



# Reducing Your Costs for Employees with Diabetes

2017 Indiana Health and Wellness Summit    October 3, 2017

**Brenda Jagatic BScN, RN, Certified Diabetes Educator**  
**Diabetes Education Coordinator**



## How Do We Optimize Today's Discussion?

- **Introductions**
- **Enabling your role and responsibilities for greater results**
  - When did the health risk of the workforce become your responsibility?
  - How has the cost of healthcare impacted your role?
- **Matching your expectations with my experience & best practices**

## How do we optimize today's discussion?

### **Enabling your role and responsibilities for greater results**

- ✓ Review diabetes issues for employers
- ✓ Return on investment and reduced costs with a diabetes education program
- ✓ Impact employee morale & loyalty and enhance productivity.

## How do we optimize today's discussion?

### **Matching your expectations with my experience & best practices**

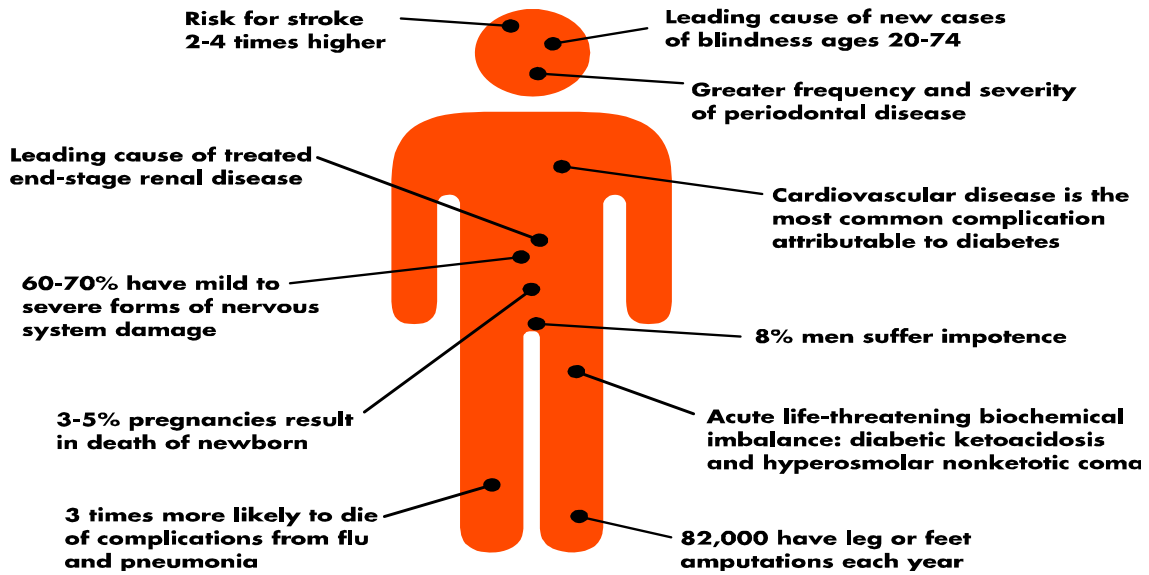
- Expert who is passionate about diabetes
- Provided diabetes care in free clinic, summer camps, and outpatient hospital settings
- Research study on depression screening
- Published on managing co-morbidity of diabetes and cancer
- Diabetes Education Coordinator for Indiana State Department of Health

# Diabetes: Challenges for Employers

## Diabetes

- Diabetes is a challenging disease to live with
- Most employees do not get adequate training on how to manage diabetes
- Many people view diabetes as a slow death
- Uncontrolled diabetes can lead to great suffering

## UNCONTROLLED DIABETES



Source: American Diabetes Association

13

## Uncontrolled diabetes is costly on so many levels

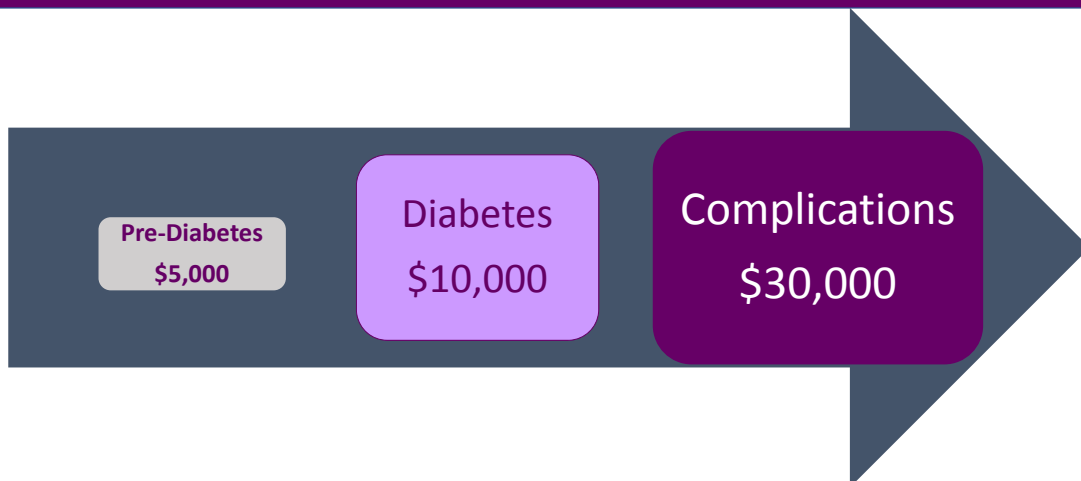
- Can lead to horrific complications
- Can lead to reduced productivity, absenteeism, and more sick days
- Can greatly reduce quality of life
- Can lead to increased health care costs
- Can lead to early retirement and early death
- Effects your bottom line in many ways

## Medical Expenses for Employees with Diabetes

Approximately 2.3 times higher than those without diabetes

Source: Moving the Needle on Diabetes: The Employer Perspective Jeremy Nobel et al

## Diabetes Annual Costs by Stage



## Workplace Cost Calculator: Estimate for a Company with 1,000 Employees

- 120 employees have diabetes and 34 undiagnosed
- 370 have pre-diabetes
- \$4 million: average annual insurance cost for employees with diabetes & pre-diabetes
- **\$751,682: annual increased cost if 25% of employees with pre-diabetes develop diabetes**
- **Good news: type 2 diabetes can be prevented**

\*Last edit 3/11/ 2016

Source: <http://www.diabetes.org/in-my-community/awareness-programs/stop-diabetes-at-work/>

## Costs for Employers

### **Direct costs:**

Inpatient hospital care, medications, diabetes supplies, ER visits, and physician office visits

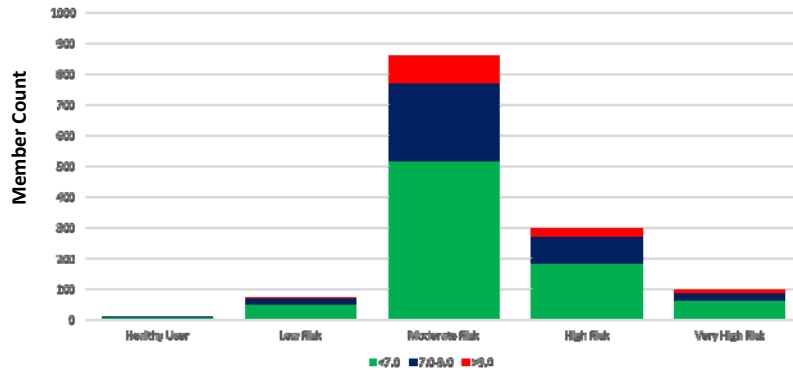
### **Indirect costs:**

Employee diabetes-related absenteeism, presenteeism (reduced productivity), disability, early retirement, and early mortality

Source: Moving the Needle on Diabetes: The Employer Perspective Jeremy Nobel et al

## Diabetes & A1C Control

ID with Diabetes and A1c Value



	Healthy	Low Risk	Moderate	High Risk	Very High Risk
Avg. Plan Paid (Med&Rx)-Members w/ Diabetes	\$1,144	\$1,755	\$5,557	\$19,411	\$64,879

Data represents the risk and A1c control of members with diabetes. Risk Period: 1/1/2010-12/31/2010

Source: Mary Delaney vitalincite

## Addressing the Challenge: Diabetes Management

## Diabetes Management

Employers have so much to gain even with modest success in **Diabetes Management** and so much to lose if nothing is done.

Source: Transforming Diabetes Management: New Directions for Employers. Nobel et al, 2014

## Diabetes Management

National studies conclude for each dollar spent on **Diabetes Management**, employers can enjoy a **\$4 ROI**

Source: Moving the Needle on Diabetes: The Employer Perspective. Jeremy Nobel et al, 2014



## Self-Management Education and Support: Getting a Return on Your Investment

### Diabetes Management Programs: Changing Employees Lives

1. Employees learn about their diabetes
1. Employee learn how to manage diabetes and reduce risks of complications
1. Employees are supported and followed-up in making positive behavior changes that will get their diabetes under control
1. Employees receive ongoing support to maintain good control over the life time

## Diabetes Management Programs: Changing Employees Lives

Employees with well controlled diabetes are likely to feel better and have more energy

→ this in turn could lead to fewer sick days, more productivity, high morale, and greater retention of valued employees ... and reduced healthcare costs

## How does a diabetes education program work?

### **Group education**

- Interactive and fun way to learn information about diabetes in a supportive group setting
- Group discussion and sharing facilitated by diabetes educator
- Not didactic
- Based on principles of adult learning

## Diabetes Education: Patient Testimonials

### **“John”**

Before taking the classes, I didn't know how to handle a situation that could handle me. I felt scared.

Now I still have good and bad days, but I understand what I need to do to handle diabetes and I am not scared.

Diabetes won't beat me. These classes work and word of mouth sells. People with diabetes help each other and I am glad to share these tools I've been given.

You should make everyone with diabetes sign up.

## Diabetes Education: Patient Testimonials

### **“Jane”**

It was easier to ask questions in the group than a doctor's appointment. Our group was fun and liked to joke around so I didn't feel nervous or embarrassed to ask a question.

There were also a couple of times where I was going to ask a question and someone else had the same question and asked it for me. That was nice.

I thought my A1c was just normal for me. Now I know that it's not and how to get it better.

## How does a diabetes self-management program work?

### **Individual sessions:**

- Sessions based on evidence-based motivational interviewing and behavior change methodology/theory.
- Behavior change goals are identified by the employee.
- Diabetes educator provides support to help employee make small, achievable behavior changes.
- Maintaining behavior change over time requires follow-up.

## What Entails an Accredited Diabetes Management Program?

- Evidence-based
- Cost-effective/Return on Investment
- Recognized for quality
- Adherence to nationally recognized standards
- Comparative outcome measures tracking
- Person-centered and culturally competent

# The Benefits of Diabetes Self-Management Education and Support

## Benefits of Diabetes Self Management Education and Support

- Provides employees with the knowledge, skills, and abilities required for effective, sustained self-management of their diabetes
- It is key to empower your employees to successfully manage their diabetes and improve their quality of life

Source: Partnering with diabetes educators to improve patient outcomes. [Diabetes Metab Syndr Obes](#) 2014

## Benefits of Diabetes Self Management Education and Support

1. Reduces hospital admissions and readmissions
2. Reduces estimated lifetime health care costs related to lower risk for complications
3. Improves A1c by as much as 1% ... this reflects a savings between \$600-1300
4. Improves quality of life
5. Enhances self-efficacy and empowerment

Source: A Joint Position Statement, Diabetes Care, July 2015.

## Impact of Diabetes Education on A1c

**Before** Diabetes Education: average A1c 8.68%

**After** Diabetes Education: average A1c 7.43%

**Average A1c Reduction by 14%, a dramatic cost reduction**

Source: American Diabetes Association Chronicle Diabetes Annual Benchmarks for 2016

## Benefits of DSMES Services: Behavior Changes

### Behavioral Goals

<b>1. Taking medications:</b>	<b>Baseline 18.3%</b>	<b>Post 75.9%</b>
<b>2. Monitoring:</b>	<b>Baseline 16.2%</b>	<b>Post 71.9%</b>
<b>3. Healthy eating:</b>	<b>Baseline 15.8%</b>	<b>Post 66.4%</b>
<b>4. Physical activity:</b>	<b>Baseline 17.4%</b>	<b>Post 57.9%</b>
<b>5. Problem solving:</b>	<b>Baseline 12.6%</b>	<b>Post 70.0%</b>
<b>6. Reducing risks:</b>	<b>Baseline 15.6%</b>	<b>Post 65.8%</b>
<b>7. Healthy coping:</b>	<b>Baseline 18.2%</b>	<b>Post 69.9%</b>

Source: American Diabetes Association Chronicle Diabetes Annual Benchmarks for 2016

## Benefits of Diabetes Education

- Studies have shown people who receive diabetes education are more likely to:

Use primary  
care /  
prevention  
services

Take  
medications as  
prescribed

Control glucose,  
blood pressure,  
LDL cholesterol

Have lower  
health costs

# Methodology

## AADE7™ Self-Care Behaviors:





## AADE 7 Healthy Eating

A diabetes educator can help your employee to learn about:

- ✓ Eating healthy most of the time
- ✓ Counting carbohydrates
- ✓ Reading food labels
- ✓ Reducing portion sizes
- ✓ Developing a healthy eating plan
- ✓ Fitting healthy eating into my culture
- ✓ Preventing high or low blood sugars
- ✓ Setting goals for healthy weight loss



## AADE7 Being Active

- ✓ Can improve cholesterol, blood pressure, ability to cope with stress and anxiety, and mood.
- ✓ Can also help keep blood sugars closer to normal.
- ✓ A diabetes educator can help your patients to develop an activity plan.
- ✓ Sitting is the “new” smoking



## AADE7 Monitoring

- ✓ Why checking blood glucose is a good idea.
- ✓ How to use a blood glucose meter.
- ✓ When to check blood sugar and how to interpret the result.
- ✓ What to do if blood sugars are high or low.
- ✓ Common causes of falsely elevated readings.



## AADE7 Taking Medications

- ✓ How do I take my medications properly?
- ✓ What do each of these medications do?
- ✓ What side effects are common?
- ✓ How do I give myself an insulin injection?
- ✓ For injectables-use of teach-back
- ✓ What kinds of things cause insulin to go bad?



## AADE7 Problem-Solving

- ✓ Dealing with hyperglycemia, hypoglycemia, profound hypoglycemia (glucagon), ketones.
- ✓ How to modify your regimen when sick or before surgery
- ✓ How to modify your regimen when your activity level changes
- ✓ What to do if you cannot afford medications or supplies



Source: <https://www.diabeteseducator.org/docs/default-source/legacy-docs/resources/pdf/general/AADE7-problem-solving.pdf>

## AADE7 Healthy Coping

- ✓ Psychosocial aspects of diabetes
  - Depression
  - Social isolation
  - The “diabetes police”
- ✓ Engagement in support groups
- ✓ Impact stress can have on blood glucose control
- ✓ Knowledge of available resources



<https://www.diabeteseducator.org/patient-resources/aade7-self-care-behaviors/healthy-coping>

## AADE7 Reducing Risks

✓ Looking after their diabetes can reduce the chances of your patients developing serious complications.

✓ A diabetes educator can talk to your patients about other things they can do to reduce risks:

✧ **Smoking cessation**

✧ See their doctor regularly

✧ Take care of their feet

✧ Get their yearly flu vaccine

✧ Visit the eye doctor at least once a year

✧ Don't forget the dentist

✧ Listen to their body

## Diabetes Risk Reduction Strategies

1. Identify and work intensively with employees with poor control
2. Incorporate risk reduction strategies in all employees with diabetes
3. Prevention strategies for all employees without diabetes

## Identifying High Risk Employees With Diabetes

### SEVERELY ELEVATED LEVELS:

Higher risk of serious complications such as heart attack, stroke, blindness, kidney failure, amputations, etc.

A1c LEVELS	GLUCOSE LEVELS
13	380
12	345
11	310
10	275

## Focusing on Employees with Poor Control

- Poor control increases risk of severe complications lead to greater suffering and very high healthcare costs
- Need to provide intensive, evidence-based, high quality education and support
- Delivery of care needs to be based on the psychology of behavior change and utilization the spirit of motivational interviewing

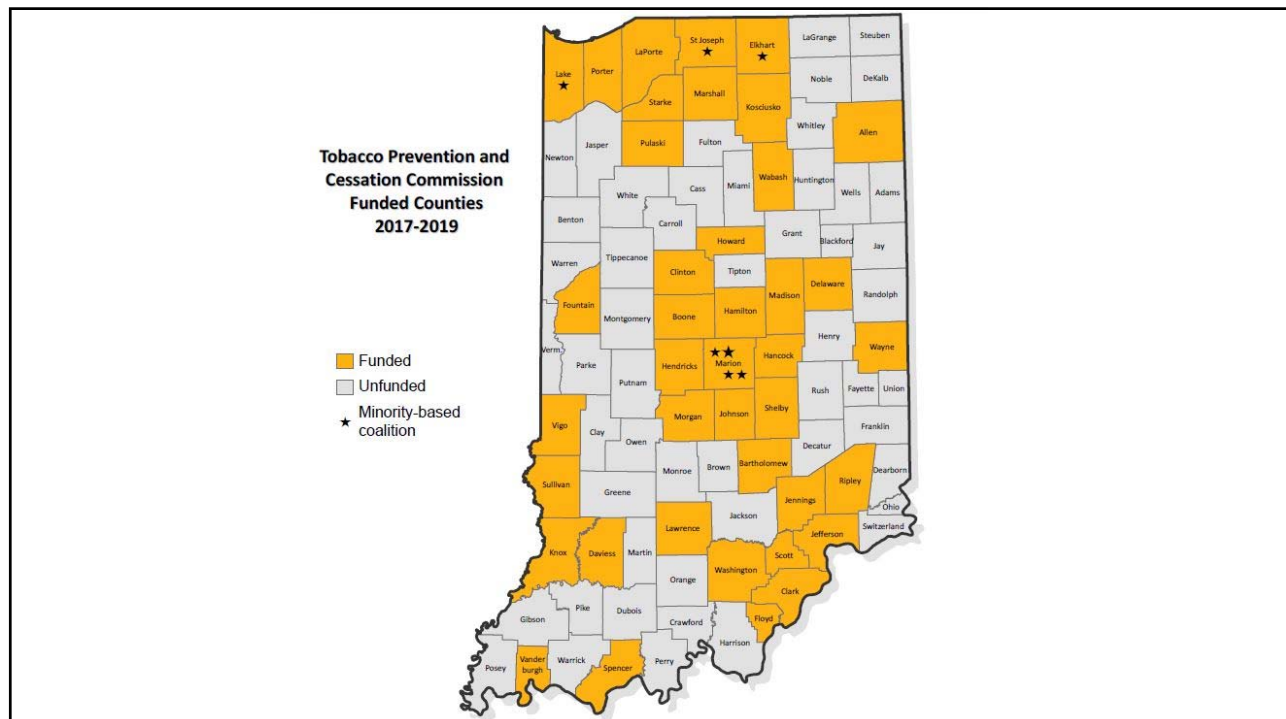
## Reducing Risks of Complications

Smoking and Diabetes-A Dangerous Combination

- Higher risks of:
- Blindness
  - Heart and kidney disease
  - Infections, ulcers, and amputation
  - Damaged nerves causes numbness, pain, weakness

**1-800-QUIT NOW INDIANA TOBACCO QUITLINE**

**It's free, it's confidential, it can save your life**



## Reducing Risks of Complications

- ✓ **Daily foot care education:** can reduce 85% diabetes-related amputations
- ✓ **Pneumonia and yearly flu vaccine** can reduce costs of hospitalizations for complications of pneumonia and the flu
- ✓ **Yearly eye exams:** can prevent 90% of diabetes-related blindness



## Reducing Risks of Complications

- ✓ **Dental exams** every 6 months helps to prevent serious gum disease that can require surgery and may lead to loss of teeth
- ✓ **Closely monitoring kidney functions tests** can detect and treat early diabetic kidney disease by lowering blood pressure which can reduce decline in kidney function by 30-70%



## Reducing Risks of Complications

- ✓ **Blood sugar control** reduces risk of eye disease, kidney disease and nerve disease by 40%
- ✓ **Blood pressure control** reduces risk of heart disease and stroke by 33-50%
- ✓ **Improved control of cholesterol** levels can reduce cardiovascular complications by 20-50%

Source: [www.cdc.gov/diabetes](http://www.cdc.gov/diabetes)



## Integration of Diabetes Management into Your Wellness Program



## Strategies for Integrating Diabetes Management Into Your Wellness Program

1. Screen employees for diabetes
1. Offer free Diabetes Prevention Program to employees
1. Offer free Diabetes Self-Management and Support Services to employees living with diabetes
1. Encourage employees with new diabetes diagnosis to participate in diabetes program

## Strategies for Integrating Diabetes Management Into Your Wellness Program

6. Offer high intensity support to high risk employees (A1c greater than 9) to reduce incidence or manage serious complications
7. Include employees in development of program & seek ongoing feedback
8. Offer discounts for medications, especially insulin

## Integration of Diabetes Prevention into Your Wellness Program

### Costco Online Diabetes Prevention Program

- Covered medical benefit to its employees, their spouses, and their children aged 18 and older who meet program eligibility requirements.
- The easy-to-deploy online model to be a good fit for their employees located in different geographic areas across the US
- Costco worked creatively ... to engage employees and encourage program uptake.

Source: Approaches to Employer Coverage of the National Diabetes Prevention Program for Employees at Risk for Type 2 Diabetes. CDC. September 2016

## Integration of Diabetes Services into Your Wellness Program

**Dallas-Fort Worth Business Group:** Developed a diabetes management model based on screening, education, and treatment for Federal Reserve Bank of Dallas

### Conclusions:

1. Employers can make diabetes management programs succeed at work
2. On-site programs go a step further by enhancing employee morale and loyalty
3. Holds enormous potential for reducing diabetes among employees, enhancing worker productivity, decreasing diabetes-related costs, and reducing other health problems
4. Program developers should collaborate with the benefits, wellness, and fitness departments of the organization to ensure program synergy

Source: <https://www.cdc.gov/diabetes/diabetesatwork/about/stories/html>

## Integration of Diabetes Services into Your Wellness Program

### **Case Study: World-wide Employer**

- After 4 years **20% reduction** in diabetes health care costs for employees with diabetes
- Significant reduction in average A1c for employees
- Program no longer needs significant marketing as “word” gets round that diabetes is not that difficult to control

## Integration of Diabetes Services into Your Wellness Program

### **Case study: Manufacturing company in Central Indiana**

- Incorporated a diabetes program into the on-site Primary Care clinic
- Initiation: Employees with diabetes attended mandatory session about the diabetes program
- Interested employees signed up for program
- Focus: helping employees change behavior
- After one year program requires little marketing as “word gets around” about benefits

## Integration of Diabetes Services into Your Wellness Program

### **Case study: Manufacturing company in Central Indiana (cont' d)**

- Kitchen at clinic: employees can learn how to cook healthier meals
- Focus on plant-based diet: food as medicine
- Free meals provided to employees
- Data: significant reduction in A1c, weight loss, reduction in cholesterol levels, and reduced drug costs
- Employees with A1c >9 receive more intensive support and follow-up

## Other Ways to Support Diabetes Management for Your Employees

- Support diabetes programs in your area
- Provide diabetes management and diabetes prevention as a covered benefit for your employees
- Remove or reduce out of pocket expenses for employees attending diabetes programs
- Support programs that working towards providing diabetes management via telehealth

## For More Information

**Brenda Jagatic, BScN, RN, CDE**

**Diabetes Education  
Coordinator**

**[bjagatic@isdh.in.gov](mailto:bjagatic@isdh.in.gov)**

**Susie King**

**Diabetes Prevention  
Coordinator**

**[sking@isdh.in.gov](mailto:sking@isdh.in.gov)**



## Center for Disease Control and Management

**Diabetes at Work | Diabetes | CDC**

<https://www.cdc.gov/diabetes/diabetesatwork/index.html>

<https://nccd.cdc.gov/Toolkit/DiabetesImpact>

<https://www.cdc.gov/diabetes/prevention/index.html>

[https://www.cdc.gov/diabetes/pdfs/programs/stateandlocal/emerging\\_practices-employer\\_coverage.pdf](https://www.cdc.gov/diabetes/pdfs/programs/stateandlocal/emerging_practices-employer_coverage.pdf)

<http://www.nationaldppcoveragetoolkit.org/>

Source:

## Additional Resources

### **American Medical Association**

<https://assets.ama-assn.org/sub/prevent-diabetes-stat/>

<https://wire.ama-assn.org/delivering-care/6-steps-starting-your-own-diabetes-prevention-program>