



## 2011 IBI/NBCH Health and Productivity Forum

Integrated Benefits Institute &  
National Business Coalition on Health

Case Studies Featuring 2011 Presentations

### Caterpillar Develops Robust Tools to Change Employee Behavior

*Synopsis: Caterpillar Inc. developed a data toolset to capture actionable data regarding employee health risk and work engagement behavior. Using the Healthways Well-Being Assessment and benchmark data from the Gallup-Healthways Well-Being Index, Caterpillar crafted an initiative achieving several objectives: identify the link between well-being and engagement (a key component of productivity), identify significant variations among individual business units in well-being and productivity, and identify local opportunities for focused interventions to improve well-being and engagement in order to increase productivity.*

#### **Background**

One of the most highly-rated sessions at the 2011 IBI/NBCH Health and Productivity Forum, “Towards More Inclusive and Productive Well-Being” described the use by Caterpillar, Inc., of the Healthways Well-Being Assessment to identify productivity opportunities.

Presenters included Michael L. Taylor, MD, Medical Director for Health Promotion at Caterpillar; Nikki Duggan, Director of Well-Being Strategy at Healthways; and Lindsay Sears, PhD, Senior Analyst at Healthways.

Caterpillar launched its program in a solid position: health care costs per-member-per-year were flat from 2002 to 2010, compared to more than double for national industry employers on average. But to help maintain its position as the world’s leading manufacturer of earth-moving equipment, Caterpillar wanted to measure and control costs generated in related areas such as employee engagement and productivity.

“We have moved beyond a focus on injury and illness to addressing the larger picture of wellness and productivity,” said Taylor. “Long-term we need higher quality care, we will succeed as a competitor if our people are healthier and more productive.”

Health care risk/cost sharing with employees, while a core strategy for some employers, was a launching point at Caterpillar. The wellness program has three core goals:

- Help keep healthy people healthy
- Reduce or eliminate risk from lifestyle behavior choices, and

- Optimize care for those with chronic diseases or conditions

These health cost-containment goals support Caterpillar’s strategy to promote employee health and engagement as the twin foundations of productivity.

“The Well-Being Assessment scores painted an important picture showing the variation within a large company, emphasizing that enhanced productivity and well-being have many constructs and one solution is unlikely to fit everyone’s needs,” said Taylor. “It also linked well-being to engagement—I believe for the first time in this field, and I believe it is an important contribution.”

### **Measuring Productivity**

Any organization can measure productivity, but doing it accurately and cost-effectively is another matter. For Caterpillar, the Well-Being Assessment’s standardized survey instrument held out the potential for several useful capabilities related to health and productivity.

The Well-Being Index was jointly developed by Gallup and Healthways, who have a shared commitment to use the Index to systematically survey U.S. communities for 25 years. Launched in 2008, the Index adds 1,000 surveys per day, passing one million people surveyed by January, 2011. The Index has 41 questions in six domains or Indexes: Life Evaluation, Emotional Health, Physical Health, Healthy Behavior, Work Environment, and Basic Access.

Healthways created a Well-Being Assessment based on the six domains of the Well-Being Index plus a productivity/culture-of-health survey, and an NCQA certified health-risk assessment. Using the Assessment plus an employee engagement survey developed internally, Caterpillar explored the capabilities of this system to:

- identify key factors affecting or predicting employee productivity,
- identify opportunities for fostering workforce engagement
- support development of well-being interventions in individual business units.

Caterpillar implemented the survey for more than 27,000 eligible employees on 3/1/2010 as the corporation was pulling out of the recession with a reduced workforce. The survey was offered without incentives, but rolled out with strong corporate and local communication programs. Response was dramatic, with demand shutting down the internet-based server on the launch day. Within three weeks nearly 53% of eligible employees had taken the survey. Of 30 business units, 25 had sufficient participation to support comparison groups.

Compared to national averages for March, 2010, Caterpillar’s combined Well-Being Assessment score was 0.5 point better. Average scores across the six domains were higher in “Life Evaluation Index” (“evaluation of present and anticipated life situation 5 years from now”) and “Basic Access Index” (“Access to food, shelter, healthcare, and a safe and satisfying place to live”) and lower in Physical Health and Emotional Health Indexes. The gravity of employee obesity was driven home by Caterpillar’s lowest index score, a full three points lower in Physical Index compared to the U.S. general score.

## **“Heat Mapping”**

Using the Well-Being Assessment allows Caterpillar to compare between business units to identify units needing special support in particular areas. Based on scores in the six domains, business units were ranked in quintile groups, from green for the highest-scoring to red for the lowest, giving rise to the phrase “heat mapping.”

Caterpillar found substantial variation across the 25 business units on several metrics. In the most extreme example, the highest “Life Evaluation Index” score was 73.1, compared to the lowest of 52.4. In other applications of the Well-Being Assessment, the Life Evaluation score is a significant indicator for health outcomes. An individual business unit can have substantial variation across the six domains, as well.

Heat-mapping provided the raw data to identify opportunities to improve employee well-being. Additionally, “We had to map against opportunity to improve performance, and that was in the areas of training, and physical and emotional indexes,” said Taylor. During the recession, many units had reduced spending on training, employees had cut back on use of health care, and personal and operating stresses created challenges for emotional health.

One of the four “Work Environment Index” questions asked: “At work, do you get to use your strengths to do what you do best every day?” Significant variability in this area, from a high of 81.8 to a low of 60.2, indicated opportunities to improve the foundations for employee engagement.

## **Significant Correlations**

Caterpillar’s basic sequence in the program is: Well-Being Assessment scores help quantify Engagement, Health and Productivity; positive trends in these areas drive the more quantifiable outcomes of Health Care Cost and Lost Value Cost.

“The goals are higher Life Evaluation and higher Well-Being scores. Engaged employees will help Caterpillar get the product out the door,” said Taylor

In several cases, overall scores on the Well-Being Assessment had a direct, linear relationship with internal metrics for employee engagement and productivity. “Business units with the lowest scores on well-being also had the lowest employee engagement,” said Taylor. “Leadership, values, team effectiveness, and safety – important metrics for us – all had a linear relationship with the Well-Being Assessment score.”

Getting positive outcomes on internal states like engagement involves many factors, some an organization can control, such as training, and many it cannot. “It’s like turning a big ship around,” said Taylor.

## **Finding Parallels**

In a related project, Healthways collaborated with Pro-Change Behavior Systems to validate a brief survey employers can use to gather “actionable evidence to do an opportunity analysis,” said Lindsay Sears of Healthways. The survey was validated in an investigation with 1827 people working for multiple employers before use as part of Caterpillar’s program. Sears presented on behalf of Pro-Change founder James

Prochaska, PhD, renowned readiness-to-change researcher, who had travel restrictions during recovery from a health condition.

The “Well-Being Assessment-Productivity” (WBA-P) explores conditions affecting productivity in detail, rather than providing a comprehensive productivity metric. The WBA-P asks: “During the past 4 weeks (28 days), how often have you been at work but had trouble concentrating or doing your best because of...”

- Health or physical condition
- Caring for others
- Personal problems/Worries
- Depression/Anxiety
- Financial Stress/Concerns
- Lack of resources
- Issues with coworker
- Too much to do/Lack of time
- Issues with supervisor
- Technical Issues
- Lack of Training

Some conditions in the list are present in the *individual* taking the survey, and some in the *workplace*, resulting in a “WBA-PI” and a “WBA-PW” (blue bullets above). Sears noted,

- Lost productivity (measured in other ways) increased as the number of cited conditions increased.
- Among the 11 barriers above, the work-related conditions were cited more frequently in association with lost productivity than individual conditions.

Sears later commented on what appeared to be a lower impact of health risk on productivity. “This study was a snapshot of a moment in time rather than a longitudinal study of how conditions affect people over time,” she said. “Health risks may interact over time and have a cumulative impact, but may not be cited as frequently. Because some people reported work conditions more frequently didn’t mean they were more impactful.”

The WBA-P survey was validated against two widely-used, validated surveys, the Health & Work Performance Questionnaire (HPQ) and the Work Productivity & Activity Impairment Questionnaire/General Health (WPAI). Findings from these validation studies supported use of WBA-P as a diagnostic tool, able to identify which domain(s) of the Well-Being Assessment are driving lost productivity in individual employees, when used under certain protocols. Well-Being interventions could be tailored to needs of an individual employee.

In a separate study group of non-Caterpillar employees, Healthways found the Life Evaluation score alone was a significant indicator for health outcomes:

- High-scoring “Thriving” employees averaged \$1,400 combined cost of claims and prescriptions, 37.5% less than “Struggling” employees;
- “Struggling” employees with more typical scores averaged \$2,242 combined cost;
- “Suffering” employees with lower scores averaged \$3,847 or 71.6% more than “Struggling” employees.

### **Conclusion**

Initial experience at Caterpillar Inc., suggests the Well-Being Assessment is a robust tool for identifying wellness or productivity intervention opportunities from organization-wide down to individual employees. The Index captures actionable data that can be compared across the organization, within communities or business units, and nationwide.