



Interpreting Impact Toolkit Results

CDC created the [Diabetes Prevention Impact Toolkit](#) (Impact Toolkit) to help employers, insurers, and State Health Departments weigh the costs and benefits of offering the National Diabetes Prevention Program (National DPP) lifestyle change program.

This document complements the Impact Toolkit, which can be used to create predictive models for offering the National DPP lifestyle change program as a covered benefit. As a human resources or employee benefit professional, you can use this document to help you interpret these models and the return on investment (ROI) data they provide.

This document will also help you understand how different data inputs will yield different results. More detailed information is available on the Impact Toolkit website under the [Help Using the Diabetes Toolkit](#) link.

Introduction to the Diabetes Prevention Impact Toolkit

The Impact Toolkit provides several key health outcome estimates and produces an ROI projection. These estimates include:

- Total cost of delivering the National DPP lifestyle change program to a covered population.
- Cost-effectiveness of the lifestyle change program.
- Total health benefit resulting from the program.
- Life years gained and quality-adjusted life years saved.

These outcomes can help you assess the health benefits and cost-effectiveness or cost savings (ROI) of offering the National DPP lifestyle change program as a covered benefit. The model can be tailored to reflect your specific employees by adjusting input values such as worker demographics, expected adherence, and program cost.

How to Interpret Impact Toolkit Models

To enter your specific inputs into the Employer Input Dashboard, go to the [Employee Module](#) of the Impact Toolkit. When you're done, click the GET RESULTS button to see the projected impact of implementing the National DPP intervention in your organization.

This section describes each result category and presents sample results based on prepopulated sample metrics—specifically, a workforce of 5,000 employees and a participant risk group of people with high-risk diabetes. It uses screen-captured images from the Employer Input Dashboard to illustrate these results.

Your results will likely look different because they will be based on the specific inputs you enter. You can modify your results by adjusting your inputs in the box on the left side of the Employee Results Dashboard or by returning to the Employer Input Dashboard.

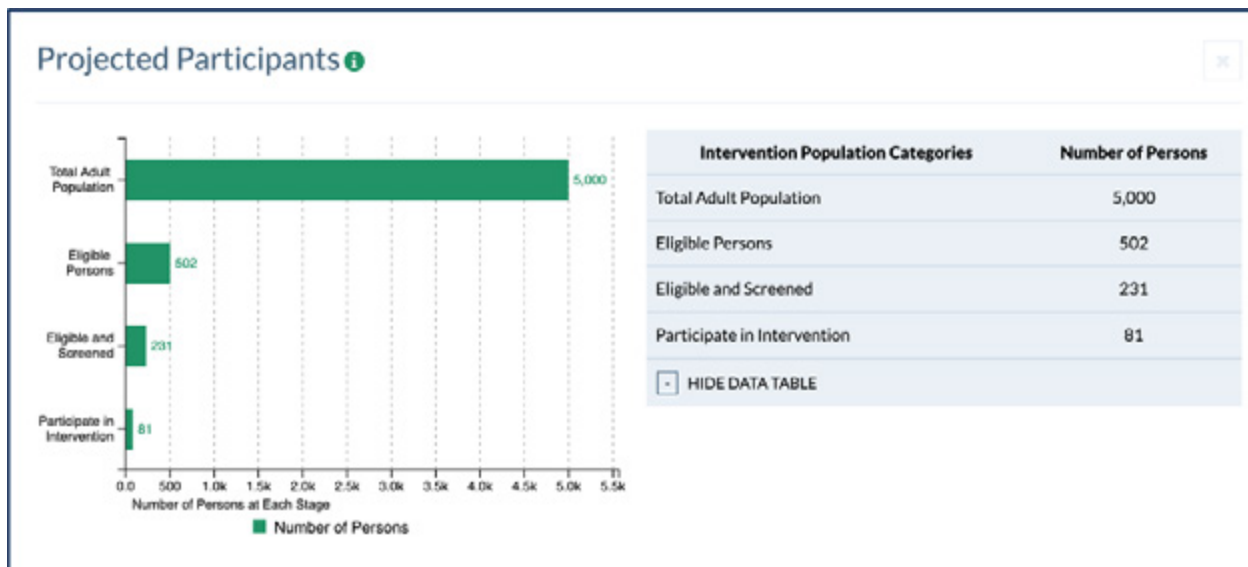
Projected Participants

In Figure 1, the projected number of participants in the National DPP lifestyle change program is calculated from the total population of employees. This projection is based on employee population characteristics and other variables, such as screening inputs and risk group, in the Employer Input Dashboard. The data are presented in a bar graph on the left and in a table on the right.



You will see green “i” icons in many places in the Employer Module. When you hover over these icons, additional information or instructions will pop up.

Figure 1



Cumulative Cases of Type 2 Diabetes

Figures 2a and 2b shows the potential cumulative cases of type 2 diabetes among program participants and the cumulative number of years that diabetes was averted based on their population inputs. The data are presented in a line graph on the left and in a bar graph on the right.

The line graph (Figure 2a) shows the projected number of diabetes cases that can be prevented if the National DPP lifestyle change program is implemented, compared to no intervention over 10 years. These numbers give you an idea of how many potential cases of diabetes you can expect over time in your workforce.

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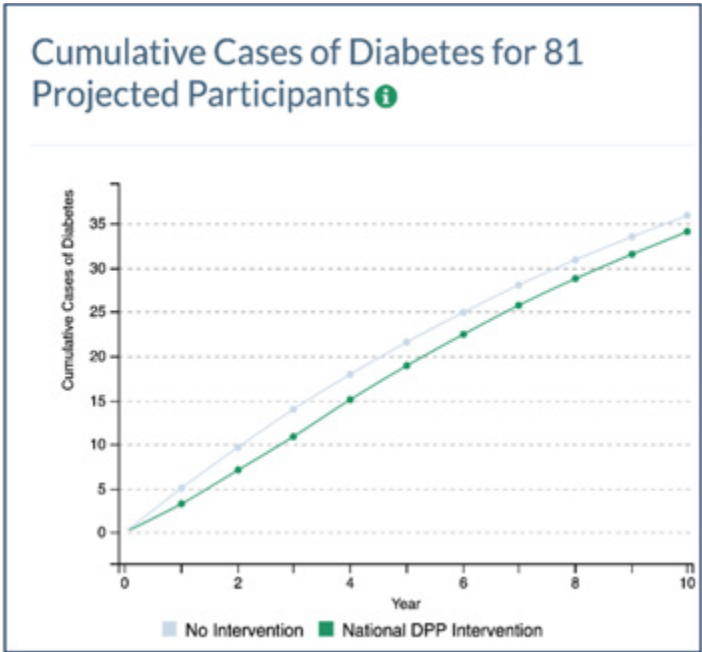
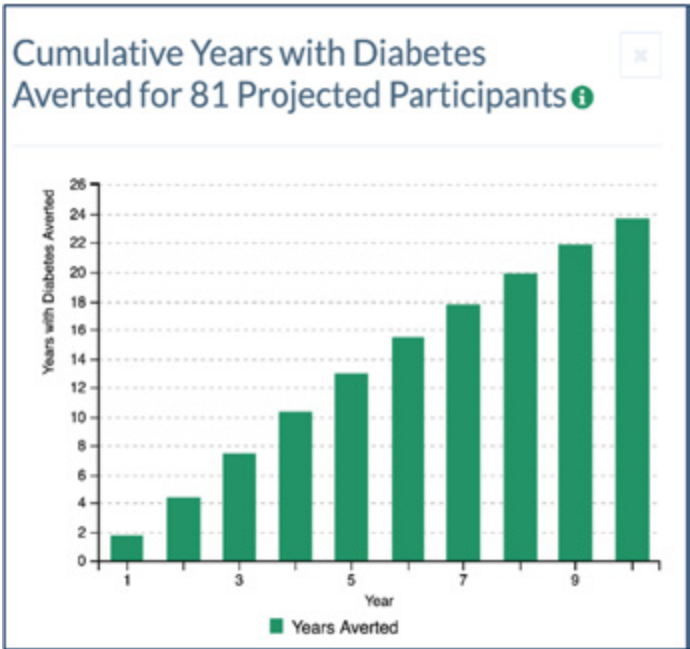


Figure 2a

The line graph provides sample data for 81 projected participants. You can see the data by hovering over the data point for each year. For example, at Year 3, you can expect to see 11 cases of diabetes with the National DPP intervention in place compared to 14 cases without the intervention.

Figure 2b

The bar graph (Figure 2b) shows the impact of the National DPP lifestyle change program on diabetes prevention. You can see the projected number of years of diabetes averted over 10 years by hovering over the bar for each year. For example, if a person developed diabetes in Year 6 after participating in the National DPP lifestyle change program, you can say that diabetes was averted for nearly 6 years compared to a person who did not participate and who developed diabetes in Year 1.¹

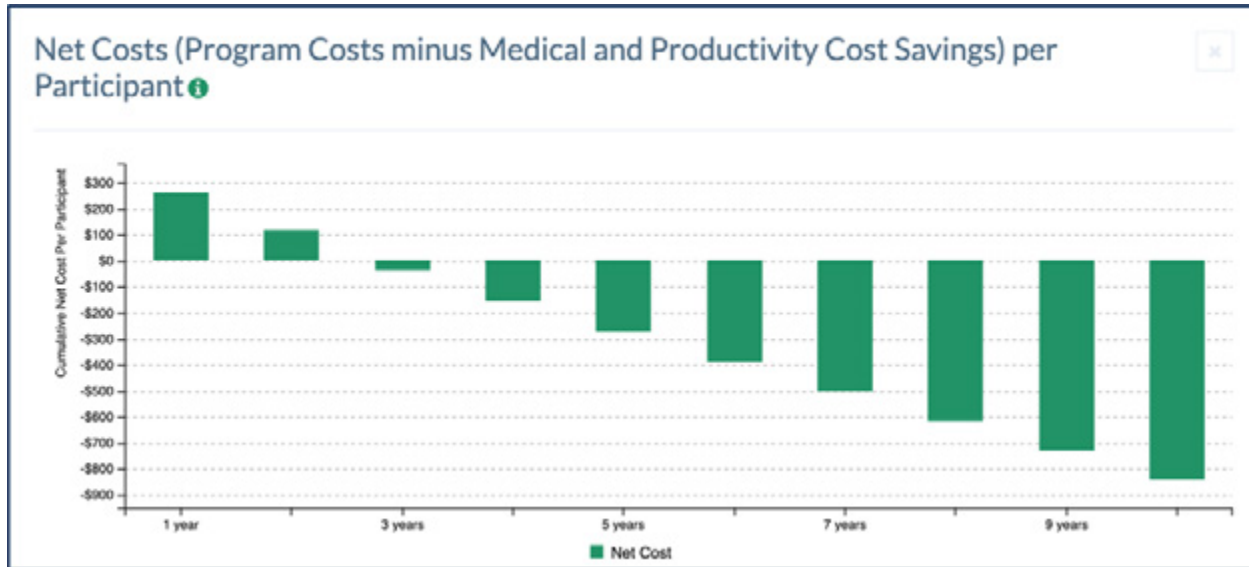


1. In this example, a person with prediabetes who does not participate in the National DPP intervention develops type 2 diabetes within 1 year. Whether and how quickly prediabetes progresses to type 2 diabetes can vary widely depending on many factors, including a person’s baseline glucose levels, age, race, or ethnicity. For more information on data models and assumptions, see pages 39-41 of the [Technical Report for the Diabetes Prevention Impact Toolkit](#).

Net Costs

Figure 3 uses a bar graph to show the projected net costs per participant over time after implementation of the National DPP lifestyle change program. Net savings are shown as negative costs. You can see the projected net costs or net savings per participant by hovering over the bar for each year over 10 years.

Figure 3



Cumulative Medical Costs per Participant

Figure 4

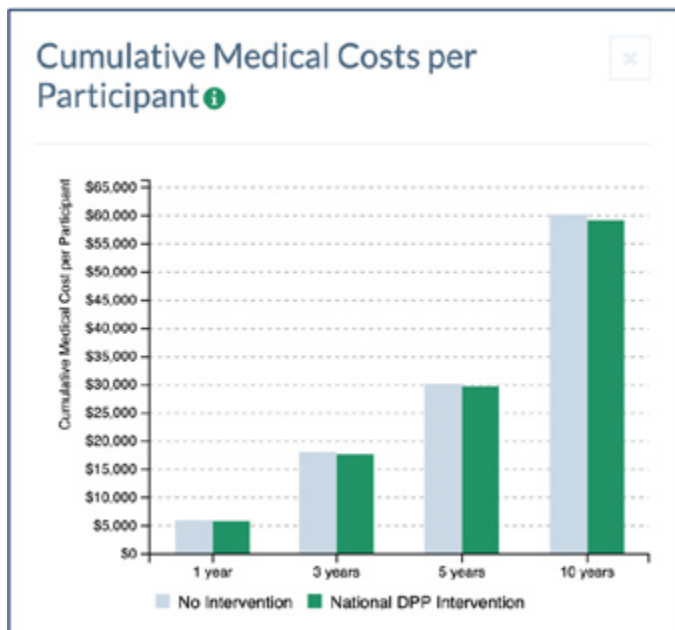


Figure 4 uses a bar graph to compare the medical costs of employees who participate in the National DPP intervention with those who do not. You can see comparisons of medical costs over time by hovering over the bars at Years 1, 3, 5, and 10.

Each year, only a small percentage of your employees are likely to develop diabetes, and only a fraction of projected cases will be prevented (depending on weight loss and regain assumptions). As a result, the average difference in medical costs may seem relatively small. But it will add up to significant cost savings over time.

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Cumulative Quality-Adjusted Life Years Gained

Figure 5

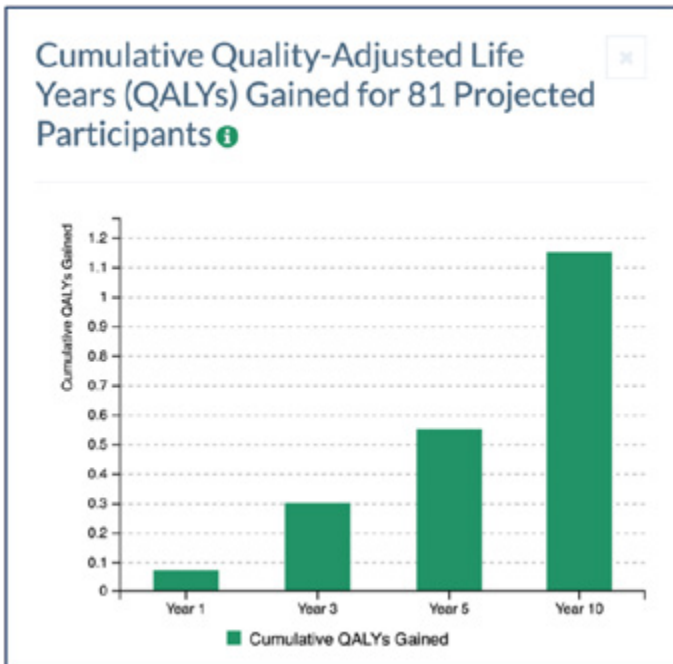


Figure 5 uses a bar graph to show cumulative quality-adjusted life years (QALY) gained for employees who participate in the National DPP lifestyle change program. A QALY is equal to 1 year of life with a perfect quality of life. It measures health in terms of both length of life and quality of life.

When a person develops diabetes, we assume an average 5% reduction in quality of life. By delaying or averting type 2 diabetes, the National DPP intervention can prevent this reduction in quality of life. The longer weight loss is maintained, and diabetes is delayed or averted after participation in the program, the higher the gain in QALY.

This example shows cumulative QALYs gained at Years 1, 3, 5, and 10 if weight loss due to participation in the National DPP intervention is maintained. You can see the projections for these years by hovering over the bar for each year.

Incremental Cost-Effectiveness Ratios

Figure 6 uses a table to show incremental cost-effectiveness ratios (ICERs), which allow you to estimate ROI over 10 years of employee participation in the National DPP lifestyle change program.

In this sample table, ICERs are calculated for each year by dividing the cumulative net cost by the cumulative QALYs gained. A lower ICER is better because it indicates that QALYs are gained from the intervention at a lower cost. The intervention is “cost saving,” and ROI is expected, when the cumulative net costs and the ICERs are negative. This intervention is considered cost-saving beginning in Year 3.

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Figure 6

The table also shows the estimated cost per diabetes case averted over time. The longer weight loss is maintained after completion of the National DPP intervention, the later the onset of diabetes. This delay lowers healthcare costs and increases cost savings for the employer each year.



Note: Footnotes for the table can be viewed on the [Employee Results Dashboard](#).

Incremental Cost-Effectiveness Ratios (ICERs)

Year	Cumulative Net Cost ¹ (\$)	Cumulative QALYs Gained ²	Incremental Cost-effectiveness Ratio (ICER) ³ (\$/QALY)	Cost per Case Averted (\$)
1	260	0.0009	305,227	11,853
2	116	0.0021	54,233	3,630
3	-39	0.0037	Cost-saving	Cost-saving
4	-158	0.0053	Cost-saving	Cost-saving
5	-273	0.0068	Cost-saving	Cost-saving
6	-388	0.0084	Cost-saving	Cost-saving
7	-503	0.0099	Cost-saving	Cost-saving
8	-617	0.0113	Cost-saving	Cost-saving
9	-730	0.0128	Cost-saving	Cost-saving
10	-842	0.0142	Cost-saving	Cost-saving

Cumulative Years of Life Gained

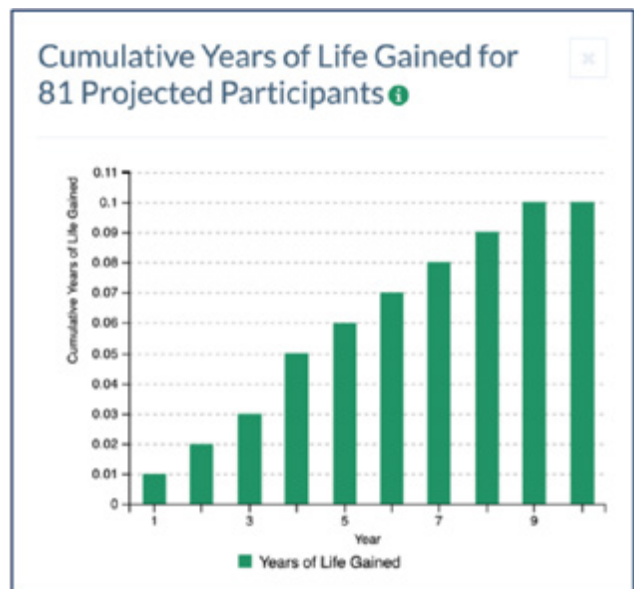
Figure 7 uses a bar graph to show estimated cumulative years of life gained for employees who participate in the National DPP intervention.

Development of type 2 diabetes is linked to an increased risk of life-threatening events such as heart attack and stroke.

You can expect a small decrease in the number of diabetes-related deaths among your employees because of diabetes being averted or delayed through implementation of the National DPP intervention.

You can see the cumulative years of life gained among projected participants by hovering over the bar for each year over 10 years. For example, in Year 5, an average of 0.55 cumulative years of life were gained across the 81 participants.

Figure 7



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