDC-recognized organizations.

Please note that some costs, such as administrative costs to get the program up and running or cost of participant incentives used to encourage retention, have not been included in this estimate. In addition, the templates in the accompanying workbook are meant to be used as a guide and may be customized by the user to more closely fit the desired reimbursement structure.

⁷ Ely, E. K., Gruss, S. M., Luman, E. T., Gregg, E. W., Ali, M. K., Nhim, K., Rolka, D. B., Albright, A. L. “A National Effort to Prevent Type 2 Diabetes: Participant-Level Evaluation of CDC’s National Diabetes Prevention Program.” *Diabetes Care*. 2017 Oct. 40(10): 1331-1341. Accessed here: <https://coveragetoolkit.org/wp-content/uploads/2018/04/New-CDC-DDT-National-DPP-article.pdf>