



CAREFIRST JMT

MyHealthProfile Corporate Report

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INTRODUCTION

The High Cost of Modifiable Behaviors

It is estimated that the U.S. will spend \$1.66 trillion on health care expenditures.¹ Health care spending is growing faster than the gross domestic product (GDP) and is projected to account for 17.7 percent of the GDP by 2012. A small number of chronic disorders, such as diabetes and cardiovascular diseases account for the majority of deaths each year, and the medical care costs of people with chronic diseases account for more than 75 percent of our nation's medical care costs.² As the population of the United States ages substantially over the next several decades, the prevalence of chronic diseases and their impact on health care costs will likely increase.

Employers are becoming more aware that overweight and obesity, lack of physical activity, and tobacco use are adversely affecting the health and productivity of their employees and ultimately, the businesses' bottom line. As a

result, innovative employers are providing their employees with a variety of work site based health promotion and disease prevention programs like myhealthIQ. These programs have been shown to improve employee health, increase productivity and yield a significant return on investment for the employer. Several studies designed to measure ROI from these programs found greater variation but a positive return on investment ranging from \$2.19 to \$13 in benefits per dollar spent. They also examined three studies of ROI for disease management programs and found a range in benefit-to-cost ratios from \$7.33 to \$10.38.

Each individual's health is shaped by many factors including medical care, social circumstances, and behavioral choices.³ Increasingly, there is clear evidence that the major chronic conditions that account for so much of the morbidity and mortality in the U.S., and the enormous direct and indirect costs associated with them, in large part are preventable and that to a considerable degree they stem from, and are exacerbated by, individual behaviors. In particular, overweight and obesity, lack of physical activity, and smoking greatly increase the risk of developing the most serious chronic disorders. Most of the dollars spent on health care in the United States, however, are for the direct care of medical conditions, while only a very small portion is targeted on preventing those conditions.⁴ As Americans see health care expenditures continue to increase, it is important to focus on strategies that reduce the prevalence and cost of preventable diseases.

ASTHMA

▶ **Based on your group's self-reported Health Risk Assessments:
8% of your employees reported they have Asthma.**

▶ **1% are not successfully treating the disease.**

Asthma Facts:

Asthma is an obstructive lung disease caused by an inflammatory reaction and hyper reactivity of the airways to various triggers. Inflammation and bronchospasm of the airways restricts airflow into and out of the lungs. Asthma is characterized by periodic attacks of wheezing, shortness of breath, chest tightness, and coughing. In sensitive individuals, asthma symptoms can be triggered by inhaled allergens (allergy triggers), such as pet dander, dust mites, cockroach allergens, molds, or pollens. Symptoms of asthma can also be triggered by respiratory infections, exercise, cold air, tobacco smoke and other pollutants, stress, food, or drug allergies. Currently, asthma is the 6th-ranking chronic condition among the general American population in terms of prevalence and the leading serious chronic illness of children in the U.S. The two most recent analyses of the economic impact of asthma, commissioned by the American Lung Association (ALA) to study asthma costs in 2000 and 2001, cited annual estimates of \$12.7 billion and \$14 billion, respectively. The financial burden of asthma is borne heavily by patients and their families. Out-of-pocket expenses for asthma are estimated at roughly 25 percent of total medical costs compared to the average of 10 percent for medical expenses for all illnesses. The average family in the U.S. spends between 5.5 percent and 14.5 percent of its total income on treating an asthmatic child.

However, employers are not impervious to this cost burden. Annual per capita employer expenditures for asthmatic patients were approximately 2.5 times those for control subjects (\$5,385/employee versus \$2,121/employee). For asthmatic employees, wage-replacement costs for workdays lost as a result of disability and absenteeism accounted for almost as much as did medical care (40 percent versus 43 percent). As indicated above, both prevalence and costs of asthma have increased markedly over the past decade and a half. While there is no consensus as to why asthma prevalence has increased, scientists studying the phenomenon have postulated that obesity and lack of physical exercise, dietary changes, and increased exposure to indoor allergens are among the reasons for the increase. The growth in costs of asthma is largely due to the increase in asthma prevalence: prevalence rates increased by nearly 70 percent from 1986 to 1996, far outpacing the 12 percent growth in population. Average costs for asthma per capita actually decreased over this period, despite the significant increase in absolute costs. That is, while treatments have become more cost-effective, total costs have still ballooned because of the greater proportion of the population with asthma. This indicates that, in order to contain asthma costs in the future, better treatments must be supplemented with prevention strategies aimed at reducing asthma prevalence.

TOBACCO USE

 **Based on your group's self-reported Health Risk Assessments:
7% of your employees reported to be smokers.**

Tobacco Use:

Tobacco use is the single most preventable risk factor for death and disease, contributing to more than 440,000 premature deaths annually in the United States during 1995 through 1999. This figure represents one out of every five deaths each year being associated with tobacco use, ranking tobacco use as the number one health problem contributing to death and disability in the U.S. Tobacco use is a risk factor for chronic lung disease, heart disease, stroke, and several forms of cancer, specifically cancer of the lungs, larynx, esophagus, mouth and bladder. Additionally, research indicates that smoking contributes to cancer of the cervix, pancreas and kidneys. Shorter-term effects of smoking include increased heart rate and blood pressure, coughing with phlegm or blood, shortness of breath when not exercising, wheezing or gasping, and reported poorer overall health.

The harmful effects of smoking do not appear limited only to those who use tobacco. Pregnant women who smoke are more likely to produce low birth weight babies and infants with a variety of health disorders, including those with an increased risk of death from sudden infant death syndrome and respiratory distress. In addition, an estimated 3,000 nonsmoking Americans die each year from lung cancer, and up to 300,000 children have respiratory tract infections due to increased susceptibility after exposure to secondhand smoke.

The Costs of Smoking: The direct and indirect economic costs associated with tobacco use are significant. According to the National Institute on Drug Abuse (NIDA), the direct and indirect costs of smoking are estimated at \$138 billion per year. As with other chronic conditions, employers are significantly affected by the indirect costs of the health problems that result from tobacco use. An extensive review of the literature published in 2001 found solid evidence that 6 to 14 percent of personal health care expenditures could be attributed to smoking, and that smokers had greater medical costs over the course of their lifetimes. The review also found a large number of studies that demonstrated that smokers are more costly to their employers than those employees who do not smoke. The economic costs of smoking are estimated to be about \$3,391 per smoker per year. Each pack of cigarettes sold in the United States costs the nation an estimated \$7.18 in medical care costs and lost productivity. Roughly 14 percent of all Medicaid expenditures are for smoking related illnesses, and more than \$20 billion of Medicare expenditures each year are related to smoking.

HYPERTENSION

 **Based on your group's self-reported HRAs:
13% of participants are in the medium to extreme risk category for high blood pressure.**

Hypertension:

High blood pressure (hypertension) killed 44,619 Americans in 2000 and contributed to the deaths of more than 60,000 others. Because the consequences associated with high blood pressure are so serious, early detection, treatment, and control are important.

- High blood pressure increases the risk for heart disease and stroke, both leading causes of death in the United States. About 1 in 4 American adults have high blood pressure. High blood pressure affects about 1 in 3 African Americans, 1 in 5 Hispanics and Native Americans, and 1 in 6 Asians/ Pacific Islanders.
- What do blood pressure numbers indicate? Blood pressure is often written as two numbers. The top (systolic) number represents the pressure while the heart is beating. The bottom (diastolic) number represents the pressure when the heart is resting between beats.
- High blood pressure for adults is defined as a systolic pressure of 140 mmHg or higher, or a diastolic pressure of 90 mmHg or higher.
- Optimal blood pressure is a systolic blood pressure less than 120 and a diastolic blood pressure less than 80.

- Among people with high blood pressure, 31.6% don't even know they have it.
- High blood pressure is easily detectable and usually controllable with lifestyle modifications such as increasing physical activity or reducing dietary salt intake, with or without medications.
- The Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC-7) recommends that adults have their blood pressure checked regularly.

CARDIOVASCULAR DISEASE

- ▶ **Based on your group's self-reported Health Risk Assessments:
8% of your employees reported they currently have some form of Heart Disease.**
- ▶ **5% with medium to extreme risk - Total Cholesterol.**
- ▶ **4% with medium to extreme risk - LDL Cholesterol.**
- ▶ **5% with medium to extreme risk - Total/HDL Cholesterol Ratio.**
- ▶ **13% with medium to extreme risk - Blood Pressure.**
- ▶ **21% with high to extreme risk - Obesity.**

Cardiovascular disease (CVD) is predominantly caused by atherosclerosis--a hardening of the arteries--due to a thickening of the lining of the arteries. Atherosclerosis results in inadequate blood flow to particular tissues in the body, causing poor function, damage, or death of those tissues. In heart disease and stroke, the principal components of CVD, atherosclerosis affects the arteries of the heart and brain, respectively. CVD accounts for 40 percent of the mortality in the United States, killing about 950,000 Americans annually. Taken as a whole, CVD is the cause of more deaths than the next five causes of death combined.

It is commonly believed that CVD primarily affects men and older people. However, research shows that more than half of all CVD deaths each year occur among women. Heart disease also results in significant disability among working adults. Stroke is a leading cause of serious, long-term disability that accounts for more than half of all patients hospitalized for a neurological disease. Of the 4.5 million Americans who have had a stroke, 1 million have been impaired by some form of long-term disability. Almost 6 million hospitalizations each year are due to CVD.

Risk Factors for Cardiovascular Disease

As discussed earlier, untreated or poorly treated diabetes can result in cardiovascular disease. In addition, the CDC has identified five key risk factors for CVD: tobacco use, high cholesterol levels, lack of physical activity, poor nutrition, and high blood pressure.

- **High blood pressure:** 13% of your employees are in the medium to extreme risk category for high blood pressure based on their self-reported HRAs. About 90 percent of middle-aged Americans will develop high blood pressure in their lifetime, and nearly 70 percent of people with high blood pressure do not have it under control. Of the estimated 50 million Americans with high blood pressure, 31.6 percent are unaware of their condition.
- **High cholesterol:** 5% of your employees are in the medium to extreme risk category for high cholesterol based on their self-reported HRAs. About 40.6 million Americans have cholesterol levels of 240 mg/dl or above, which is considered high risk. Meanwhile, a 10 percent decrease in cholesterol levels may result in an estimated 30 percent reduction in the incidence of coronary heart disease.
- **Tobacco use:** 7% of your employees said they smoked tobacco. About 1 in 5 deaths from CVD are attributable to smoking. Age-adjusted prevalence rates for Americans 18 and older in 2000 show that 27.1 percent of men and 22.2 percent of women are smokers. The World Health Organization estimates that

one year after quitting, the risk of coronary heart disease decreases by 50 percent, and within 15 years, the relative risk of dying from CHD for an ex-smoker approaches that of a lifetime nonsmoker. The risk of death from coronary heart disease increases by up to 30 percent among those exposed to environmental tobacco smoke at home or at work.

- **Eating Habits:** Poor diet leads to obesity: using BMI definitions, **57%** of your employees are considered overweight or are in the obese category of BMI based on their self-reported HRAs.
- **Physical inactivity:** **29%** of your employees exercise less than 1 time per week and are considered physically inactive. The relative risk of coronary heart disease associated with physical inactivity ranges from 1.5 to 2.4, an increase in risk comparable to that observed for high blood cholesterol, high blood pressure, or smoking.

Costs of CVD: The NHLBI/AHA studies of CVD evaluated both direct costs (physician services, hospital and nursing home services, medications, home healthcare, and other durables) and indirect costs of lost productivity resulting from morbidity and mortality (days of work lost due to absence from work or premature death). For the year 2003, these cost categories totaled \$209.3 billion and \$142.5 billion, respectively. Direct medical care costs covered approximately 66 million physician office visits and 7 million outpatient department visits and over 4 million emergency department visits. CVD ranks highest among all disease categories in hospital discharges. An estimated 3 million Americans ages 35-64 who are currently free of coronary heart disease will develop the disease in the next ten years in the absence of intervention to reduce risk factors.

OVERWEIGHT AND OBESITY

▶ **Based on your group's self-reported HRAs:
36% of your participants are overweight (BMI between 25.0 and 29.9).**

▶ **Based on your group's self-reported HRAs:
21% of your participants are obese (BMI 30.0 or over).**

The current widely-used definition for overweight in adults is a body mass index (BMI) of 25 to 29.9, and for obesity in adults, a BMI of 30 or over. BMI is calculated solely on the basis of the height and weight of an individual; the calculation does not take into consideration the sex of the individual, the proportion of fat and muscle, or different body shapes. Waist circumference is also an independent predictor of risk factors and morbidity.

Public health officials refer to obesity as an epidemic. The prevalence of overweight and obesity has increased dramatically in recent years, doubling since 1980, and now is seen by the CDC as one of the top threats to the health of the Nation. Weight gain is a direct function of an imbalance between the amount of calories consumed and the amount of calories expended by an individual. While there are some genetic determinants of obesity, much, if not most, of the recent increase in prevalence of obesity in the U.S. population stems from changes in people's diets and the level of their physical activity. To some extent, these dietary changes may reflect the greater availability of pre-packaged foods, low-cost-big-portion restaurant meals, and soft drinks, all of which may be high in sugar, calories, and/or fat. This increase in obesity has occurred even though the public generally is more educated about what constitutes a healthy diet and ingredients in food products have become more clearly identified on labels.

On the other side of the equation, changing people's habits related to physical activity has proved to be a challenging task. Individuals who want to be more physically active, often find it difficult to do so because of demands, and other constraints associated with their work, family, and community. According to a recent study by the National Center for Health Statistics (NCHS), less than a third of US adults engage in regular leisure-time physical activity, and only about one-fifth of adults engage in a high level of overall physical activity. One study looked at adults who were trying to lose or not gain weight and found that less than 20 percent of the individuals were following recommendations about increasing physical activity and reducing calories. Also notable is a finding that only 42.8 percent of obese people who had routine checkups in the past months had been urged during those visits to lose weight.

Research has shown that as body mass increases, so does health care utilization and costs. Obesity may account for as much as a 36% increase in costs for inpatient and ambulatory care for individuals—a greater increase than

that attributed to aging 20 years, smoking, or problem drinking. In addition to using more physician and hospital services, obese individuals have high annual costs for medications, particularly those for diabetes and cardiovascular disease (CVD). One researcher estimated that obese individuals may pay as much as 77 percent more for medications compared to non-obese individuals. Conversely, there is evidence that patients who lose weight reduce their use of these kinds of medications, and even modest sustained weight loss (a reduction of 10 percent in body weight) may reduce expected lifetime health care costs for major obesity-related diseases by \$2,200 to \$5,300, depending on age, gender, and initial BMI.

Impact on Businesses: Employers and businesses bear a sizable portion of costs associated with treating obesity-related conditions, primarily in terms of lost productivity and the increased cost of health and disability insurance. Studies of overweight and obese employees have shown that obese employees take more sick leave than non-obese employees and are twice as likely to have high-level absenteeism (seven or more health-related absences during the last six months). In addition, another study found a reduction in the use of sick leave and disability pension by obese employees in the second and third years following surgical treatment of their obesity. An analysis of business costs in the late 1980s through the mid-1990s found that in 1994, due to conditions associated with obesity:

- employees lost 39.3 million workdays (a 50 percent increase since 1988);
- made 62.7 million visits to physician offices (a 88 percent increase);
- had 239 million restricted activity days (a 36 percent increase), and
- 89.5 bed-days (a 28 percent increase).

The costs to U.S. businesses of obesity-related health problems in 1994 added up to almost \$13 billion, with approximately \$8 billion of this paying for health insurance expenditures, \$2.4 billion for sick leave, \$1.8 billion for life insurance, and close to \$1 billion for disability insurance.

DEPRESSION

 **Based on your group's self-reported Health Risk Assessments:
10% of your participants scored high to extreme risk for depression/low "life satisfaction".**

The economic burden of depression totaled \$83.1 billion in 2000. Of this total, \$26.1 billion (31%) were direct treatment costs, \$5.4 billion (7%) were suicide-related costs, and \$51.5 billion (62%) were workplace costs.¹ Depression is the leading cause of disability as measured by Years Lived with Disability (YLDs) and the 4th leading contributor to the global burden of disease Disability Adjusted Life Years (DALYs) in 2000. By the year 2020, depression is projected to reach 2nd place of the ranking of DALYs calculated for all ages, both sexes. Today, depression is already the 2nd cause of DALYs in the age category 15-44 years for both sexes combined.²

The Facts about Depression

- Depression ranks among the top three workplace problems, following only family crisis and stress.³
- In an EAP study of the First Chicago Corporations, depression accounted for more than 50% of all mental health dollars spent. The dollar amount spent to treat depression nearly equaled the amount spent on the treatment of heart disease.⁴
- 3% of total short term disability days are due to depressive disorders, and in 76% of those cases, the employee was female.³

Employee Attitudes Toward Depression

- Many individuals are unaware they have depression.
- Employees believe that they can handle it on their own.
- Some will not seek assistance as they are concerned about the employee confidentiality policies and the potential impact on their career.
- Most employees are unaware of assistance programs or believe their insurance will not cover treatment.

Learn to recognize the symptoms of clinical depression in the workplace

There are many different signs and symptoms of clinical depression. Each individual is unique, so no list of symptoms will fit every situation. According to the National Mental Health Association, depression often manifests itself in the workplace in the following ways:

- Decrease in productivity
- Morale problems
- Lack of cooperation
- Excessive fatigue
- Unexplained aches/pains
- Safety problems/accidents
- Excessive absenteeism
- Alcohol and/or drug abuse

DIABETES



**Based on your group's self-reported Health Risk Assessments:
2% of your employees have reported they have Diabetes.**

Diabetes is a group of diseases in which blood glucose (sugar) levels are elevated either because of failure to make adequate amounts of the hormone insulin or failure of cells to respond to insulin. Diabetes results from interaction between inherited, autoimmune, and environmental factors.

There are two principal forms of diabetes that account for the majority of cases.

Type 1 diabetes-often called "insulin-dependent diabetes mellitus" or juvenile-onset diabetes, develops when the body's immune system destroys pancreatic beta cells, the cells in the body that make the hormone insulin that regulates blood glucose. Thus the pancreas can no longer produce insulin. This form of diabetes usually strikes children and young adults, and requires them to take several insulin injections a day to survive. Type 1 diabetes may account for 5 to 10 percent of all diagnosed cases of diabetes.

Type 2 diabetes-is sometimes termed "adult-onset diabetes" or "non-insulin dependent diabetes mellitus," even though some affected individuals require insulin for control of the disease. Type 2 diabetes usually begins as insulin resistance, a disorder in which cells do not use insulin properly. As it progresses, the pancreas gradually loses its ability to produce insulin. Type 2 diabetes often appears after age 40, although it is now being diagnosed increasingly in children and adolescents. This form of diabetes accounts for 90 to 95 percent of all diagnosed cases of diabetes.

In addition, some women develop diabetes during pregnancy. This form of diabetes is called gestational diabetes, and affects 2 to 5 percent of all pregnancies. After pregnancy, 5 to 10 percent of women with gestational diabetes are found to have Type 2 diabetes and women who have had gestational diabetes are at increased risk for developing Type 2 diabetes in the next 5 to 10 years. Other less common types of diabetes result from specific genetic conditions, surgery, drugs, malnutrition, infections and other illnesses. Taken together, these causes account for 1 to 5 percent of all diagnosed cases of diabetes.

Risk factors for Type 1 diabetes include autoimmune, genetic and environmental factors. Type 2 diabetes is associated with older age, obesity, family history of diabetes, prior history of gestational diabetes, impaired glucose tolerance, physical inactivity and race/ethnicity. African Americans, Hispanic/Latino Americans, American Indians and some Asian Pacific Islanders are at particularly high risk for Type 2 diabetes.

The CDC has estimated that one in three persons born in the U.S. in 2000 has a life-time risk of developing diabetes, unless significant changes occur in patterns of eating and exercising, and that 39 million people in the U.S. could have diabetes by 2050.

Untreated or poorly treated diabetes can result in death or significant disability, including heart disease and stroke, kidney failure, blindness and lower limb amputations. More than 60 percent of non-traumatic lower-limb

amputations occur among diabetics. Diabetes is the leading cause of new cases of blindness for adults aged 20-74, and is the leading cause of treated end-stage renal disease accounting for 43 percent of new cases. Other complications of diabetes include: high blood pressure, nervous system damage, dental disease, complications of pregnancy, acute life threatening events caused by biochemical imbalances, and susceptibility to other illnesses and worse prognosis over the course of these illnesses.

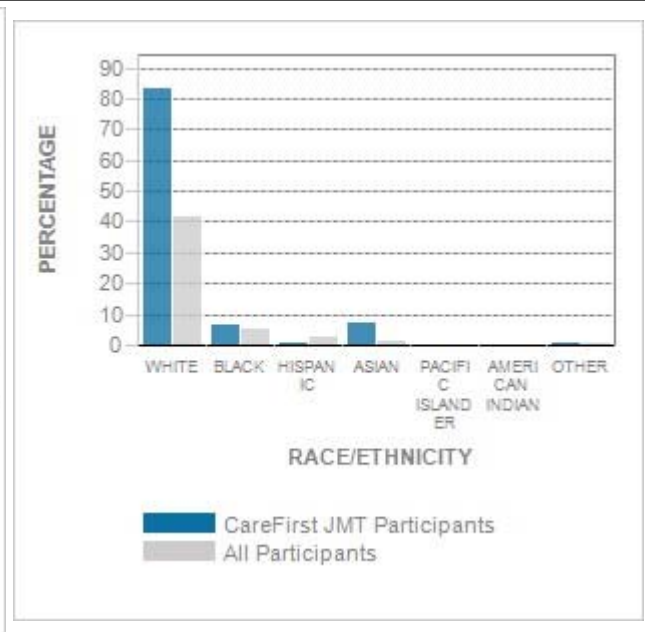
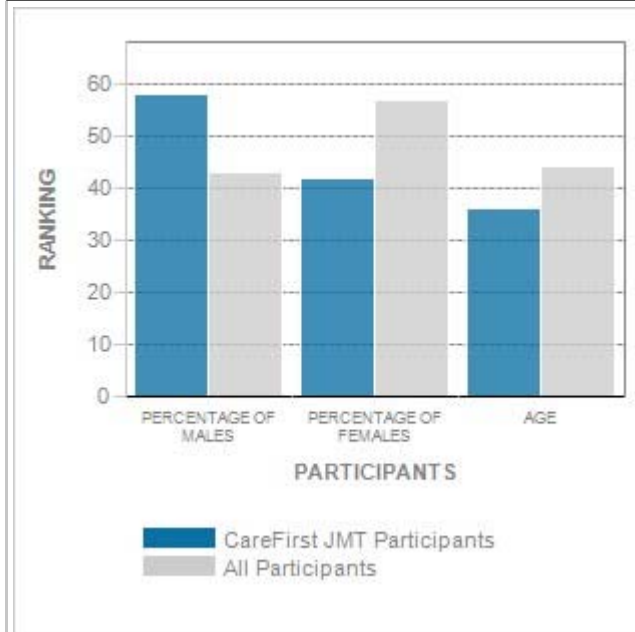
Costs of Diabetes: CDC research has shown that people with diabetes lost 8.3 days per year from work, accounting for 14 million disability days, compared to 1.7 days for people without diabetes. The ADA study examined total U.S. expenditures for major health care services, including inpatient, hospital outpatient, emergency, physician office, nursing home, home health and hospice care, and determined that these services cost a total of \$865 billion, and that \$160 billion or 18.5 percent of this total was incurred by people with diabetes. Per capita medical expenditures totaled \$13,243 for people with diabetes and \$2,560 for people without diabetes. When differences in age, sex, and race/ethnicity are adjusted for, people with diabetes had medical expenditures that were 2.4 times higher than expenditures that would have been incurred by the same group if they had not had diabetes.

There are no known methods for preventing Type 1 diabetes. Research studies have found that lifestyle changes, such as altering diet, increasing moderate physical activity and lowering body weight by 5 to 7 percent, can prevent or delay the onset of Type 2 diabetes. Studies have also shown that medications have been successful in preventing diabetes in some population groups.

Once diagnosed, effective management of diabetes is key to preventing its complications. Controlling glucose, blood pressure and blood lipids reduce health risks. Preventive care can also reduce eye disease, reduce the risk of amputation and allow for the early detection and treatment of diabetic-related kidney disease. The American Diabetes Association reports that people with diabetes who control their disease by keeping their blood sugar down cost employers only \$24 a month, compared with the \$115 a month for people with diabetes who do not control their blood sugar.

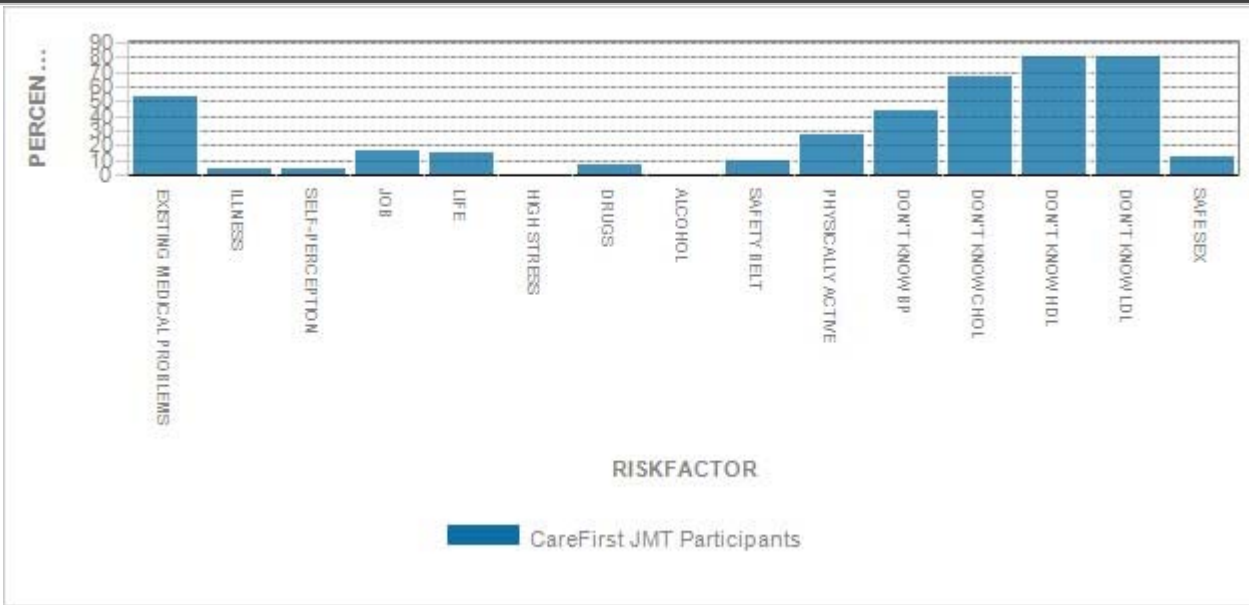
A 2003 study examined the business case for diabetes management programs in two managed care plans and quantified the health benefits for participants in a diabetes disease management program over 10 years at \$31,000 per patient in terms of length and quality of life.

SCHEDULE 1 - DEMOGRAPHICS



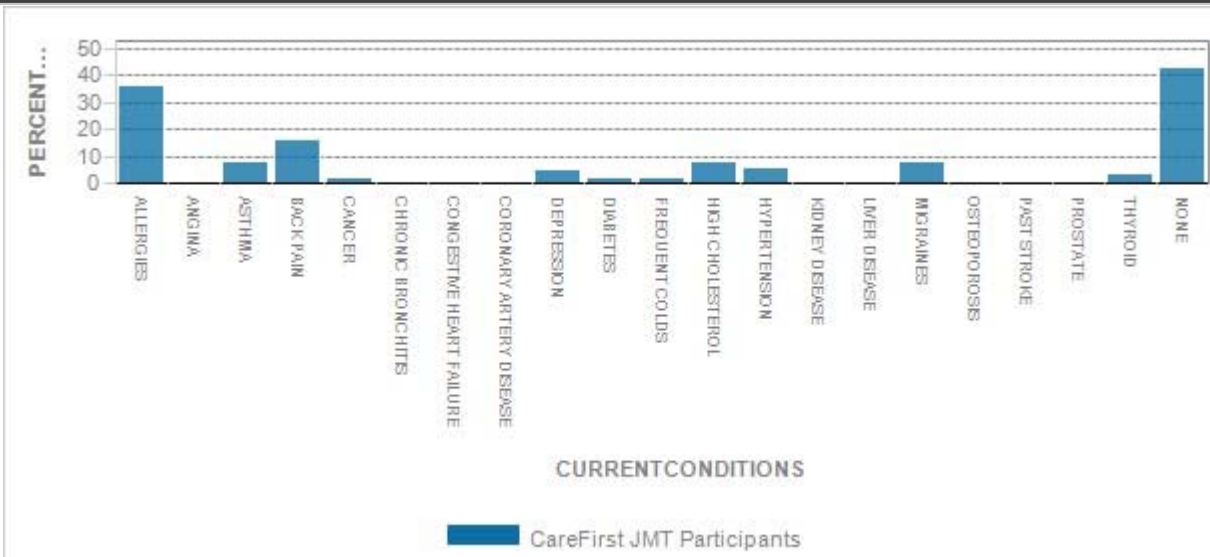
	CareFirst JMT Participants	All Participants
Number of Participants	146	---
Number of Completed Health Risk Assessments	146	---
Average Age	36	44
Males vs. Females %	58/42%	43/57%
Race/Ethnicity %: White	84%	42%
Race/Ethnicity %: Black	7%	6%
Race/Ethnicity %: Hispanic	1%	3%
Race/Ethnicity %: Asian	8%	2%
Race/Ethnicity %: Pacific Islander	0%	0%
Race/Ethnicity %: American Indian	0%	0%
Race/Ethnicity %: Other	1%	1%
Current Period vs.		
Second-period participants	0	
Third-period participants	0	
Fourth-period participants	0	
Fifth-period or more participants	0	

SCHEDULE 2 - SELF-REPORTED HEALTH RISKS



	Number of Participants	% of Participants
Existing Medical Problems	81	55%
Illness more than 5 Days/Year	7	5%
Fair or Poor Self-Perception of Health	8	5%
Low Job Satisfaction	27	18%
Low Life Satisfaction	23	16%
High Stress	1	1%
Drug/Medication Usage	11	8%
Excessive Alcohol Usage	3	2%
Safety Belt Usage less than 100%	16	11%
Low Cardiovascular Physical Activity	42	29%
Don't Know Blood Pressure	65	45%
Don't Know Total Cholesterol	99	68%
Don't Know HDL Cholesterol	120	82%
Don't Know LDL Cholesterol	119	82%
Safe Sex less than 100%.	21	14%

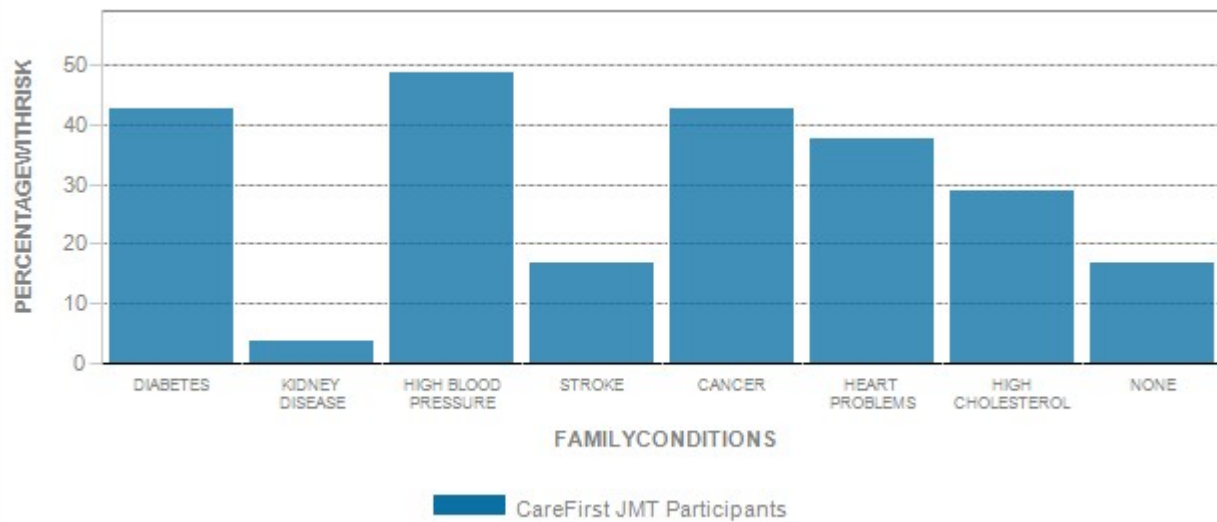
SCHEDULE 3 - SELF-REPORTED HEALTH STATUS



Summary of Current Conditions (%)

Current Condition	Number of Participants	% of Participants
Allergies	52	36%
Angina	0	0%
Asthma	11	8%
Back Pain	23	16%
Cancer	3	2%
Chronic Bronchitis	1	1%
Congestive Heart Failure	0	0%
Coronary Artery Disease	2	1%
Depression	8	5%
Diabetes	3	2%
Frequent Colds	3	2%
High Cholesterol	12	8%
Hypertension	9	6%
Kidney Disease	0	0%
Liver Disease	0	0%
Migraines	11	8%
Osteoporosis	0	0%
Past Stroke	0	0%
Prostate	2	1%
Thyroid	6	4%
None	63	43%

SCHEDULE 4 - SELF-REPORTED FAMILY CONDITIONS



Summary of Family Conditions (%)

	Number of Participants	% of Participants
Diabetes	63	43%
Kidney Disease	6	4%
High Blood Pressure	71	49%
Stroke	25	17%
Cancer	63	43%
Heart Problems	56	38%
High Cholesterol	42	29%
None	25	17%

SCHEDULE 5 - RESOURCE USAGE AND SATISFACTION

	Number of Participants	% of Participants
Emergency Room		
0 times per year	126	86%
1-2 times per year	20	14%
3-5 times per year	0	0%
6+ times per year	0	0%
Hospital Overnight		
0 times per year	139	95%
1-2 times per year	7	5%
3-5 times per year	0	0%
6+ times per year	0	0%
Considering Surgery		
Joint replacement	0	0%
Hysterectomy (removal of the uterus)	0	0%
Back surgery	1	1%
Heart surgery	0	0%
Prostate surgery	0	0%
Other surgery	4	3%
None of these	141	97%

SCHEDULE 6 - PREVENTATIVE PRACTICES

	Number of Participants	% of Participants
Immunization		
12+ months since a flu shot	95	65%
Men's Health		
Not checked for colorectal cancer (Over 50)	1	1%
Women's Health		
No mammogram (Over 35)	1	1%
No Pap Smear or not sure	1	1%
Not checked for colorectal cancer (Over 50)	1	1%
Currently pregnant	3	2%
Planning pregnancy in next 12 months	0	0%
Dentist Visits		
12+ months since a dentist visit.	22	15%

SCHEDULE 7 - LIFESTYLE PROFILES

	Number of Participants	% of Participants
Tobacco Use		
Still smoke	10	7%
Used to smoke	27	18%
Never smoked	109	75%
Use smokeless tobacco or nicotine replacement therapy	4	3%
Anyone in current household / work environment smoke	19	13%
Alcohol Use		
Average alcoholic drinks per week		
0-4	33	23%
5-9	21	14%
10-13	5	3%
14 or more	3	2%
Nutritional Habits		
Eat the number of calories to maintain a healthy weight		
Yes	88	60%
No	58	40%
Eat a low-fat diet		
Yes	80	55%
No	66	45%
Exercise Habits		
Engage in regular moderate exercise 5-7 times for 30 minutes		
No, and do not intend to in the next 6 months	13	9%
No, but intend to in the next 6 months	27	18%
No, but intend to in the next 30 days	40	27%
Yes, but for less than 6 months	16	11%
Yes, for more than 6 months	50	34%
Engage in strenuous physical activity, other than work, during the last month		
Less than 1 time per week	42	29%
1-2 times per week	46	32%
3 times per week	31	21%
4 times per week	14	10%
5 times or more per week	13	9%
Self-assessment of overall health		
Excellent	29	20%
Very good	59	40%
Good	50	34%
Fair	8	5%
Poor	0	0%

SCHEDULE 8 - EMOTIONAL HEALTH REPORT

	Number of Participants	% of Participants
Do you effectively practice stress management in your daily life		
No, and do not intend to in the next 6 months	5	3%
No, but intend to in the next 6 months	13	9%
No, but intend to in the next 30 days	7	5%
Yes, but for less than 6 months	18	12%
Yes, for more than 6 months	88	60%
Currently do not have stress	15	10%
In general, how satisfied are you with your life		
Completely satisfied	23	16%
Mostly satisfied	100	68%
Partly satisfied	23	16%
Not satisfied	0	0%
Over the last 2 weeks, how often have you had little interest or pleasure in doing things		
Not at all	110	75%
Several days	30	21%
More than half the days	5	3%
Nearly every day	1	1%
Over the last 2 weeks, how often have you felt down, depressed, or hopeless		
Not at all	104	71%
Several days	40	27%
More than half the days	1	1%
Nearly every day	1	1%
During the past 12 months, how many days did your feelings keep you from working all or most of the day		
None	109	75%
1-2 days	28	19%
3-5 days	8	5%
6 or more days	1	1%
How often do you use drugs or medications which affect your mood or help you relax		
Almost every day	9	6%
Sometimes	5	3%
Rarely or never	132	90%

SCHEDULE 9 - EMOTIONAL, WORK/FAMILY, AND SUBSTANCE ABUSE RISKS

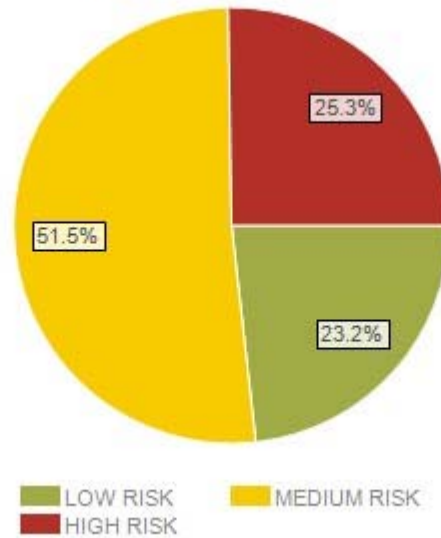
	# with Minimal Risk	# with Moderate Risk	# with Medium Risk	# with High Risk	# with Extreme Risk
Emotional:	104	27	0	6	9
Work/Family:	32	87	25	0	2
Substance Abuse:	62	55	21	5	3

SCHEDULE 10 - ESTIMATED LOST WORK DAYS

	Number of Participants	# with Poor Control	Days Lost with Poor Control	# with Good Control	Days Lost with Good Control	Total Days Lost (Current)	Days Lost if All Good Control	Potential Days Saved
Asthma:	11	1	22.2	10	106.0	128.2	116.6	11.6
Hypertension:	9	0	0.0	9	44.1	44.1	44.1	0.0
Heart Disease:	2	0	0.0	2	19.6	19.6	19.6	0.0
Depression:	8	1	43.0	7	165.9	208.9	189.6	19.3
Diabetes:	3	0	0.0	3	7.5	7.5	7.5	0.0
Migraines:	11	2	4.0	9	14.4	18.4	17.6	0.8
	Total # with Risk	Total # with Poor Control	Total Days Lost with Poor Control	Total # with Good Control	Total Days Lost with Good Control	Total Days Lost (Current)	Total Days Lost if All Good Control	Total Potential Days Saved
	44	4	69.2	40	357.5	426.7	395.0	31.7

SCHEDULE 11 - GROUP RISK STATUS

RISKCATEGORYBREAKDOWN



Total Number of Risk Factors	# of Employees	% of Employees
Low Risk = 0-2 Risk Factors	34	23%
Medium Risk = 3-4 Risk Factors	75	51%
High Risk = 5 or more Risk Factors	37	25%

SCHEDULE 12 - ESTIMATED MEDICAL COSTS BY RISK STATUS

These medical care cost estimates are calculated from research published by the Health Management Research Center at the University of Michigan. Risk status is determined from data collected from the Health Risk Assessment, including alcohol use, blood pressure, Body Mass Index, Total Cholesterol, HDL Cholesterol, the number of sick days, job satisfaction, life satisfaction, perception of health, level of physical activity, tobacco use, stress, use of drugs used to relax, stress, safety-belt usage, and any of the following medical conditions: heart disease, cancer, diabetes, stroke.

	Estimated Costs		
Base Costs	\$5,900.00		
Claims Distribution by Risk Index	Estimated Costs	Excess Claims	Total Claims
Low Risk	\$4,602.00	\$0.00	\$156,468.00
Non-Participants	\$5,982.60	\$1,380.60	\$3,009,247.80
Medium Risk	\$6,903.00	\$2,301.00	\$517,725.00
High Risk	\$10,584.60	\$5,982.60	\$391,630.20

SCHEDULE 13 - PROJECTED EXCESS "PREVENTABLE" CLAIMS

The excess claims calculator is based on more than ten years of health and productivity research captured from Health Risk Assessment and wellness participants published by the Health Management Research Center at the University of Michigan. The model uses health risk status reported in Schedule 11 of this report and findings from the research to forecast the following: the estimated costs that could be saved from reducing risks of current participants, the estimated costs of retaining current low risk participant levels, the expectation that the program will achieve a 90% participation rate over a two year period whereby Y2 participants, that did not participate in Y1, would improve their at-risk status and/or retain their low risk status as described above.

Assumptions

Total Number of Employees	649
Estimated Participation	22%
Total Number of Participants	146
Total Number of Non-Participants	503
Get 90% of Employees	438
Average Cost of Claims	\$5,900.00
Estimated Total Costs	\$3,829,100.00
Total Excess Costs	\$1,088,373.00
Percentage Excess Claims	28.42%

Lower costs due to risk status reduction

From High to Medium	\$55,849.87
From High to Low	\$35,416.99
From Medium to Low	\$79,384.50
Total	\$170,651.36

Cost to be avoided by low-risk maintenance

From Low to Medium	\$28,164.24
From Medium to High	\$46,940.40
From Low to High	\$8,136.34
Total	\$83,240.98

Risk status reduction + low-risk maintenance

Total Excess Claims
\$253,892.34

Potential savings from new participants

Estimated excess claims from year one non-participants

Total Excess Claims

Low	\$0.00
Medium	\$517,725.00
High	\$664,068.60
Total Excess Claims	\$1,181,793.60
Lower costs due to risk status reduction	
From High to Medium	\$167,549.62
From High to Low	\$106,250.98
From Medium to Low	\$238,153.50
Total	\$511,954.09
Cost to be avoided by low-risk maintenance	Total Excess Claims
From Low to Medium	\$84,492.72
From Medium to High	\$140,821.20
From Low to High	\$24,409.01
Total	\$249,722.93
Risk status reduction + low-risk maintenance	Total
	\$761,677.02
Total potential savings	\$1,015,569.36

FOOTNOTES

Cover Page:

¹ Table 2-National Health Expenditure Amounts and Average Percent Change by Type of Expenditure: Selected Calendar Years 1980-2012. CMS website/OACT projections (<http://cms.hhs.gov/statistics/nhe/projections-2002/t2.asp>).

² CDC website: <http://www.cdc.gov/nccdphp>

³ McGinnis JM. "United States," in *Critical Issues in Global Health*, ed. C.E. Koop (San Francisco: Jossey-Bass, 2001), 80-90.

⁴ McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. *Health Affairs*. 2002; 21(2):78-92.

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