THOMSON REUTERS HEALTHCARE INDEXES

WORKFORCE WELLNESS INDEX

October 2011

The *Thomson Reuters Workforce Wellness Index* measures the healthcare cost impact of six behavioral risk factors in employed populations.

The *MarketScan Workforce Wellness Index* is constructed from the *MarketScan® Commercial Claims* and *Health Risk Assessment (HRA)* databases. The *MarketScan* sample represents the experience of Thomson Reuters customers and business partners and is therefore based on a convenience sample. The U.S. *Workforce Wellness Index* is based on importance weights derived from the *MarketScan Commercial Claims* database and national behavioral risk prevalence rates derived from scientifically designed federal surveys.

The six behavioral risk factors[1] used to measure employee wellness include:

Biometric Factors:

- Body Mass Index (BMI)
- Blood Pressure
- Total Cholesterol
- Blood Glucose

Other Risk Factors:

- Tobacco Use
- Alcohol Use

BACKGROUND

The *MarketScan Databases* are a large dataset containing paid claims for medical and prescription drugs. A portion of the *MarketScan Databases* can be matched to behavioral risk assessment data. Thomson Reuters stores claim and HRA information for large, self-insured employer customers as part of our products and services to help manage the costs and health of their workforces.

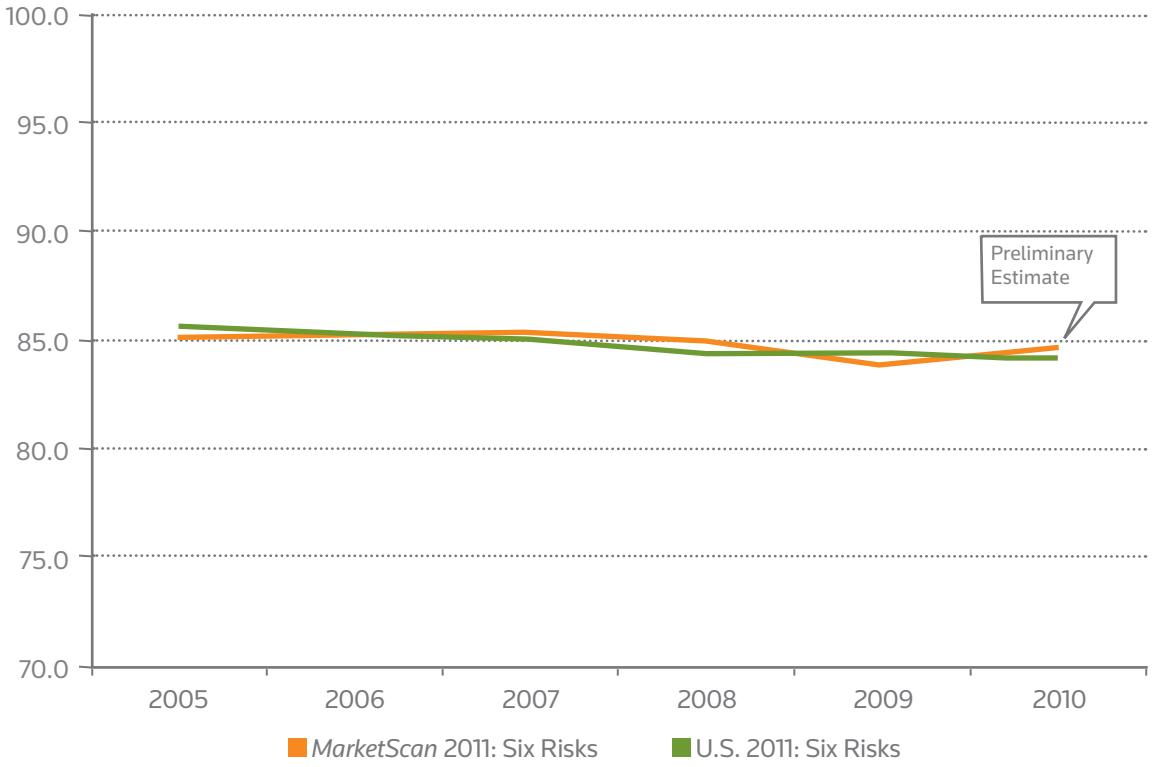
INDEX TRENDS, 2005–2010

Between 2005 and 2010, the U.S. *Workforce Wellness Index* worsened, declining from 85.8 to 84.7. The *MarketScan Workforce Wellness Index* followed a similar trend, decreasing slightly from 85.2 to 84.7. An index of 100 represents the ideal state where there are no individuals at high risk for the risk factors listed above in the employed population and, therefore, no excess healthcare costs due to these risks. Figure 1 displays the index values for 2005–2010[2]. The *MarketScan* sample value for 2010 is a preliminary estimate, and will be finalized on the next release of the *Workforce Wellness Index* in 2012.

DISCUSSION

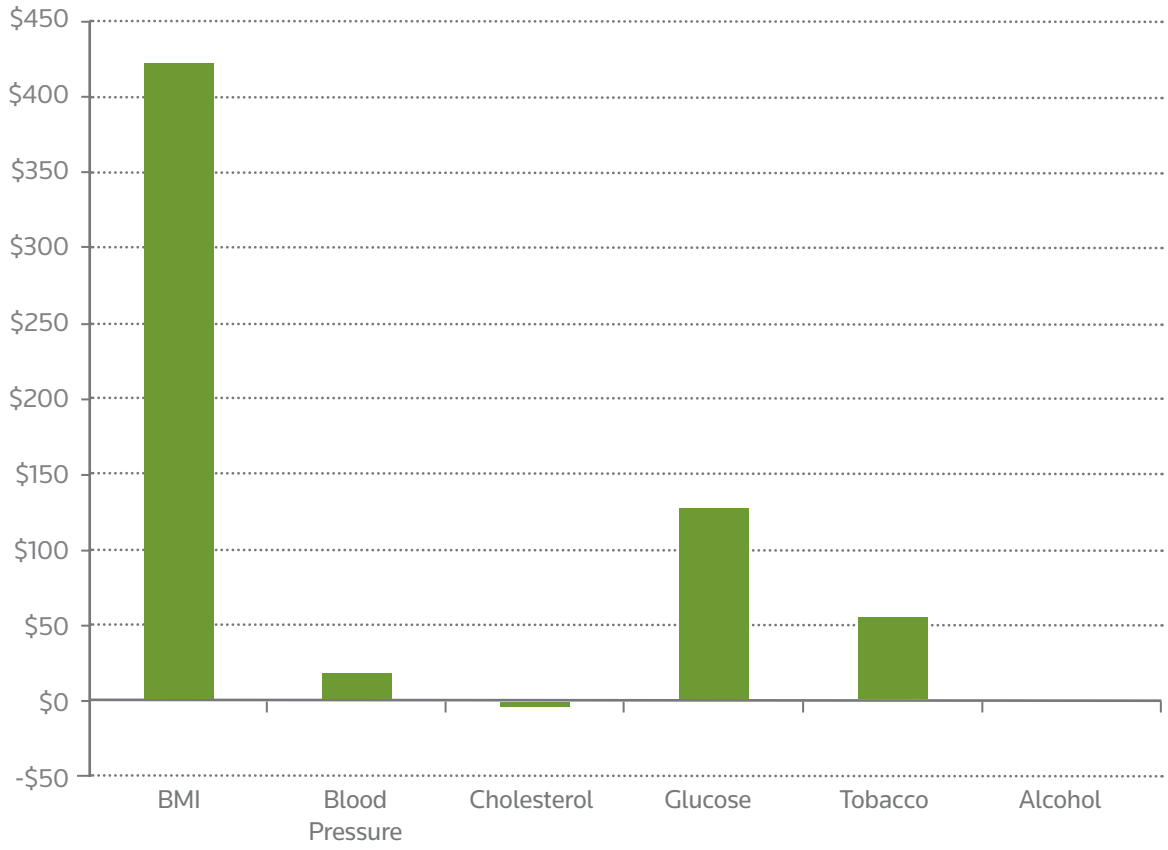
Our research for the *Workforce Wellness Index* indicates that, in 2010, approximately 14 percent of incremental direct healthcare cost in the employed, privately-insured workforce is attributable to the six behavioral risk factors for which we have reliable national measurements.[3] Using per capita spending estimates developed for the *Thomson Reuters Healthcare Spending Index for Private Insurance* for the fourth quarter of 2010, this represents approximately $623 in additional healthcare costs annually per worker.[4]

FIGURE 1: U.S. *Workforce Wellness Index* and *MarketScan* Sample, 2005-2010



The risk factor with the greatest incremental impact on healthcare cost is obesity (measured as Body Mass Index, or BMI, above 30). High BMI accounts for nearly $425 of the additional healthcare cost associated with the highlighted behavioral risk factors in 2010. High blood glucose level is the second most significant factor, accounting for just over $125 of additional cost. Tobacco use and high blood pressure had smaller short-term cost impacts. High cholesterol and heavy alcohol use had no significant impact on additional short-term medical and drug cost (see Figure 2).

FIGURE 2: Estimated Incremental Annual Cost Impact by Risk Factor



The *Workforce Wellness Index* trends for the U.S. and those based on our *MarketScan* behavioral risk assessment database were similar. Despite similarity in trend for the *Workforce Wellness Index* overall, there are underlying differences between the *MarketScan* and U.S. behavior risk profiles worth mentioning (see Figure 3):

- BMI risk prevalence rates are higher in the *MarketScan* convenience sample than in the corresponding U.S. estimate. Both U.S. and *MarketScan* BMI risks increased between 2005–2010 (24.6%-27.6% for the U.S. and 27.2%-30.6% for *MarketScan*). Relatively high rates of BMI risk in the *MarketScan* sample substantially depress index values calculated between 2005 and 2010 and represent an important opportunity for employer sponsored work site health promotion programs.
- Blood pressure, cholesterol, and blood glucose risk prevalence rates are lower in the *MarketScan* sample than the U.S. in both 2005 and 2010. In both cases, blood pressure and cholesterol risk prevalence rates decreased between 2005 and 2010.
- Tobacco and alcohol risk prevalence rates are lower in the *MarketScan* sample than the U.S. in both 2005 and 2010. The *MarketScan* rates decreased in that period for both risk factors. For the U.S., tobacco use rates decreased while alcohol rates increased slightly.

Figure 3: Adjusted Prevalence Estimates by Risk Factor for the U.S. and *MarketScan*

ADJUSTED PREVALENCE ESTIMATES – U.S.

	BMI	Blood Pressure	Cholesterol	Glucose	Tobacco	Alcohol
2005	24.6%	17.2%	15.6%	5.4%	19.3%	3.5%
2010	27.6%	13.9%	12.8%	6.6%	16.4%	3.7%

ADJUSTED PREVALENCE ESTIMATES – MARKETSCAN

	BMI	Blood Pressure	Cholesterol	Glucose	Tobacco	Alcohol
2005	27.2%	13.7%	7.9%	7.0%	11.5%	2.3%
2010	30.6%	11.3%	5.6%	6.3%	9.8%	1.7%

NOTES

[1] High risk factor levels were defined as follows:

Risk Factor	High Risk Definition
Obesity	Body Mass Index (BMI) >= 30
Blood Pressure	Systolic >=140 mm Hg or diastolic >=90 mm Hg
Cholesterol	Total Cholesterol >= 240 mg/dL
Blood Glucose	Total Blood Glucose >= 126 mg/dL
Tobacco	Currently smoke cigarettes or use any form of tobacco
Alcohol	More than 2 drinks per day

[2] National behavioral risk factor prevalence rate sources:

- National Health Interview Survey (NHIS)
  (BMI, tobacco use, and heavy alcohol use)
- National Health and Nutrition Examination Survey (NHANES)
  (Blood pressure, cholesterol, and blood glucose)

[3] A description of the data sources and methods used to develop the indexes, along with more on findings, is available in the *Thomson Reuters Workforce Wellness Index Research Brief*, available at ***http://healthcare.thomsonreuters.com/Indexes/***

[4] For more information on the Thomson Reuters Healthcare Spending Index see ***http://healthcare.thomsonreuters.com/Indexes/***.

FOR MORE INFORMATION

Visit *healthcare.thomsonreuters.com/indexes/* to read the details of our findings each month. Additional analyses by demographic characteristics, geography, or specific healthcare segments can be developed as custom datasets. To request information, contact:

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