

# North Carolina Return on Investment Fact Sheet

## Diabetes Prevention Programs (DPP) and Diabetes Self-Management Programs (DSME/T)

### What Is It?

Prediabetes is when blood glucose levels are higher than normal but not high enough to diagnose diabetes.

Type 2 diabetes occurs when the body does not use insulin properly. This is called insulin resistance. At first, your pancreas makes extra insulin to make up for it. But, over time it is not able to keep up and cannot make enough insulin, causing your blood glucose levels to rise higher than normal.<sup>1</sup>



### Why Be Concerned?

The total medical cost and lost work and wages for people with diabetes in the United States is approximately \$245 billion. The medical costs for a person with diabetes are twice as high as those without the disease. The average cost of an employee in the United States with diabetes is approximately \$13,243 compared to that of an employee without diabetes at approximately \$2,560. Diabetes Prevention Programs (DPP) and Diabetes Self-Management Programs (DSME) can help with some of the cost of this disease. Participants in DPP learn ways prevent the onset of diabetes, while participants in DSME learn how to better control of blood glucose levels and manage their diabetes. Improved management of the disease can greatly decrease the number of visits to the emergency department as well as hospital stays, thereby lowering the cost of the disease.<sup>2</sup>

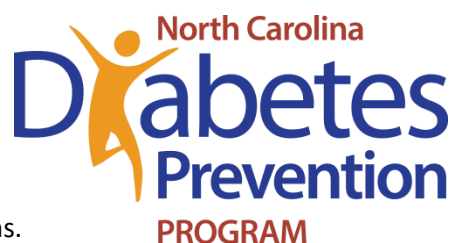
### North Carolina Challenges:

- Almost 57,000 new cases of diabetes were identified in North Carolina in 2012.<sup>3</sup>
- In 2014, diabetes was the primary cause for 2,685 deaths (over 3% of all deaths) and contributed to many more deaths in North Carolina.<sup>4</sup>
- In 2012, 73 of North Carolina's 100 counties had diagnosed diabetes prevalence of 11.2% or higher. This ranks these counties in the top 20 percent of the nation.<sup>3</sup>
- In North Carolina, 9.5 percent or 630,000 adults were estimated to have diagnosed prediabetes in 2013. Prediabetes rates were highest among non-Hispanic blacks (13.1%), compared to non-Hispanic whites (9.2%) in the state.<sup>5</sup>

### Diabetes Prevention Program Return on Investment:

Diabetes Prevention Program is a CDC-led diabetes program that brings evidence-based lifestyle change programs to local communities. The year-long program educates participants about diabetes and the ways to make lifestyle changes to prevent diabetes. The program helps participants make these changes through education on making healthy eating choices, increasing physical activity, managing stress, and solving problems.

Through Diabetes Prevention Programs, participants are expected to learn how to make lifestyle changes to lower their Hemoglobin A1c levels and prevent type 2 diabetes. Lowering the participants A1c levels has been proven to have a cost savings of \$600-\$2,200 annually.<sup>6</sup>



## Diabetes Self-Management Program Return on Investment:

Diabetes Self-Management Education/Training (DSME/T) Programs assist participants in achieving better blood glucose control by self-managing diabetes through knowledge, skill and their thinking regarding life choices. DSME/T is a crucial part of blood glucose control. Through DSME/T programs, the participants will learn the knowledge and skills they need to keep their diabetes under control. Through Diabetes Self-Management Programs, participants will learn ways in which to manage their diabetes through healthy behaviors and problem solving. An economic analysis conducted in 2000 reported that for every \$1 spent on DSME/T, there was a net savings of \$0.44 to \$8.76.<sup>7</sup> A 2009 systematic review associated diabetes education (and disease management) with decreased costs, cost savings, cost effectiveness or positive return on investment.<sup>8</sup> The same study also found that commercially insured members who use diabetes education cost, on average, 5.7 percent less than members who do not participate in diabetes education.



### What Employers / Businesses Can Do:

- Provide prediabetes awareness education for employees. (Place prediabetes messaging about risks and symptoms on your internal worksite web page, bulletin boards, newsletters etc.) Helpful website: [www.cdc.gov/diabetes/prevention](http://www.cdc.gov/diabetes/prevention)
- Provide free prediabetes screenings for employees, and consider offering incentives to have this completed.
- For employees with prediabetes, offer incentives to enroll in a “CDC-Recognized Diabetes Prevention Program.” Helpful website: [nccd.cdc.gov/DDT\\_DPRP/Registry.aspx](http://nccd.cdc.gov/DDT_DPRP/Registry.aspx)
- Consider having worksite staff become a lifestyle coach of a “CDC-Recognized Diabetes Prevention Program”, or offer DPP classes at the worksite. Helpful website: [nccd.cdc.gov/DDT\\_DPRP/Registry.aspx](http://nccd.cdc.gov/DDT_DPRP/Registry.aspx)
- Assure that the company insurance plan includes covered benefits for attendance at a CDC-Recognized Diabetes Prevention Program.
- Provide employee support / programming for healthy living, and consider offering a comprehensive worksite wellness program.<sup>9</sup>

<sup>1</sup> American Diabetes Association Diabetes Basics – Type 2 (2016, February 4). Retrieved from <http://www.diabetes.org/diabetes-basics/type-2/>

<sup>2</sup> Return on Investment of Diabetes Prevention Programs (DPP) and Diabetes Self-Management Programs (DSME/T). (2015, July). Retrieved from <https://dph.georgia.gov/sites/dph.georgia.gov/files/DPP-DSME%20ROI%20Factsheet%20July%202015%20Final.pdf>

<sup>3</sup> [http://www.cdc.gov/diabetes/atlas/countydata/County\\_ListofIndicators.html](http://www.cdc.gov/diabetes/atlas/countydata/County_ListofIndicators.html)

<sup>4</sup> <http://www.schs.state.nc.us/interactive/query/lcd/lcd.cfm>

<sup>5</sup> <http://www.schs.state.nc.us/data/brfss/2013/nc/all/prediab.html>

<sup>6</sup> Diabetes America. (n.d.). Retrieved from [www.diabetesamerica.com/employershealth-plans/](http://www.diabetesamerica.com/employershealth-plans/)

<sup>7</sup> Klonoff DC, Schwartz DM. An economic analysis of interventions for diabetes. Diabetes Care. 2000 Mar;23(3):390-404. (<http://www.ncbi.nlm.nih.gov/pubmed/10868871>)

<sup>8</sup> Boren SA, et al. Costs and benefits associated with diabetes education: a review of the literature. Diabetes Educ. 2009 Jan Feb; 35(1):72-96. (<http://www.ncbi.nlm.nih.gov/pubmed/19244564>)

<sup>9</sup> Prediabetes Cost / Return on Investment (ROI) Fact Sheet. (2013). Retrieved from

[http://c.ymcdn.com/sites/www.chronicdisease.org/resource/resmgr/NDPP\\_KY\\_Final\\_KY\\_PREDIABETES\\_ROI\\_FA.pdf](http://c.ymcdn.com/sites/www.chronicdisease.org/resource/resmgr/NDPP_KY_Final_KY_PREDIABETES_ROI_FA.pdf)