

# DataSmärt

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## Health Risks and Cost Risks are not the same

### **The weak association between health risks and near-term health care utilization**

There is a widely-held belief that companies can reduce healthcare costs by encouraging healthy behaviors. This presumption is based on decades of research showing that:

- a) Health risks (such as smoking, inactivity, and obesity) increase the chances of chronic disease over time.
- b) Health risks are associated with higher costs. This body of evidence fuels the multi-billion dollar wellness industry and dictates the types of programs offered to employees.

### **But how strong is the relationship? And can it help with short-term cost management?**

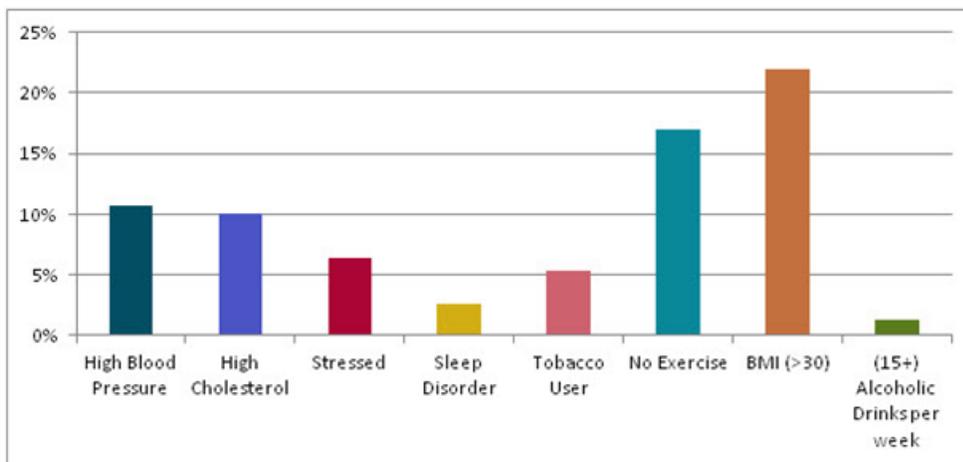
Using data from several large employers who collect health risk information, DataSmart can examine that question. First, we analyzed responses to eight different risk factors:

- High cholesterol
- High blood pressure
- Lack of exercise

- Body Mass Index (BMI) >30
- Tobacco use
- Sleep problems
- High alcohol use
- Frequent stress

As shown in the graph below, the most **commonly reported risks were BMI and lack of exercise**. From 38,000 respondents:

- The average number of risks was just under 1
- 19% had 2 or more risks
- About 3% had 4 or more risks



### We also asked the traditional question

Are a greater number of risks associated with higher integrated health and absence costs?

Holding age and gender constant, each additional risk factor was associated with \$837 more in costs. On the surface, the data reinforces traditional thinking about health risks. If we end the story here, we might simply say: yes, more risks means higher cost.

### But there is much more to the story

Let's reverse the question and instead ask:

Are employees with the highest cost also much higher risk? Among the employees in this analysis:

- Almost half (48%) of all health-related benefit costs were incurred by only 5% of employees
- 52% of these costs were incurred by the remaining 95%
- The average cost among the 5% was about \$44,800

- The average cost for the remaining 95% of employees was only about \$2,600
- The difference between the average 5% cost and the average 95% cost was \$42,000

Based on the prevailing wisdom about risks and costs, what should we expect regarding health risks of the 95% and the 5%? Wouldn't we presume that the 5% are those who ignored healthy-living recommendations, have many risk factors, and have suffered the consequences?

Well, that isn't what we find. The average number of risks (among the eight risks we defined earlier) in the 5% population was 1.1 risks, while the average for the 95% was 0.7 risks. While this number is higher (and statistically significant), a difference of 0.4 risks is surprisingly small. Using our earlier analysis of the dollar value of each risk, 0.4 risks equates to a difference of \$334 (0.4x\$837).

In other words, within the overall difference of \$42,000 between the groups, we can account for less than 1% of that difference with risk factors. To reassure readers, this finding is not a one-time fluke. We have seen the same pattern repeatedly; from a health-risk perspective, the 5% usually look quite similar to the 95%, yet their costs can be 20 to 30 times higher.

In case you're wondering, both groups were equally likely to take the employer promoted Health Risk Assessment (HRA), with rates for the top 5% being slightly higher. And costs and risks were measured in the same year.

	Bottom 95%	Top 5%
% who took the HRA	57%	61%
Risks	0.7	1.1
Annual Integrated Cost	\$2,593	\$44,792

### What this means

Employers should find these results unsettling because they challenge some of the basic tenets of wellness efforts: A) we target high-risk people because we think they will be expensive, and B) reducing risks is the way to reduce cost.

One can anticipate objections/explanations to this finding. For example, perhaps only the healthiest people filled out the HRA (doesn't appear to be the case). Or perhaps people weren't honest in their responses. Or perhaps that specific HRA doesn't measure the right things. Or that it takes years for health risks to cause problems.

But in every one of these objections, we find an inherent flaw in the overall logic. If we cannot rely on the validity of answers to help identify those at risk for high costs, why do

we use such instruments? And if we cannot detect changes for long periods of time, why are wellness programs being used as a near-term cost-containment strategy?

### **How to reconcile this with conventional wisdom**

Are we suggesting that decades of research regarding health risks were incorrect? No. If you take a population of people who smoke, don't exercise, and are overweight, and track them over a long period of time, they will develop more chronic diseases sooner than individuals who behave in the opposite way. This produces, on average, a difference in cost over time. No argument.

However, in any given year, across an employed population, there are strong influences on health-related spending that far outweigh the effects of health behavior. These include the design of benefits (and inherent incentives therein), the work environment, the practice patterns of providers, and the employee's orientation toward care-seeking. Past health risks may influence whether you develop back pain, but the cost of treating that back pain will vary far more due to other factors than what influenced its development in the first place.

### **Think differently**

Quite simply, every employer should question health improvement techniques as a near-term cost-reduction strategy. This can only be established by creating a robust data warehouse that collects information on all members of your plan – not just those having medical and Rx claims. Benefits data are tall, wide, and sometimes anything but linear as employer plans try to equate Health Risk and Cost Risk. And that's OK. The beautiful thing about the DataSmart program is that you don't need to know what your data hold at the onset of exploration. DataSmart is at its best not when it's used to prove points, i.e. strength of carrier/TPA discounts, rather when it's used to uncover patterns, ask why, explore trends and understand interactions. That's when insights are gained that fuel informed decisions.

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