Adding Diabetes to the Mix: Workplace Wellness Programs

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.
Why are we discussing this?

- Epidemic of diabetes
- Working population now has many chronic conditions
- How do we balance having a healthy workforce, make accommodations for chronic conditions, avoid “discrimination”, keep people healthy?
- The worksite can be a great place for education

Consequences of uncontrolled diabetes
- Loss of productivity
- Increased direct and indirect health care expenditures
- Poorer quality of life for employees
- Possible permanent disability
Why pick diabetes for a health promotion intervention at a business?

• Effective interventions promote multiple good outcomes.
• Loss of productivity due to uncontrolled diabetes may be improved with better glucose control.
• Improve quality of life for employees.
• Many employees (both current and future) have or may be at risk for developing diabetes.

• Unique opportunity for education
• Less time away from work
• Improves employer-employee relations and shows employer cares about employees.
Opportunity knocks to open the doors between business and community partners

- The health of a community impacts the economic health of its businesses.
- Corporations are able to play a unique role in the development of a community’s health and continued vitality.
Estimated cost of diabetes in U.S. (ADA 2007)

Total: $174 billion
Reduced national productivity.
- Indirect costs include increased absenteeism ($2.6 billion) and reduced productivity while at work – Presenteeism - ($20.0 billion) for the employed population
- Reduced productivity for those not in the labor force ($0.8 billion)
- Unemployment from disease-related disability ($7.9 billion)
- Lost productive capacity due to early mortality ($26.9 billion)

Future costs
- By 2034, the number of people projected to have diabetes = 44 million
- By 2034, health care costs attributable to diabetes could increase to $336 billion

Haung et al Diabetes Care 2009;32:2225-9
Don’t get “Lost in Translation”:
Business world vs. Traditional medical world

• ROI
• Stay in business
• Productivity
• Presenteeism/absenteeism
• Profit and loss
• Disease management
• Employees as a capital investment
• Population health

• Occupation is rarely on the radar screen in primary care or endo’s office
• Public and private partnerships
• Diabetes self-management education
• Individual health
• Advocacy
Bottom Line: Does better glucose control translate to better outcomes or better health in the individual?

Yes!

• For every 1% drop in A1c the risk of microvascular complications (eye, kidney, and nerve damage) can be reduced by up to 40%.
• Better control translates into fewer complications in eyes and kidneys.
• Workers with better A1C have fewer days lost to absenteeism.
• Fewer complications translate into fewer days lost to absenteeism and disability, and future savings on health care expenditures
• Fewer days of restricted activity
• Fewer accommodations needed

Testa et al, JAMA, Nov 1, 1998
Promoting Employee Wellness
Cost and Productivity Impact

A1C Levels Are Directly Linked to Health Care Costs


Charges for Care Included Defined Outpatient and Inpatient Services

Standardized 3-Year Estimates of Charges:
- $10,439 – No CoMorbidities
- $44,417 – CoMorbidities

% Increase in Medical Costs

<table>
<thead>
<tr>
<th>% A1C</th>
<th>0%</th>
<th>4%</th>
<th>10%</th>
<th>20%</th>
<th>30%</th>
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<tbody>
<tr>
<td>Goal  = &lt; 7%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not at Goal &gt;= 7%</td>
<td></td>
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Source:
<table>
<thead>
<tr>
<th>A1c</th>
<th>Glucose mg/dL</th>
<th>Avg Charge/Patient No Complications</th>
<th>Avg Charge/Patient Complications</th>
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<tbody>
<tr>
<td>6%</td>
<td>100</td>
<td>$8,576</td>
<td>$38,726</td>
</tr>
<tr>
<td>7%</td>
<td>135</td>
<td>$8,954</td>
<td>$40,230</td>
</tr>
<tr>
<td>8%</td>
<td>170</td>
<td>$9,555</td>
<td>$42,230</td>
</tr>
<tr>
<td>9%</td>
<td>205</td>
<td>$10,424</td>
<td>$42,467</td>
</tr>
<tr>
<td>10%</td>
<td>240</td>
<td>$11,629</td>
<td>$49,673</td>
</tr>
</tbody>
</table>

Gilmer TP et al. *Diabetes Care*. 1997; 20:1847-53
Access to Diabetes Management/Education

An actuarial study of more than 4 million individuals found that patients who participate in diabetes education:

- Are more likely to adhere to diabetic care standards than are similar patients who do not
- Have claims costs lower than those of similar patients who do not
- Pharmacy costs are higher but inpatient costs are lower


Issues:
- Time, Cost, Distance
- Adult Learning Theories
- Workplace Culture
- Employee Empowerment
- Impact of Low Health Literacy
Worksite issues and diabetes

• Balance between appropriate therapies to PREVENT complications and accommodations such as needles at the worksite, breaks for snacks
• Wellness programs to PREVENT and improve control
• Placement issues
Individual assessment: Each person, each job

• Work with health care provider
• Education!
• Assessment of physical condition
• Assessment of therapeutic regimen. Can insulin, for example be adjusted (dose, type, timing) to better control glucose level (avoid hypoglycemia, keep good control)?
• Accommodation may be short term until glucose levels are stable.
• Be proactive.
National Diabetes Education Program

- Joint initiative of CDC and NIH, multiple workgroups
- Materials for health care providers, for people who have diabetes, and the people who care for them
- Materials for Awareness, Education and Prevention
- Focus group tested by diverse audiences, multiple languages
- NO COPYRIGHT : Add your logo!
- Over 200 public/private partnerships
NDEP Business Health Strategy Stakeholders’ Group: Goals and Partners

- To increase awareness of the benefits of quality diabetes care among employers, benefits managers and managed care decision makers
- To provide employers, health plans and employees with tools and information for incorporating diabetes education programs into the workplace
- To promote the value of investing in prevention

- CDC and NIH
- Large and small businesses: GE, GM, Land’s End
- Unions
- Occupational health professionals (ACOEM, AOHN)
- Public health agencies (State Diabetes Prevention and Control Programs)
- National associations representing employers, business coalitions and health care insurers (NBCH, NBGH, AHIP)
www.diabetesatwork.org

• A FREE, easy-to-use tool that helps businesses identify the potential impact of diabetes in their workplace and provides them with resources for creating education programs:
  • Interactive assessment tool
  • Over 35 lesson plans and fact sheets in English and Spanish
  • Resources for diabetes support group planning
  • Employer showcase presentations
  • Workshop planning tool kit
  • No Copyright!

Choosing Foods and Beverages for Healthy Meetings, Conferences and Events

The Centers for Disease Control and Prevention (CDC) promotes workplace practices and policies that make healthy eating choices available whenever food and beverages are provided at work-related events. Many workers consume a significant portion of food away from home. Foods consumed at cafeterias, from vending machines, and in other public food-service establishments are often not as nutritious or healthy as foods prepared at home. In general, Americans’ diets showed saturated fat and sodium recommendations, and few Americans are meeting fruit, vegetable, and whole grain recommendations. The Dietary Guidelines for Americans provides guidance on a diet that promotes health and may help prevent the effects of diet-related chronic diseases. Making healthy food available at work is one way to encourage employees to eat a healthy diet.

• In 1995, an estimated $263 billion in lost productivity associated with morbidity from coronary heart disease, stroke, and diabetes was attributed to diet.

• A poor diet is an underlying factor in the development of many conditions such as heart disease, some cancers, stroke, diabetes, and overweight and obesity.

• In 1999-2000, 60% of adults reported being overweight or obese. People who are overweight or obese are more likely to suffer from many chronic illnesses and conditions.
www.DiabetesAtWork.org Content

- General Diabetes Education
- Managing Diabetes Complications
- Cardiovascular Disease Risk Factors
- Nutrition, Physical Activity, and Weight Control
- Emotional Well-Being
- Feet Care
- Guide to Choosing a Health Plan
- “Lunch and Learns” Topics
- Shift Work
- Supervisor’s Guide
- Links to NDEP Websites

Target Audiences
- Occupational Health Providers
- Diabetes Educators
- Health Promotion/Wellness Programs
- Health Plans
- Decision Makers
- People with or at Risk for Diabetes, their Families and Caregivers
Words of Wisdom

• Can’t transform everything at once
• Use the web sites to print out forms and “recipes”
• Don’t re-invent the wheel
• Learn from others
GE/NBGH Project: What Did We Do?

• Identify a population at high risk for developing diabetes and other cardiovascular risk factors (CRA) at the worksite
• Combine public and private expertise to develop interventions to decrease the risks
• Calculate the ROI

• Financing: cooperative agreement
• Logistics: Weekly conference calls
• Content: GE materials (0,5,10,25)* + CDC materials (www.diabetesatwork.org)
• Serial CRAs

* 0 tobacco, 5 fruits and vegetables/day, 10,000 steps/day, BMI<25
Customer Satisfaction Results

<table>
<thead>
<tr>
<th></th>
<th>GE Much Better</th>
<th>GE Little Better</th>
<th>About Same</th>
<th>MD Little Better</th>
<th>MD Much Better</th>
<th>Blank or NA</th>
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<tbody>
<tr>
<td>Treats me with respect</td>
<td>33%</td>
<td>16%</td>
<td>49%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Accurately measures my blood pressure</td>
<td>23%</td>
<td>7%</td>
<td>67%</td>
<td>0%</td>
<td>0%</td>
<td>2%</td>
</tr>
<tr>
<td>Clearly explains my risks</td>
<td>47%</td>
<td>23%</td>
<td>21%</td>
<td>5%</td>
<td>0%</td>
<td>5%</td>
</tr>
<tr>
<td>Clearly explains how I can reduce my risks</td>
<td>51%</td>
<td>14%</td>
<td>26%</td>
<td>5%</td>
<td>0%</td>
<td>5%</td>
</tr>
</tbody>
</table>

- “I have participated for three years. It is very helpful to see the progress on a consistent basis. This program definitely helps understand the health risks and management, and provides encouragement, support and guidance for healthy lifestyle.”
Trane Wellness Program: A Public Private Partnership

- It started in a supermarket.
- Medical providers (occ med professionals, docs, nurses, wellness coordinators)
- Sources of expertise: Public health, NDEP (CDC/NIH), state DPCP (Diabetes Control and Prevention Program), University of Kentucky, Local Health Department
- Community groups, AHA, ADA
- Makers of the necessities of life
- Partnership between health department and private company
- On site training of all shifts
- Plan: Spread to other plants in the US
Worked with established vendor and program

- Established gaps in care
- Used telephonic help
- How to engage employees
- Different Strokes for Different Folks
- On site program at plants: Program participants liked working with somebody from the community at the plant
- Webinars to reach multiple worksites: IT and other tech folks Hawaii-Maine
Trane Diabetes Program- Tailor Program: Webinars

- **Webinars**
  - Taking Steps to Prevent Diabetes
  - Living with Diabetes
  - Living with Children with Diabetes

- **Sessions Provided**
  - 4 Sessions each
  - Different Time Zones/Days

- **Presenters:** from NDEP and Health department

- **Presentation Logistics**
  - 45 minutes in length (x2)
  - Chat room availability
  - Open Forum
Focus Group Evaluation

Comments from “changes made in daily life”

- Exercise more (52%)
- Watch what I am eating
- Changed my eating habits (57%)
- Walking more
- Reading more labels
- More participation if on “paid time”

Comments from “what would keep you from attending future classes”

- If my boss won’t let me come
- If unpaid time
- Getting fired
- Going on strike
- Death
- Wild Horses
Lessons Learned

• Work with existing programs, vendors: True collaboration, not competition
• Include many community and health organizations
• Include health plan
• Consistency
• Support from the top
Diabetes prevention: Small steps. Big rewards!

- Based on the science of The Diabetes Prevention Program (DPP)
- 58% of people with pre-diabetes (DPP study) prevented or delayed the onset of type 2 diabetes through lifestyle change
- Prevent type 2 diabetes in people with pre-diabetes
- Modest lifestyle changes
- Lose 5-7% of body weight, 10-15 lbs in a 200 lb person
- Walk 30 minutes/5 days/ week
- Game Plan Tool kit: strategies to motivate patients to change lifestyle

Diabetes Prevention

• At least 25% (some say 70%) of health care costs are potentially preventable through a healthier lifestyle and a reduction in health risks.

• Nationwide community based lifestyle program

• Could prevent or delay 885,000 cases of type 2 diabetes

• Could save $5.7 billion in 25 years

• Break even in 14 years

• Costs savings in both younger and older populations; but greater health and economic gains in people under 65

• Zhuo et al, Health Affairs 2012;31:50-60
Per capita costs of the lifestyle intervention program (US$)

<table>
<thead>
<tr>
<th>Interventions</th>
<th>Cost per year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intensive Lifestyle (DPP)</td>
<td>$1,500 / $700*</td>
</tr>
<tr>
<td>Group Lifestyle (DPP)</td>
<td>$300 – 450*</td>
</tr>
<tr>
<td>Group Lifestyle at YMCA</td>
<td>$240**</td>
</tr>
</tbody>
</table>

Note: For DPP, $1500 for the first year and $700 for years after the first year

National Diabetes Prevention Program

COMPONENTS

Training: Increase Workforce
Train the workforce that can implement the program cost effectively.

Recognition Program: Assure Quality
Implement a recognition program that will:
- Assure quality.
- Lead to reimbursement.
- Allow CDC to develop a program registry.

Intervention Sites: Deliver Program
Develop intervention sites that will build infrastructure and provide the program.

Health Marketing: Support Program Uptake
Increase referrals to and use of the prevention program.

www.cdc.gov/diabetes/prevention
Get Real!
You don’t have to eat like this to prevent diabetes.

It’s about taking small steps: losing 10 to 15 pounds if you weigh 200 pounds, walking briskly for 30 minutes most days, and making healthy food choices.

It’s about big rewards: living a longer and healthier life—and avoiding serious health problems such as heart attacks, strokes, blindness, kidney failure or amputation.

Take the first step today. If you’re over 45 and overweight, you may be at high risk for diabetes. Talk to your health care provider today. For free information about preventing diabetes, call 1-800-438-5383.

Get Real!
You don’t have to knock yourself out to prevent diabetes.

It’s about taking small steps: losing 10 to 15 pounds if you weigh 200 pounds, walking briskly for 30 minutes most days, and making healthy food choices.

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National Healthy Worksite Program
www.cdc.gov/NationalHealthyWorksite

• Reduce the risk of chronic disease among employees through science-based workplace health interventions and promising practices.

• Promote sustainable and replicable workplace health activities such as establishing a worksite health committee, having senior leadership support, and forming community partnerships and health coalitions.

• Promote peer-to-peer business mentoring.
REMEMBER

The lifestyle changes and medical care recommended for diabetes control helps to prevent and control MANY chronic diseases.
# Resource List

<table>
<thead>
<tr>
<th>Resource</th>
<th>Website</th>
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<tbody>
<tr>
<td>American College of Occupational Environmental Medicine</td>
<td><a href="http://www.acoem.org">www.acoem.org</a></td>
</tr>
<tr>
<td>Centers for Disease Control (CDC)</td>
<td><a href="http://www.cdc.gov/NationalHealthyWorksite">www.cdc.gov/NationalHealthyWorksite</a></td>
</tr>
<tr>
<td>Diabetes at work</td>
<td><a href="http://www.diabetesatwork.org">www.diabetesatwork.org</a></td>
</tr>
<tr>
<td>Healthy People 2020</td>
<td><a href="http://www.healthypeople.gov">www.healthypeople.gov</a></td>
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<tr>
<td>National Business Coalition on Health</td>
<td><a href="http://www.nbch.org">www.nbch.org</a></td>
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<tr>
<td>National Business Group on Health</td>
<td><a href="http://www.businessgroup.org">www.businessgroup.org</a></td>
</tr>
<tr>
<td>National Diabetes Education program</td>
<td><a href="http://www.ndep.nih.gov">www.ndep.nih.gov</a></td>
</tr>
<tr>
<td>Partnership for Prevention</td>
<td><a href="http://www.prevent.org">www.prevent.org</a></td>
</tr>
<tr>
<td>Wellness Councils of America</td>
<td><a href="http://www.welcoa.org">www.welcoa.org</a></td>
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