



Why Mitigating Metabolic Syndrome Stems the Trajectory of Health Care Trend

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Agenda for Discussion

- Marketplace Trends – Why does it matter?
- What is Metabolic Syndrome?
- What impact can an employer have on Metabolic Syndrome?
- A Case Study and the Clinical Outcomes
- Q&A

Marketplace Trends and Why Does It Matter?

Wally Gomaa

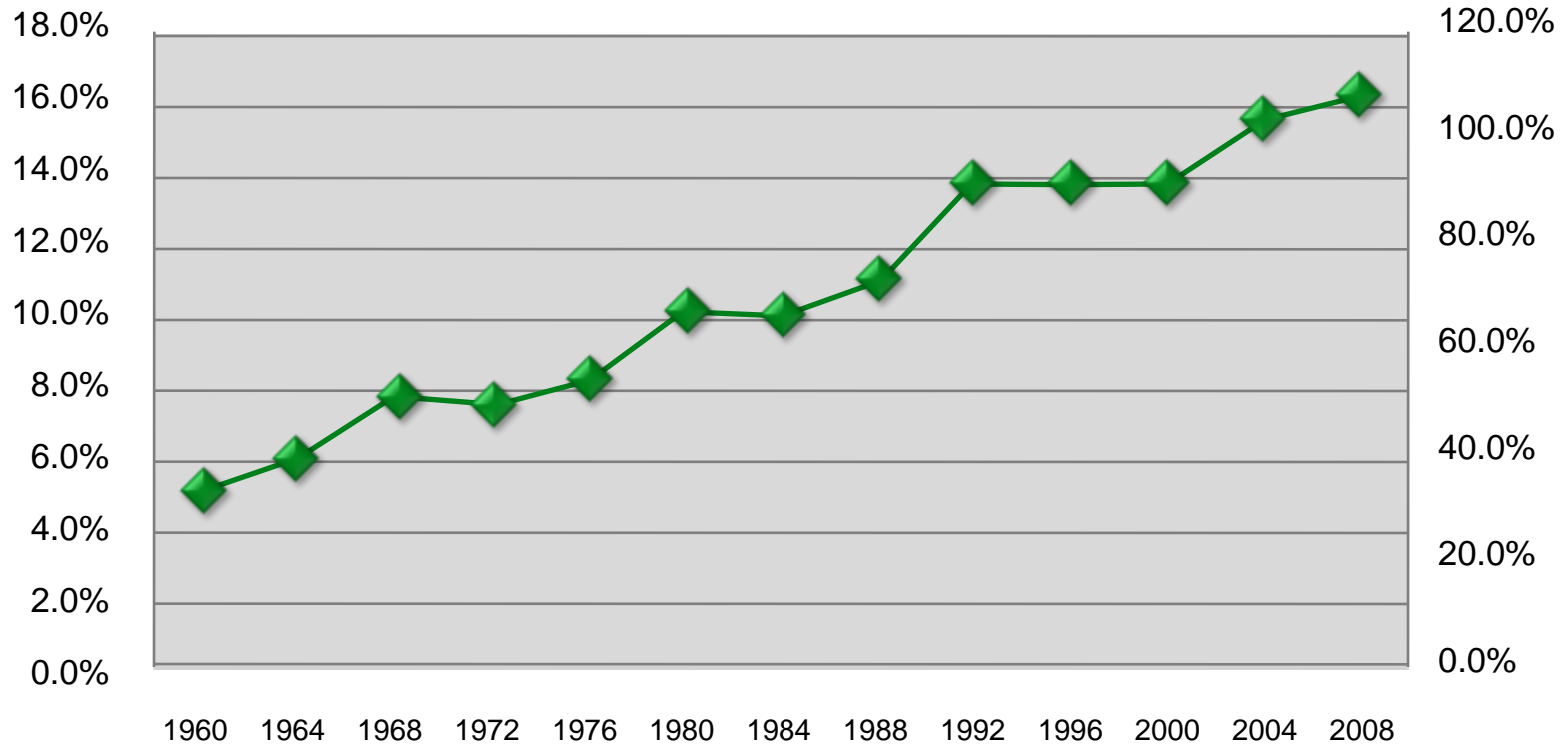
Where We've Been

Average Cost of Family Health Insurance in the U.S.



Healthcare Cost

Historical Trends – 1960 – 2008

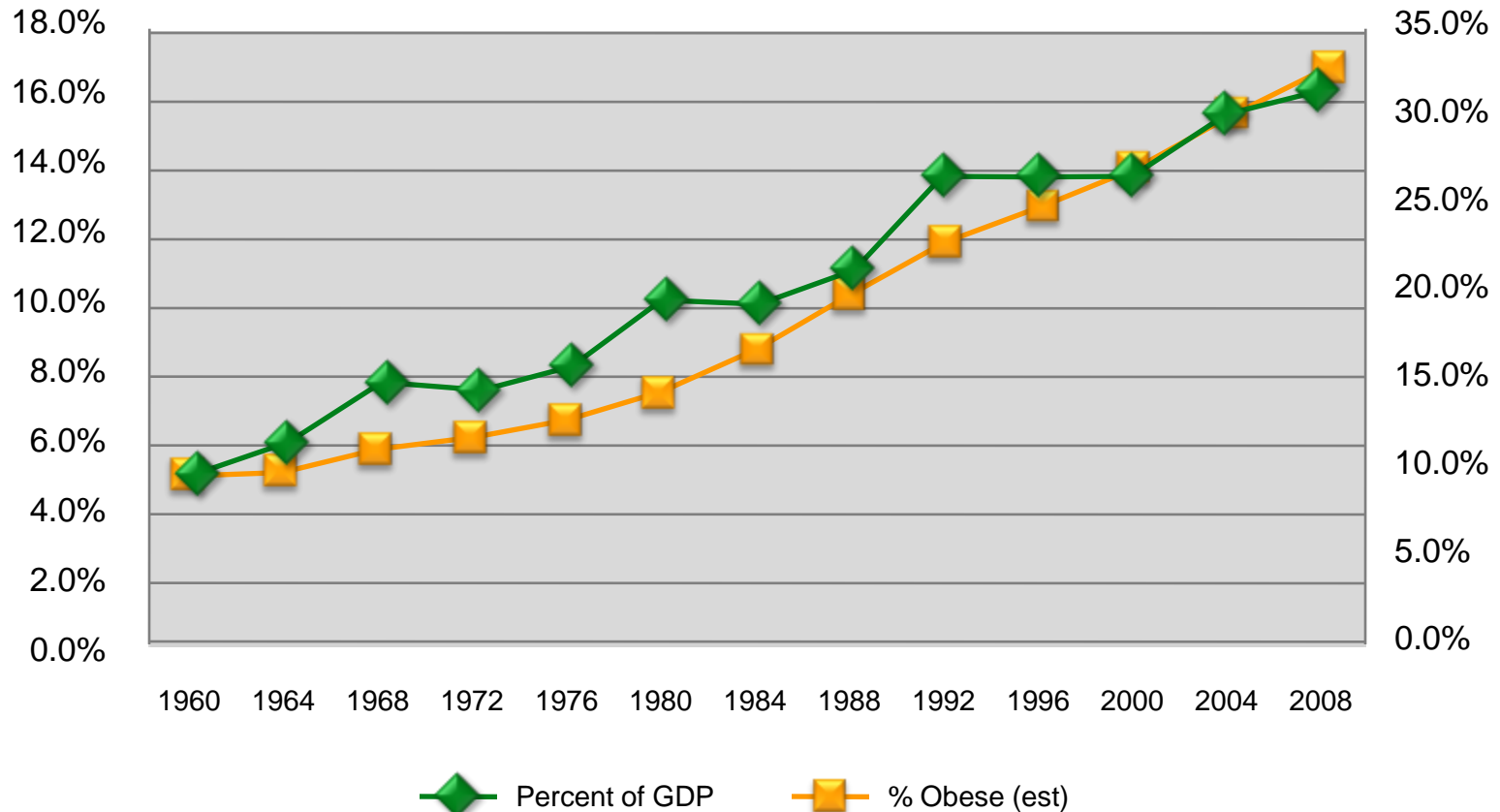


Source: OECD Health Data 2009; KFF, 2008;
US News & World Report, 2005

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Healthcare Cost & Obesity

Historical Trends – 1960 – 2008

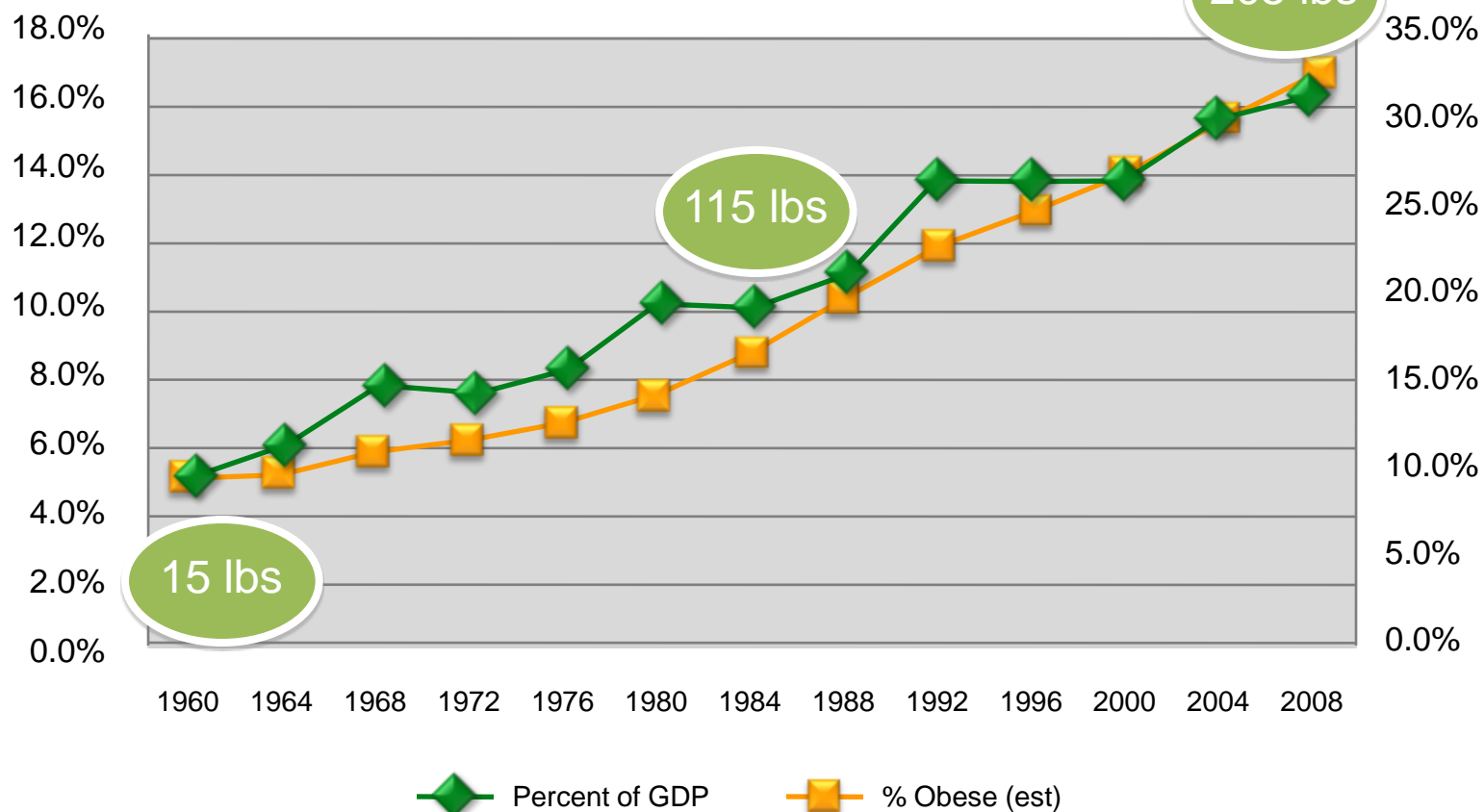


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Healthcare Cost, Obesity & Sugar!

Historical Trends – 1960 – 2008

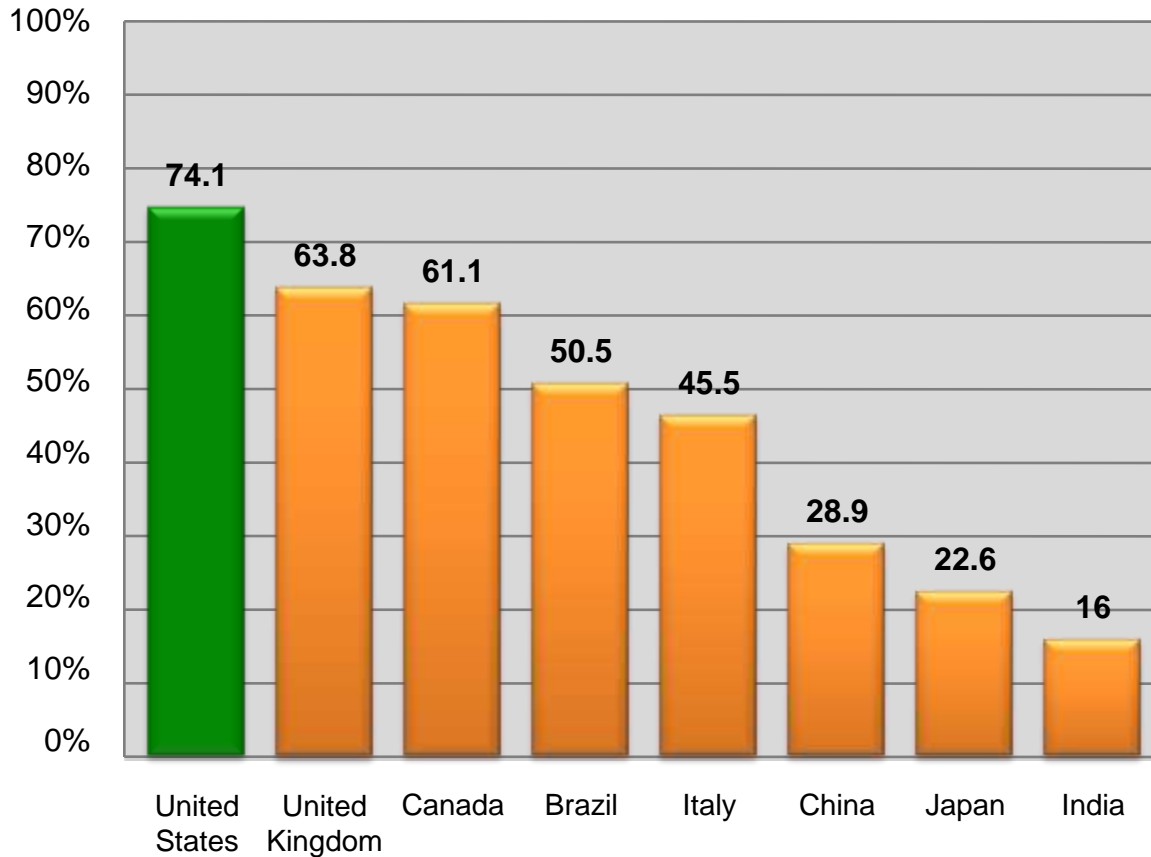


Source: OECD Health Data 2009; KFF, 2008;
US News & World Report, 2005

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Where We've Been

Overweight Percentage of the Population by Country



Rank	Country	%
1	Nauru	94.5
2	Micronesia	91.1
3	Cook Islands	90.9
4	Tonga	90.8
5	Niue	81.7
6	Samoa	80.4
7	Palau	78.4
8	Kuwait	74.2
9	United States	74.1
10	Kiribati	73.6

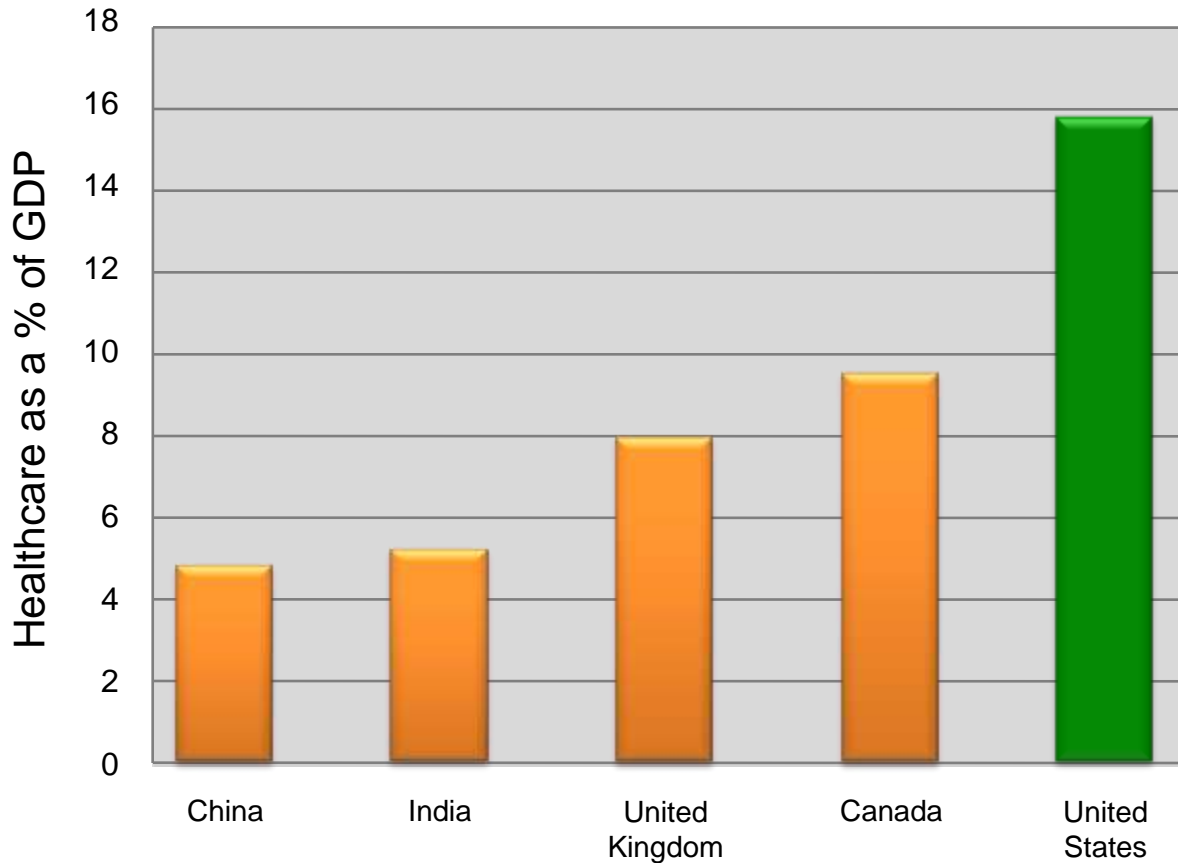
Source: World Health Organization



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Where We've Been

Healthcare as a % of GDP by Country

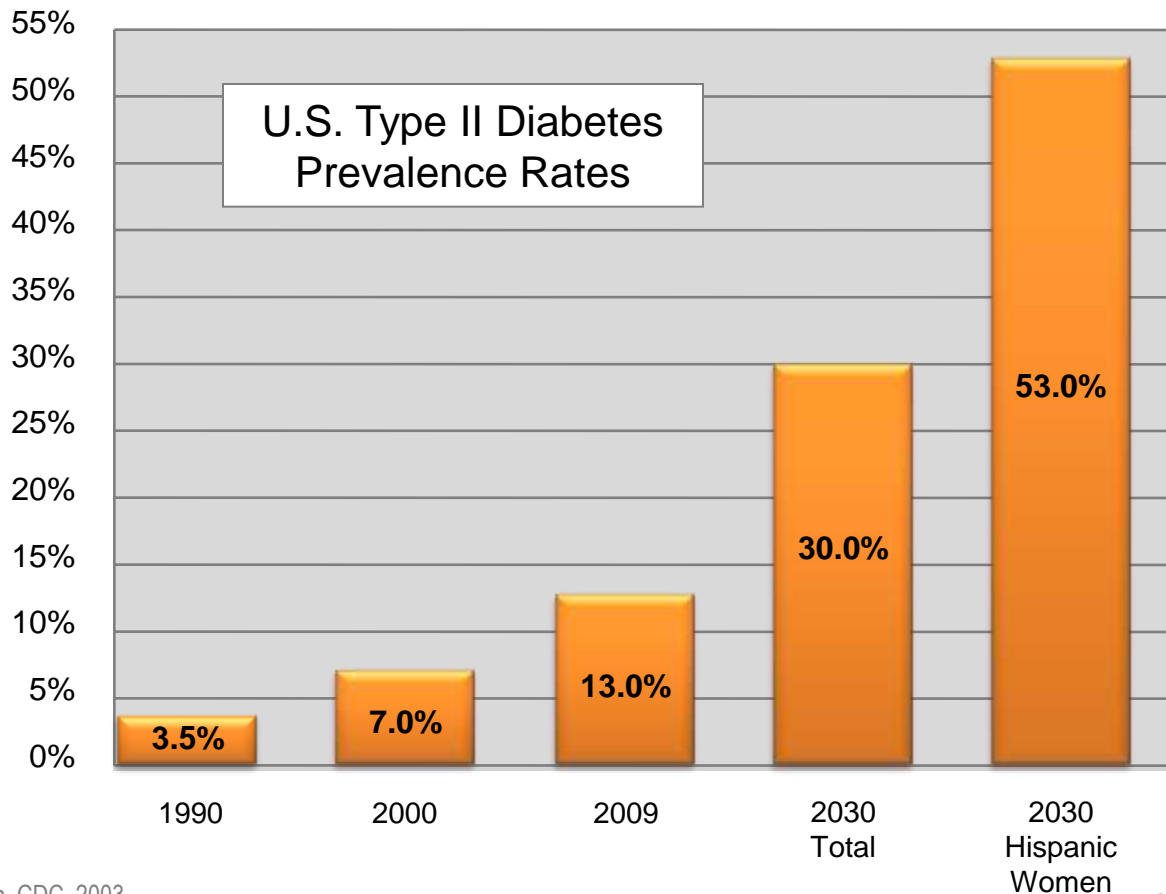


The Global Bottom 10	
Timor-Leste	11.2
Sao Tome and Principe	11.5
Switzerland	11.5
Lebanon	11.6
Malawi	12.9
Kiribati	13.7
Niue	15.1
Marshall Islands	15.2
United States of America	15.4
Tuvalu	16.6

Source: World Health Organization

What's Next? Future Disease "Production"

- Slowing the "production" of NEW disease is the ONLY sustainable way to flatten the trajectory of healthcare trends



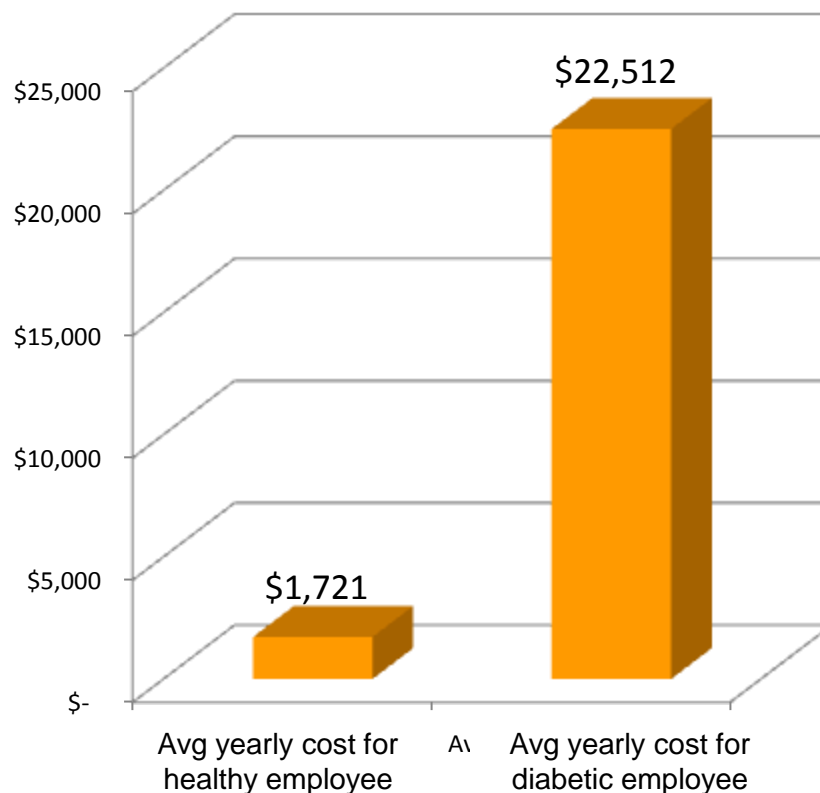
Source: AP Report, Narayan, CDC, 2003

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What's Next? Financial Impact of Diabetes

- Traditional approach
 - Diabetes disease management program
- “Loss Control” approach
 - Shut down the factory
 - The majority of new diabetics are Type II
 - Type II diabetes is almost completely avoidable

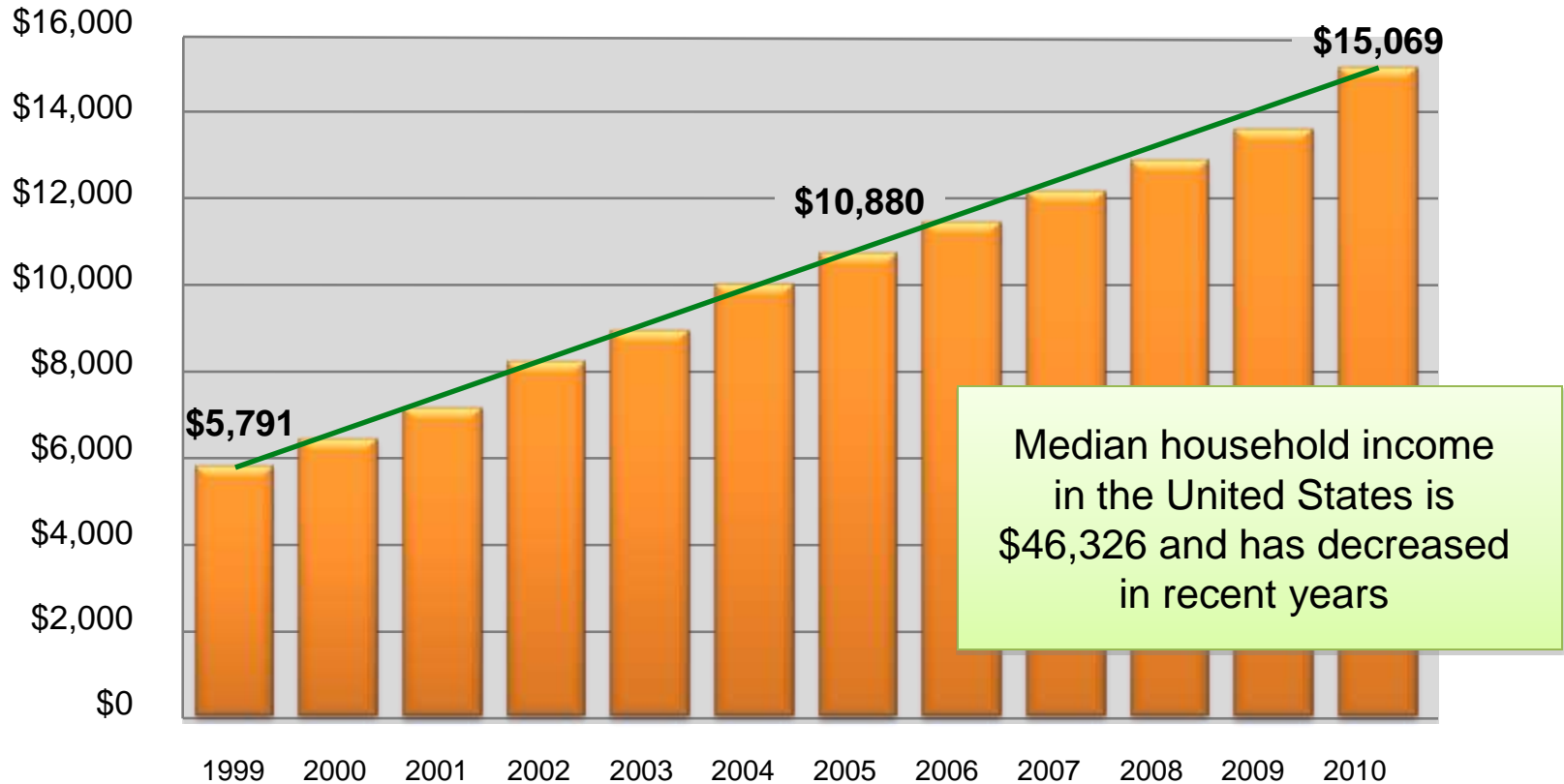
Annual Medical Claims
Healthy vs. Diabetic



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What's Next?

Average Cost of Family Health Insurance in the U.S.

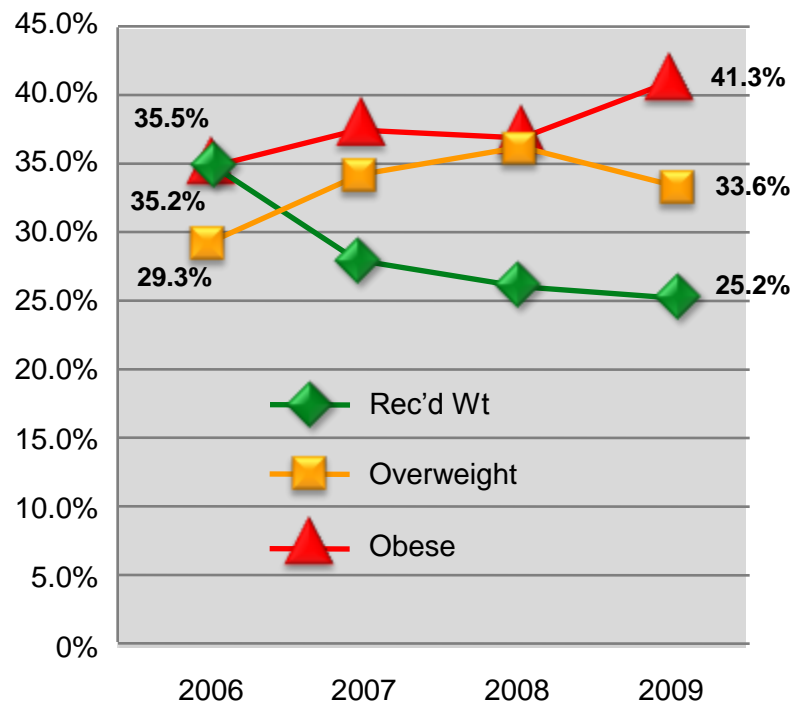


Where We've Been – Are Traditional “Wellness” Programs Effective Enough?

- Average weight has increased each of the past 4 years
- The average weight has increased from 178.2 to 194.6 since 2005
- The average employee BMI is considered obese as defined by the Centers for Disease Control

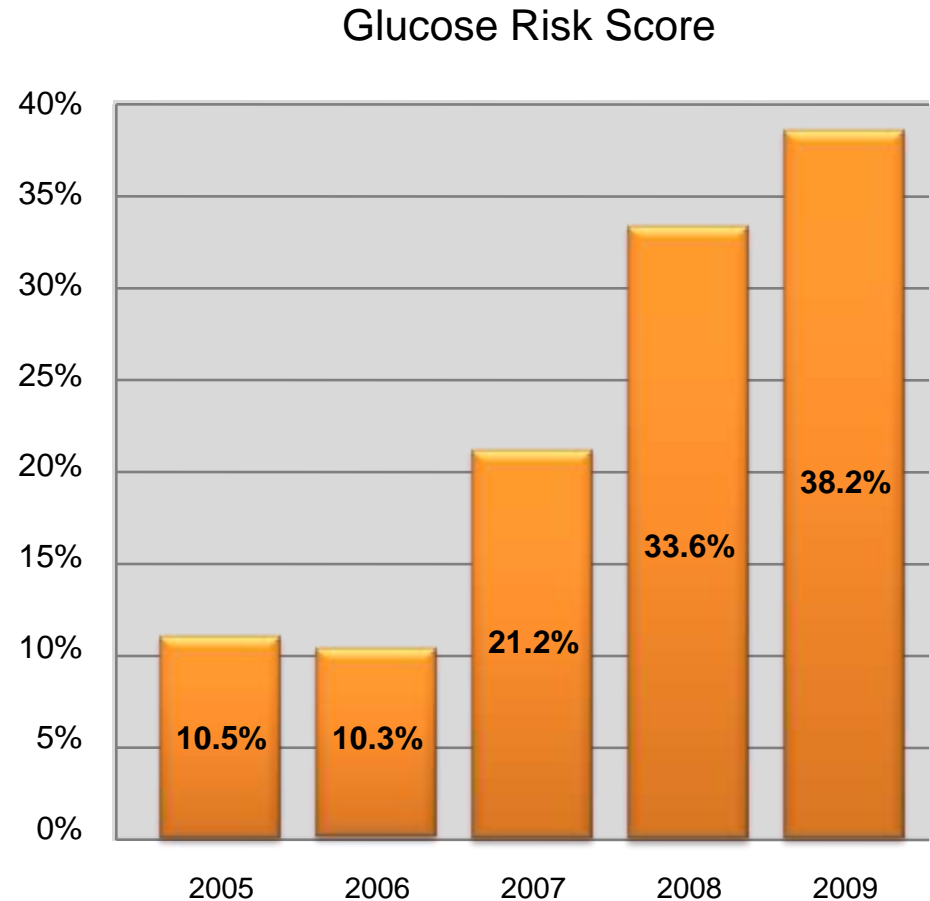
Year	Avg. BMI
2005	27.8
2006	28.6
2007	29.5
2008	29.7
2009	30.2

Average Body Mass Index



Where We've Been – Are Traditional “Wellness” Programs Effective Enough?

- Elevated glucose risk is steadily increasing
- This pattern is closely correlated to diabetes incidence and related claims

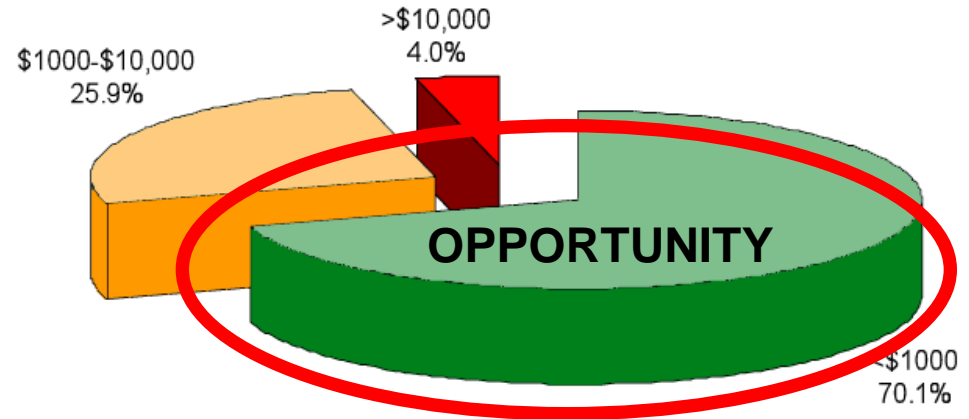


What Do We Do Next?

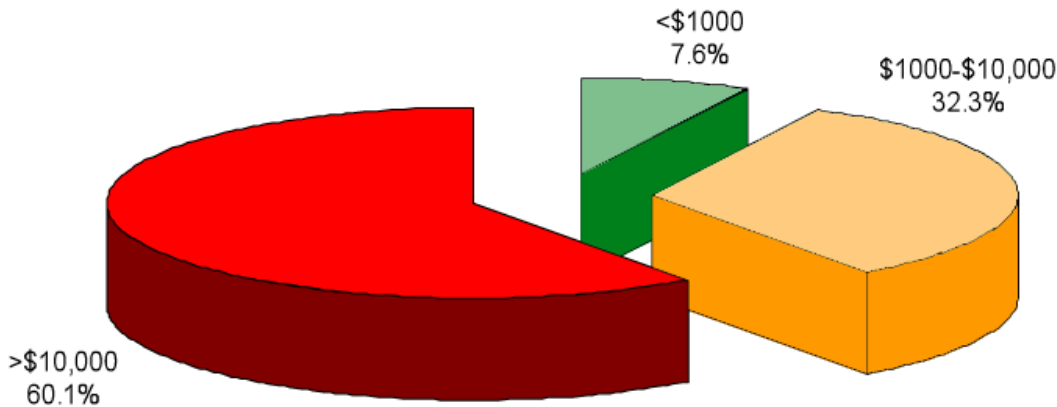
“Clinical Improvement” Risk Identification

A small percentage of claimants drive the majority of paid claims each plan year

Claimants



Claims



Majority of next year’s “Red” group will come from those with no previous claim risks

What is Metabolic Syndrome?

David Ferriss, MD

On their own, these risks create health problems

**High
blood
pressure**

**Low
HDL (good)
cholesterol**

**High
triglycerides**

**High
blood
sugar**

**High
waist
circumference**

**Blood Pressure
<130/85**

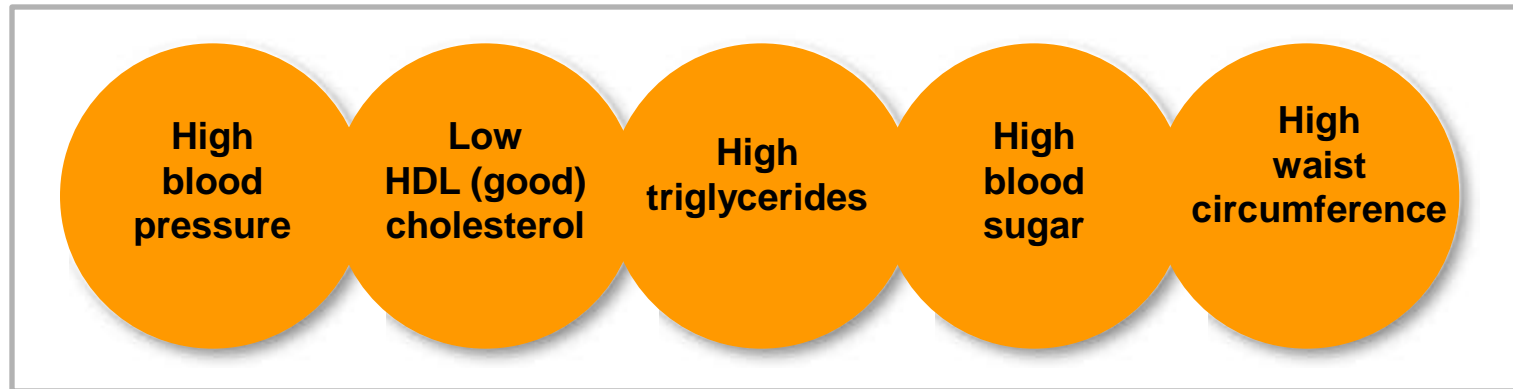
**HDL Cholesterol
>40/50**

**Triglycerides
<150**

**Blood Sugar
<100**

**Waist Circumference
<40/35**

Combined, They're a Recipe for Disease – and High Cost



7x
more likely to get diabetes

3x
more likely to get heart disease



2x
more likely to have a stroke

4x
higher medication spend

2x
more lost work days

What Do We Do Next?

Metabolic Syndrome Programs

Men's Risk Factors

HDL Cholesterol <40

Triglycerides \geq 150

Waist Circumference \geq 40 inches
(not pants size)

Blood Pressure \geq 130/85

Fasting Glucose \geq 100

Women's Risk Factors

HDL Cholesterol <50

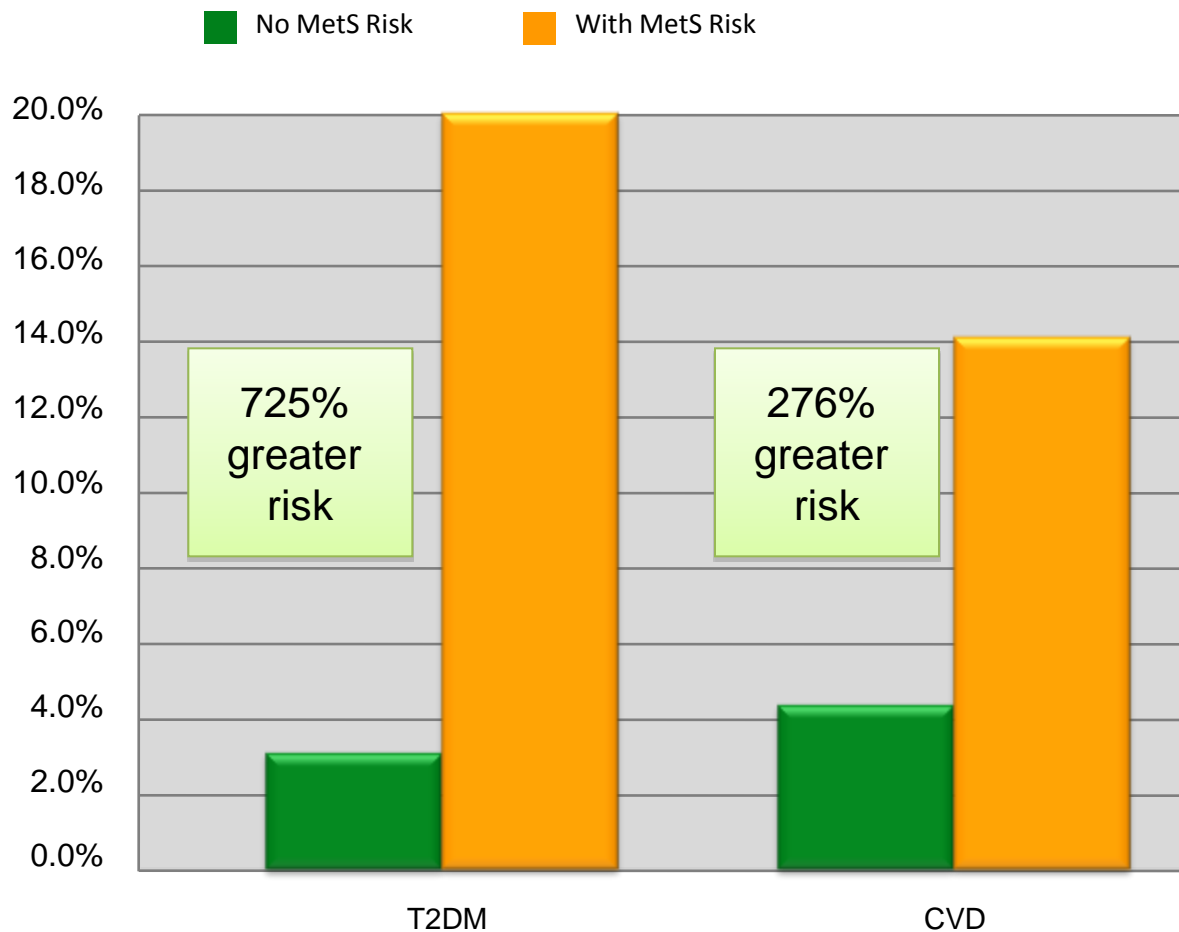
Triglycerides \geq 150

Waist Circumference \geq 35 inches
(not pants size)

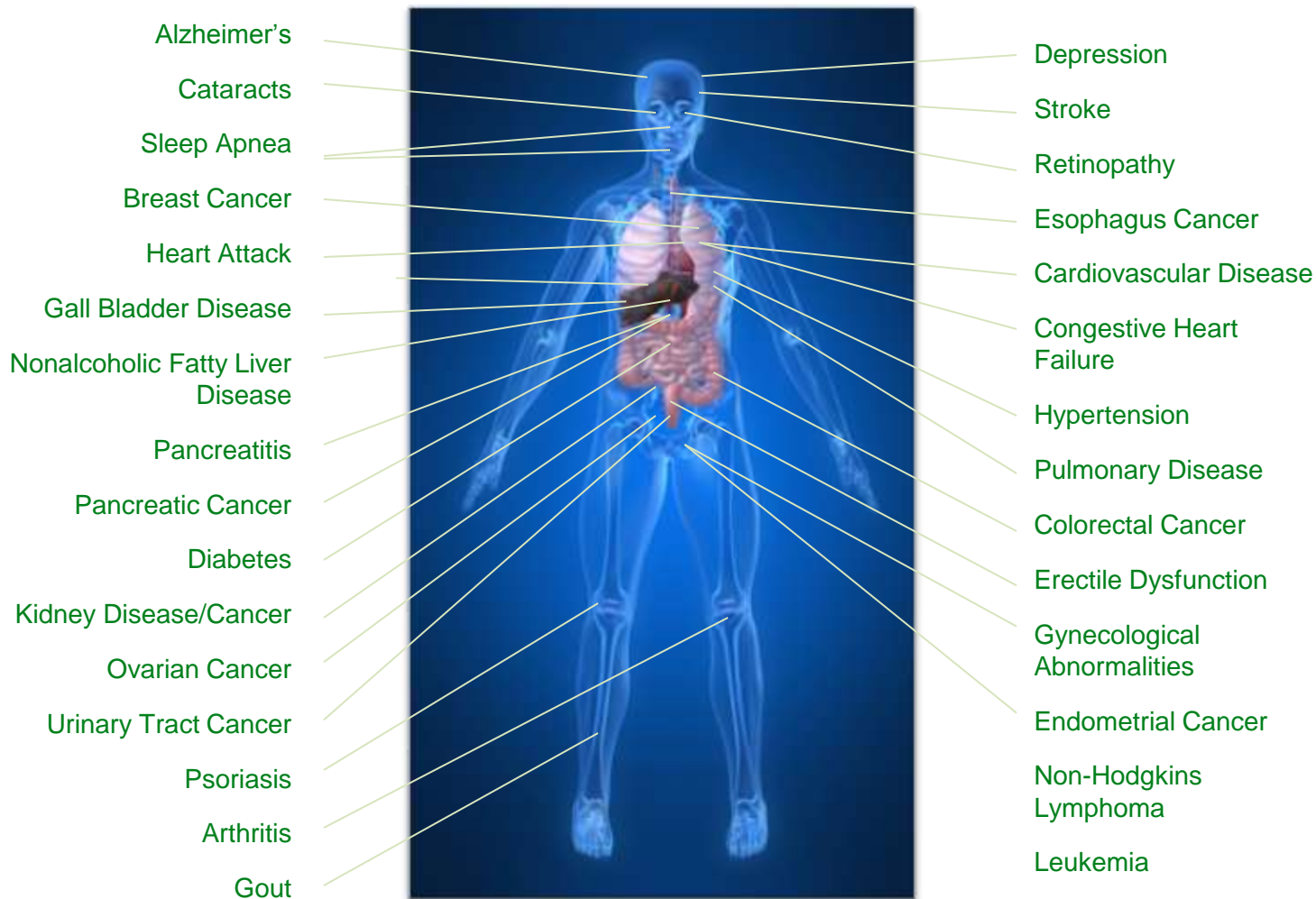
Blood Pressure \geq 130/85

Fasting Glucose \geq 100

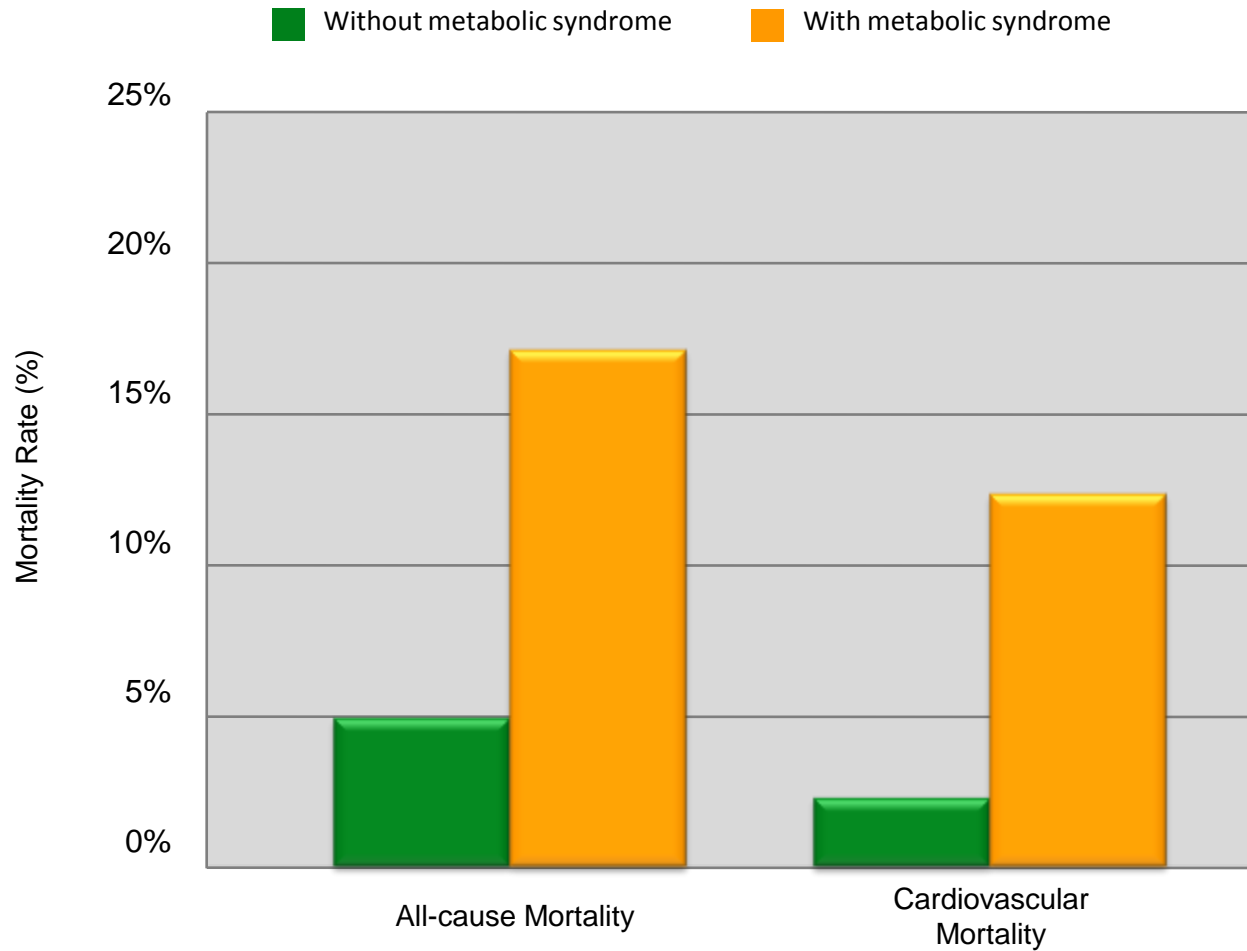
Framingham Heart Study Offspring Study



Disease Risk Associated with Metabolic Syndrome Elements



Metabolic Syndrome: Impact on Mortality



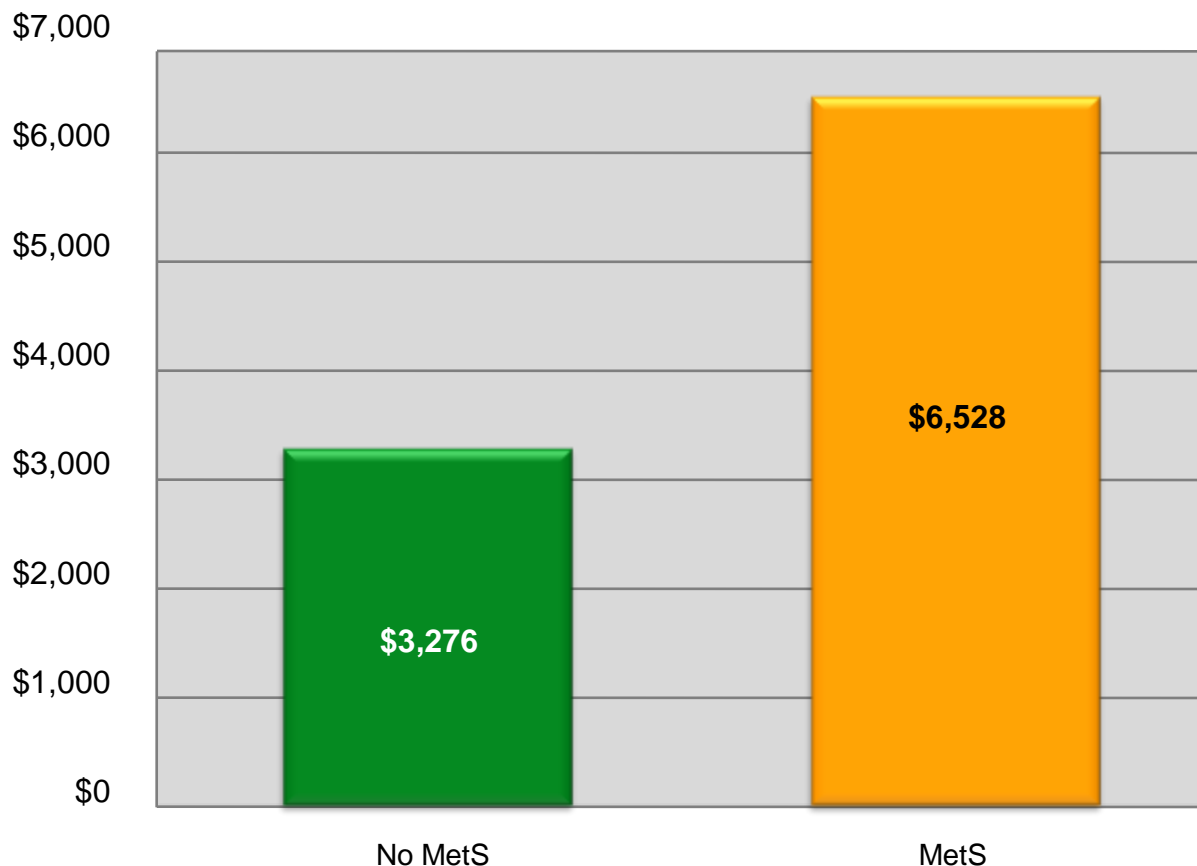
Isomaa B et al. *Diabetes Care*. 2001; 24:683-689.

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Metabolic Syndrome

Additional Medical Cost

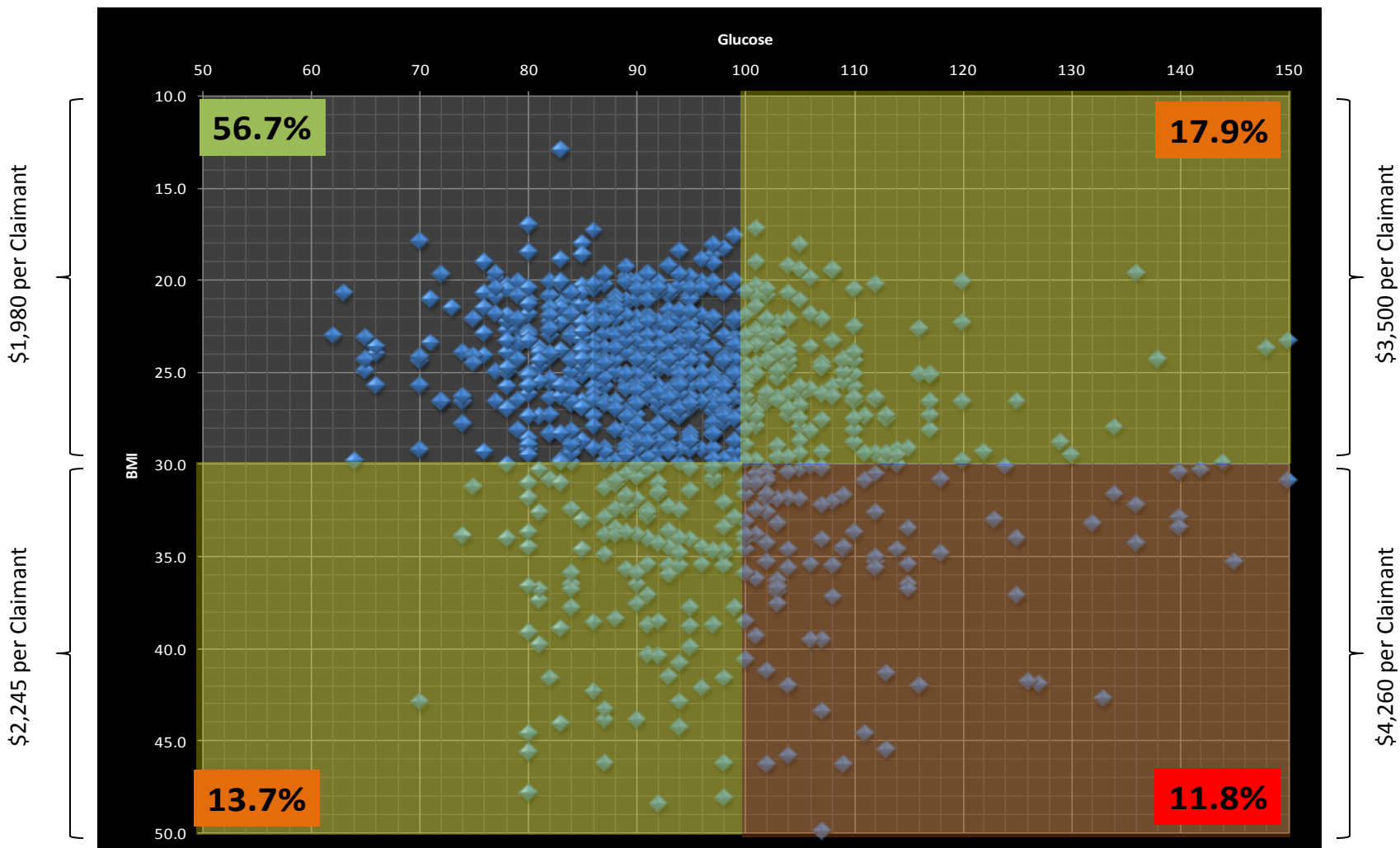
Annual Non-cardiovascular Event Medical Cost



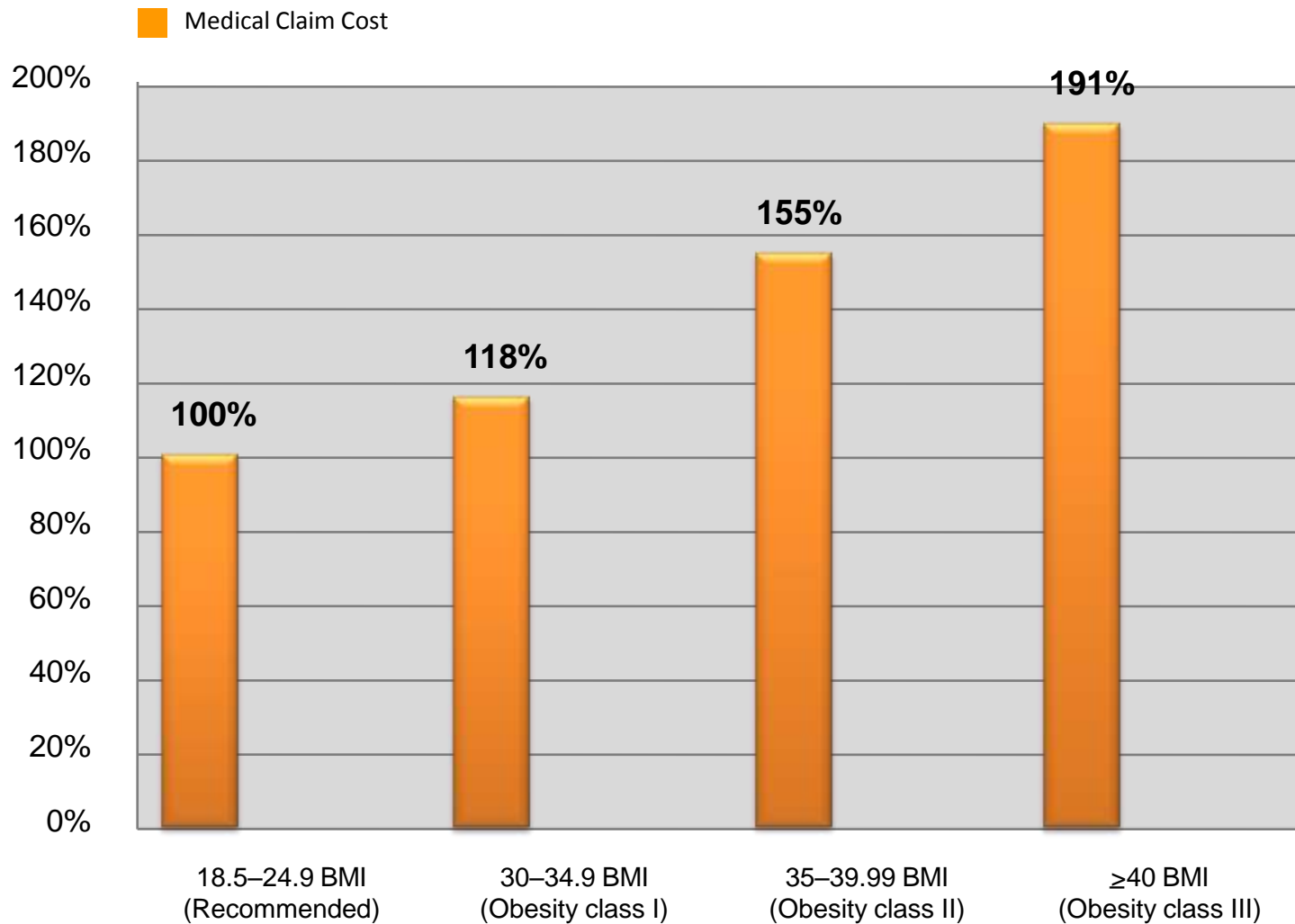
What Impact an Employer Can Have on Metabolic Syndrome?

Wally Gomaa

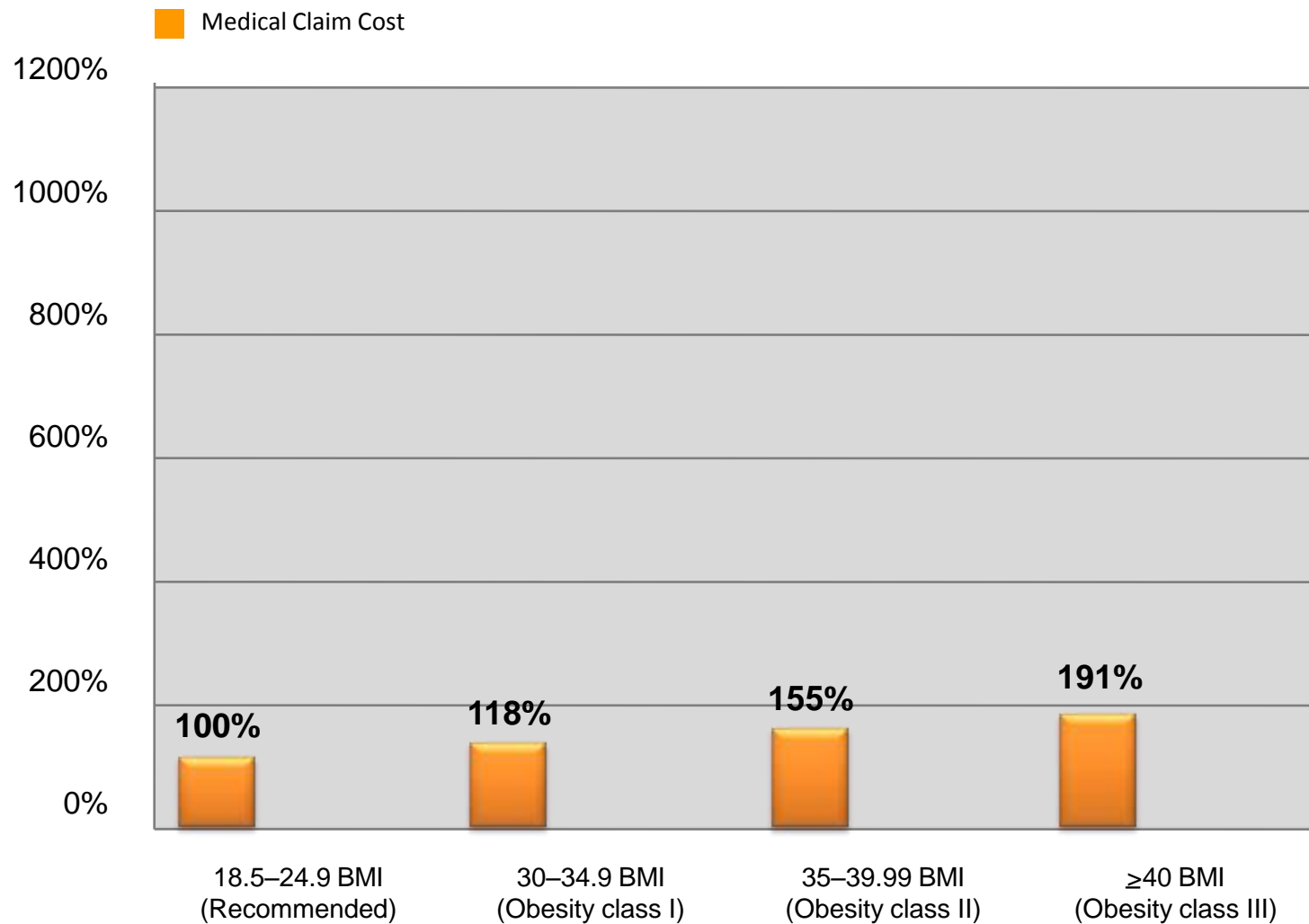
Risk Cluster Profile Example



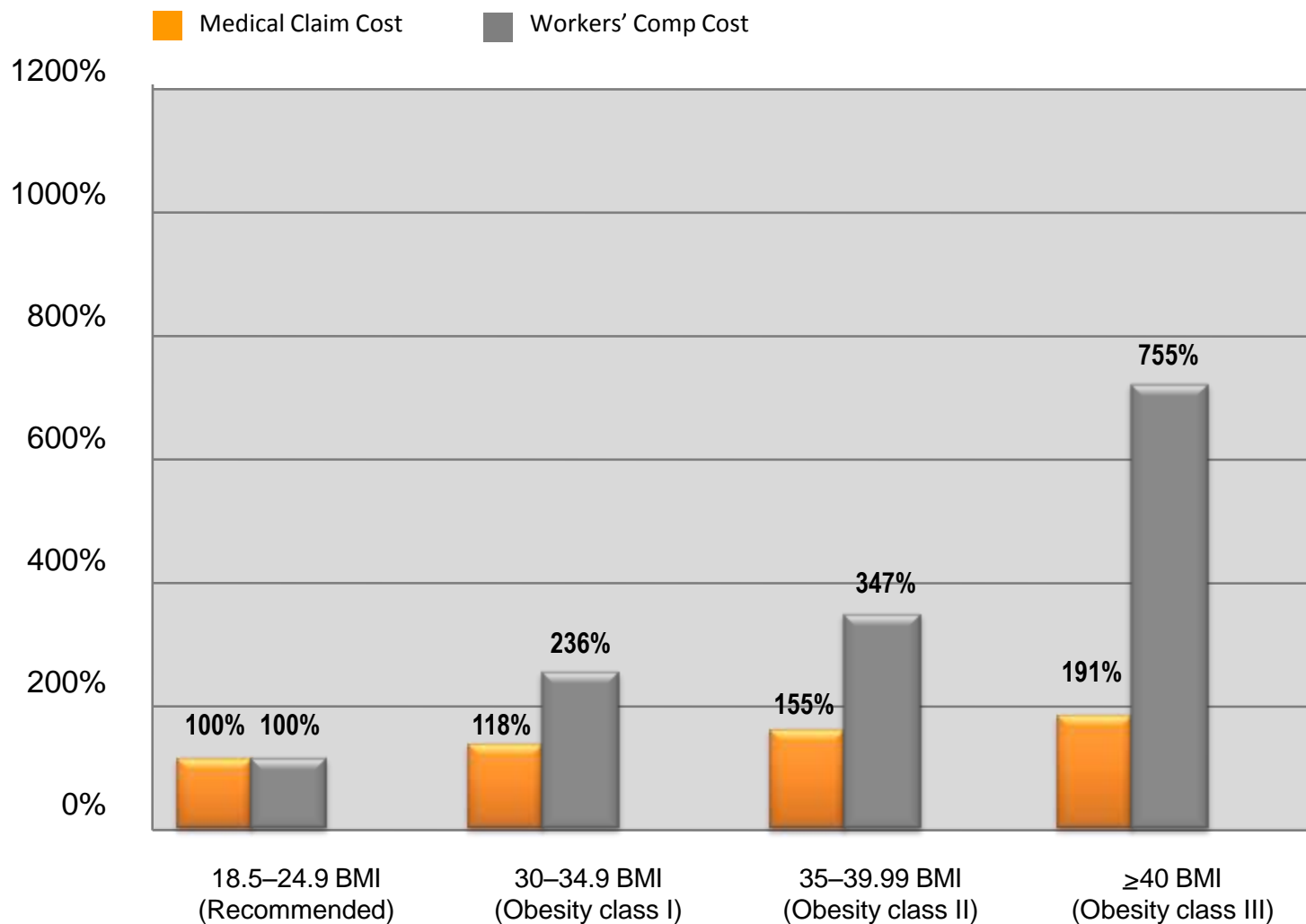
Obesity and Medical Cost



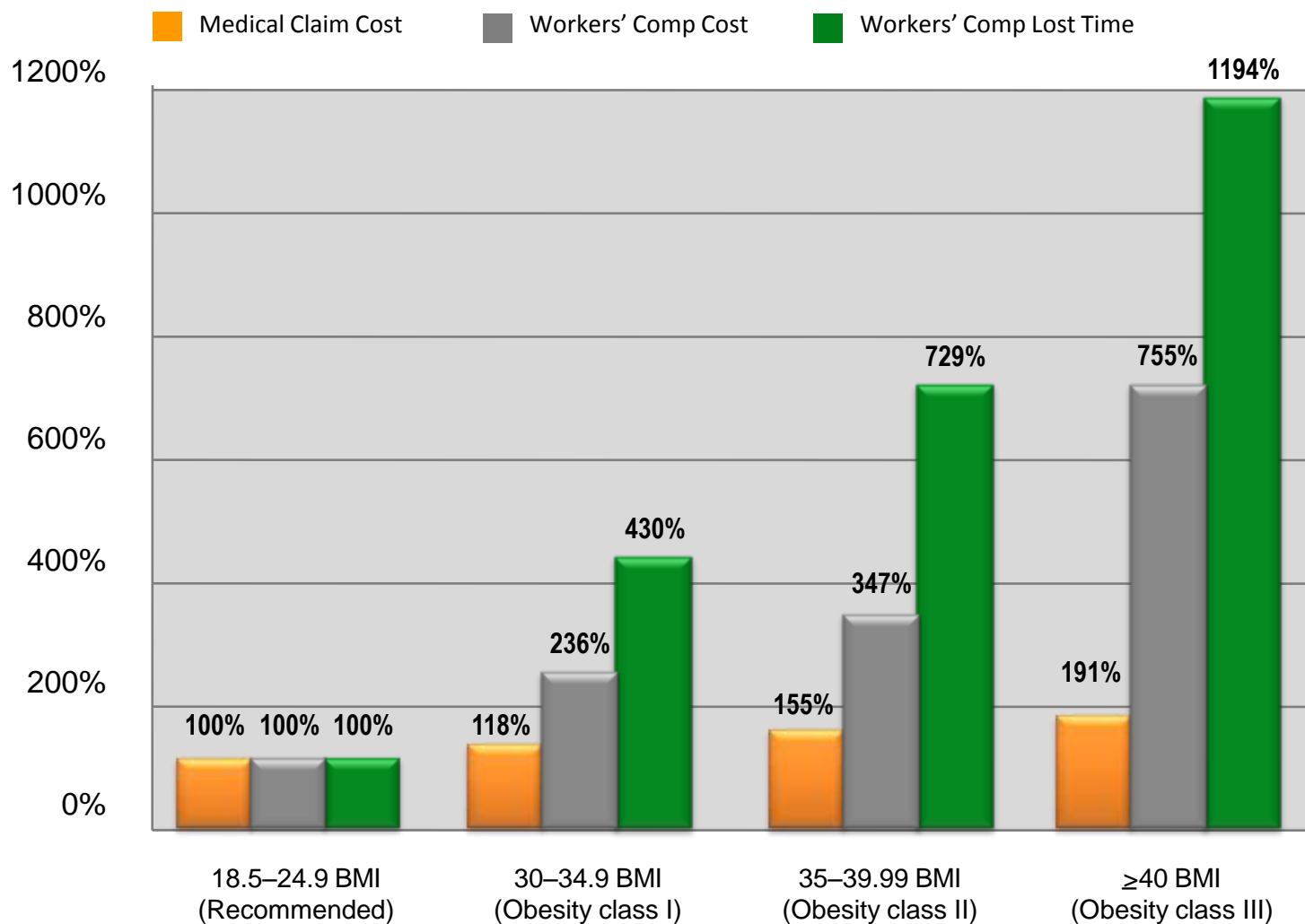
Obesity and Medical Cost



Obesity, Medical and Workers' Comp Cost



Obesity, Medical, Workers' Comp and Lost Time



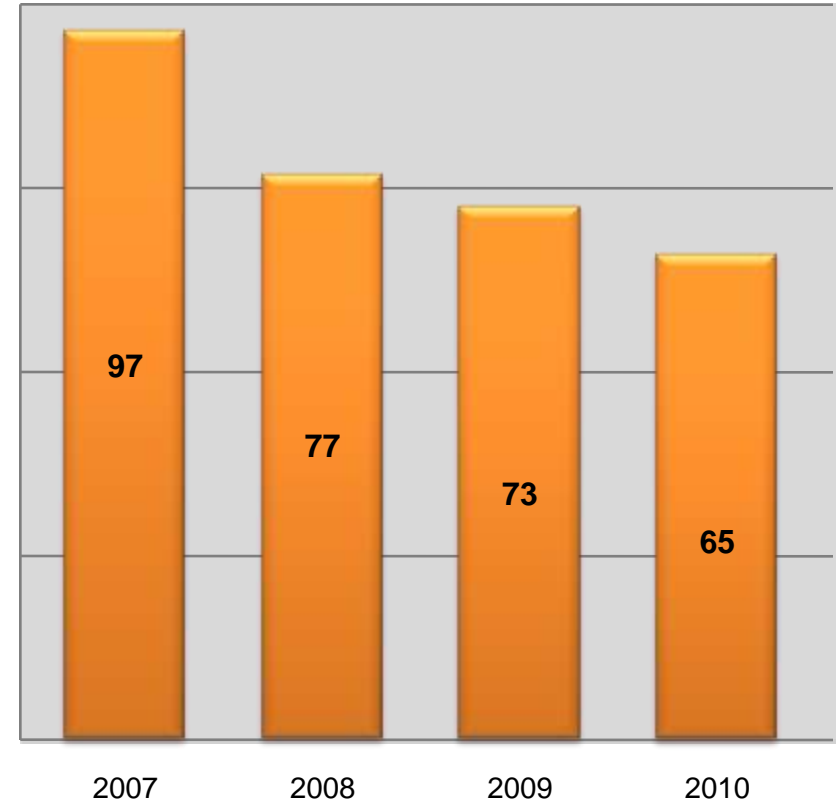
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Sample Employer Medical Utilization

N ≈ 7,000 Covered Lives

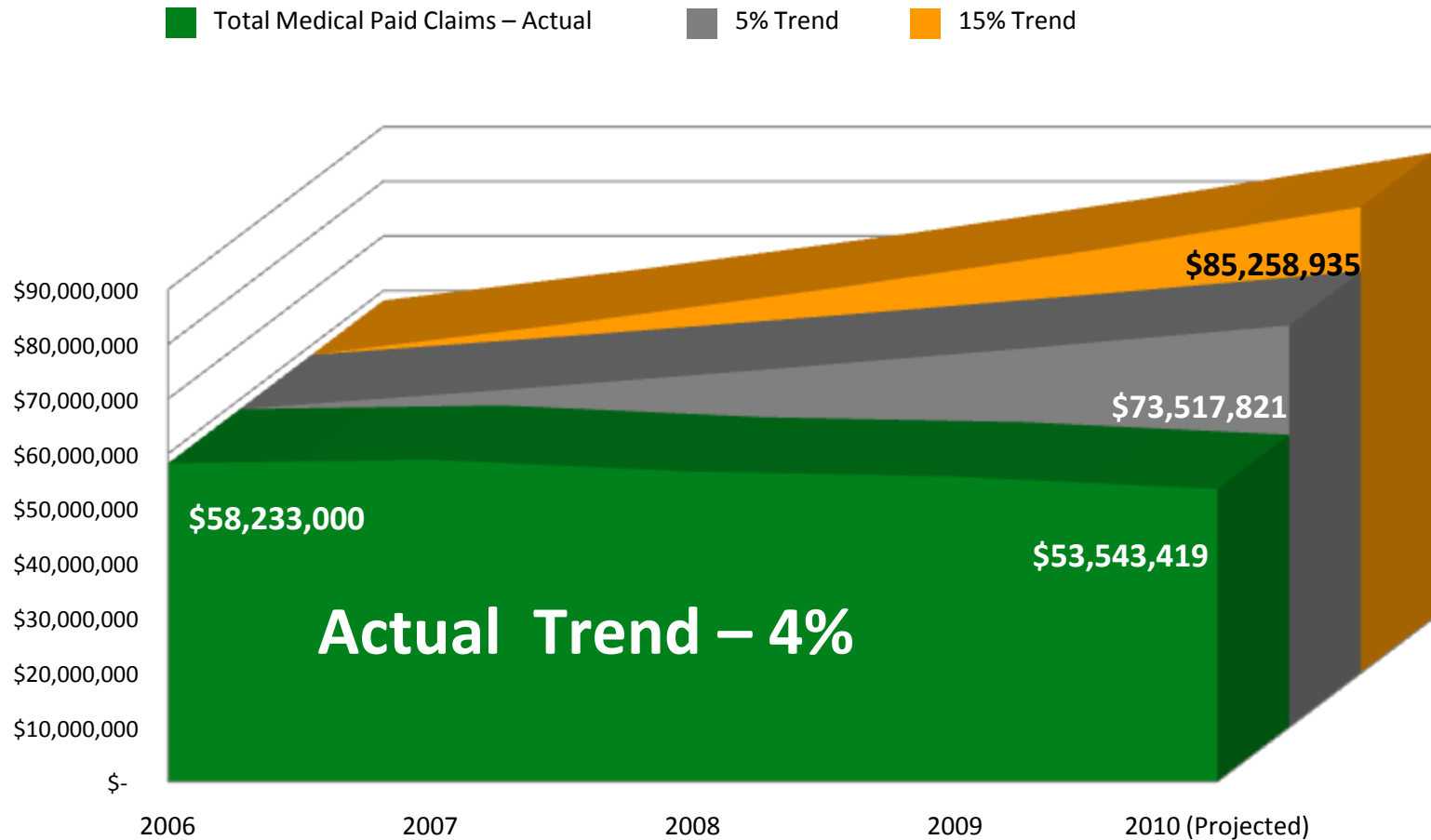
- Sample employer A has seen consistent reduction in hospitalizations
- Sample employer B observed a 29.9% reduction in Rx dosage and therapies

Inpatient Admissions Per 1000



Sample Employer Medical Trend

N ≈ 7,000 Covered Lives



A Case Study and the Clinical Outcomes

David Ferriss, MD

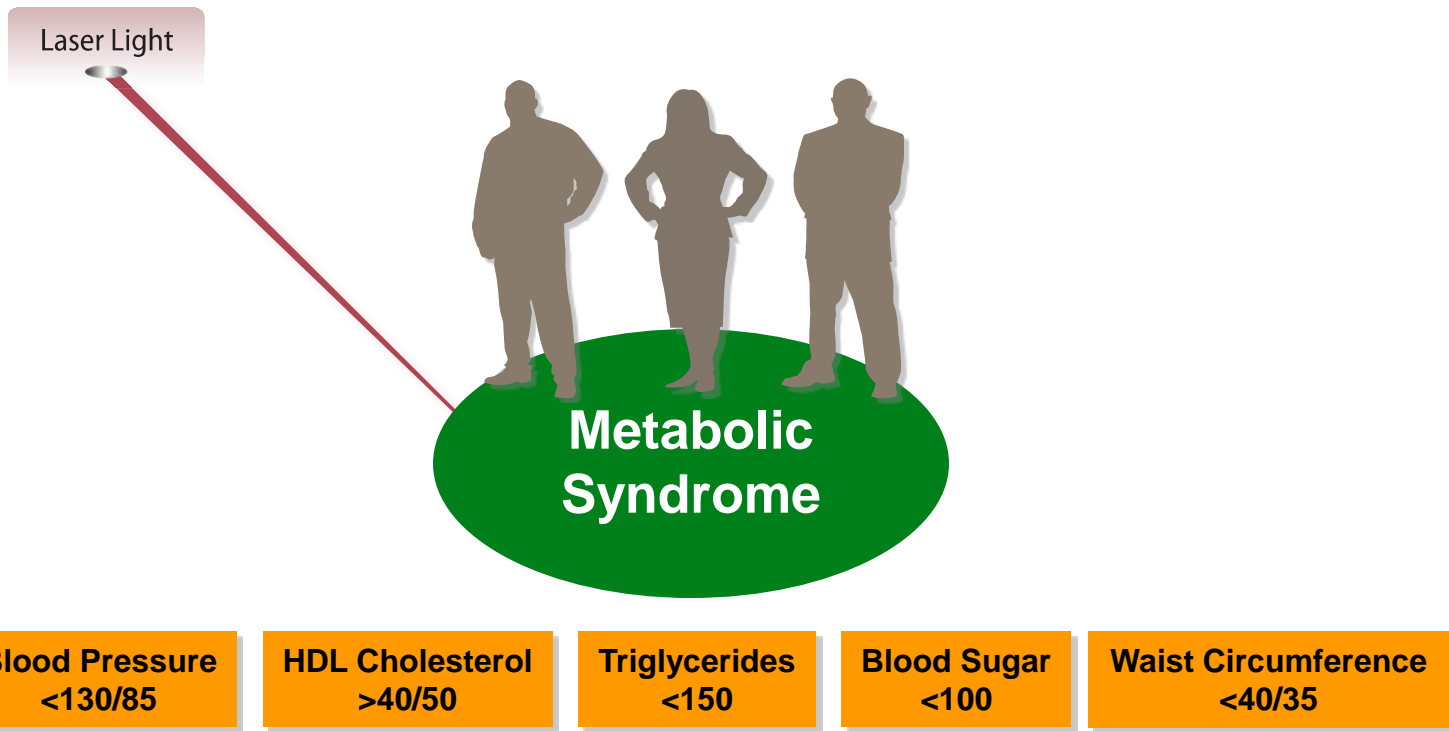
One-third of Workers Currently Have **Combined Risks**



Employers can change that – **in 90 days**

Metabolic Syndrome Improvement Program

Laser-light intervention **dramatically reduces the health risks** of this high-risk population



Reduce risks = Better health, lower cost

Best Practices Drive Results

- Engagement and support from the top-down is critical
- Choose dates, times and locations that make the class accessible
- Communicate, communicate, communicate
 - Promote program and registration for at least 3 weeks
 - Ensure participants understand where and when to meet
- Implement incentives, negative or positive, for completion of all components – classes, pre-post-biometrics and behavioral survey
 - Drives high reporting volume and offers the most complete view into health improvement across the class graduates
- Consider incentive or contests related to participation

Best practices yield best results:

- Improvements across lab values
- Improvements in lifestyle behaviors
- Increased participant enrollment
- High participant satisfaction
- Alumni champions spread excitement

Real Guidance. Real Results.

What CIGNA's 2010 Metabolic Syndrome Improvement Program Graduates Achieved:

Reduced Risk Factors

- Of the health risk factors that contribute to chronic disease, **100%** of the graduates improved two or more of their risk factors while **92%** improved three or more, and **65%** improved six or more risk factors!
- **98%** improved at least 3 out of 5 metabolic syndrome risk factors
- Our graduates with a BMI >30 **lost an average of 4.3 pounds**

Improved Physical Activity

- **70%** of our Metabolic Syndrome Improvement Program graduates improved their HDL – or “healthy” cholesterol
- Improved HDL can be correlated to increased physical activity among graduates

Improved Nutrition Habits

- Participants complete a behavioral survey about healthy eating habits before and after the 10-week course. Survey results revealed:
 - Graduates eating more fruits, veggies and high-fiber grains
 - Graduates that have reduced their servings of food that contain high saturated fat
 - Graduates that are more conscious of food labels and the ingredients in their food

A Case Study – Rockwood Schools

Highlight of Results – 2006 – 2009

2006 – Pre-Wellness Team

- Following Health Assessment alone – 46 enrolled in wellness program

2008 – 2009 – Post-Wellness Team and communication plan executed:

- 592 enrolled in Disease Management:
 - 1st year savings of \$301,484 medical
\$ 84,284 productivity
 - Diabetes clinical compliance ↑18%
 - Inpatient hospital days ↓24%
 - 78% followed medical compliance guidelines – (norm 71%)
- Trend – (13.5%)
 - HSA planned expenditures moved from \$2,538 to \$2,196 from 2008 to 2009

2010 – Multi-year health improvement strategy to:

- Use baseline clinical data to identify top issues
- Ongoing assessment of program effectiveness
- Addition of Metabolic Syndrome class to improve risks earlier

POPULATION FACTS:

- 2,500 employees
- Health Assessment Results
 - 14% – 5 or more risks
 - \$6,548 – average health case costs
 - 3.2 times greater costs for high risk vs. low participants
- Top Diseases
 - Cancer related
 - Musculoskeletal
 - Heart/Circ
- 95% – desire to improve health

ACTIONS:

2006 – Wellness Committee

Onsite – Several activities:

Biometrics, Flu, Weight Program, Mammograms

2009 – Incentives introduced

2009 – Metabolic Syndrome decision

2010 Metabolic Syndrome improvement – class held

A Case Study – Rockwood Schools

What:

- A 10-week onsite class focused on healthy lifestyle improvements for those with metabolic syndrome
- Pre-post questionnaires and biometric screenings
- Alumni social networking program for up to 12 months

Clinical Results:

Biometric Test – % of participants who achieved positive improvement:

Biometric Test	Percent of participants that achieved positive improvement
Diastolic BP	67%
Systolic BP	0%
Fasting Glucose	20%
Triglycerides	17%
HDL Cholesterol	0%
LDL Cholesterol	71%
Total Cholesterol	60%
TC/HDL Ratio	0%
Waist Circumference	24%

RESULTS:

- 90% adopted healthier eating
- 93% understand how to read and use food nutrition labels
- 77% ↑ frequency and intensity of exercise
- 84% developed better stress coping mechanisms
- 77% stated more effective at work

SUSTAINABILITY:

Confidence level in maintaining
35% – very confident
52% – confident
13% – neutral
0% – not confident

Q&A



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