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Diabetes Management and Work-related Outcomes

A Broader Workforce Perspective

Kimberly Jinnett, Ph.D.

Executive Vice President, Integrated Benefits Institute

kjinnett@ibiweb.org

The Full Cost of Employee Poor Health

Medical &
Pharmacy costs
\$3,376 PEPY

Personal Health Costs

25%
Medical Care
Pharmacy

Health-related
Productivity Costs
\$10,128 PEPY

Productivity Costs

Absenteeism

Short-term Disability
Long-term Disability

75%
Presenteeism

Overtime
Turnover
Temporary Staffing
Administrative Costs
Replacement Training
Off-Site Travel for Care
Customer Dissatisfaction
Variable Product Quality

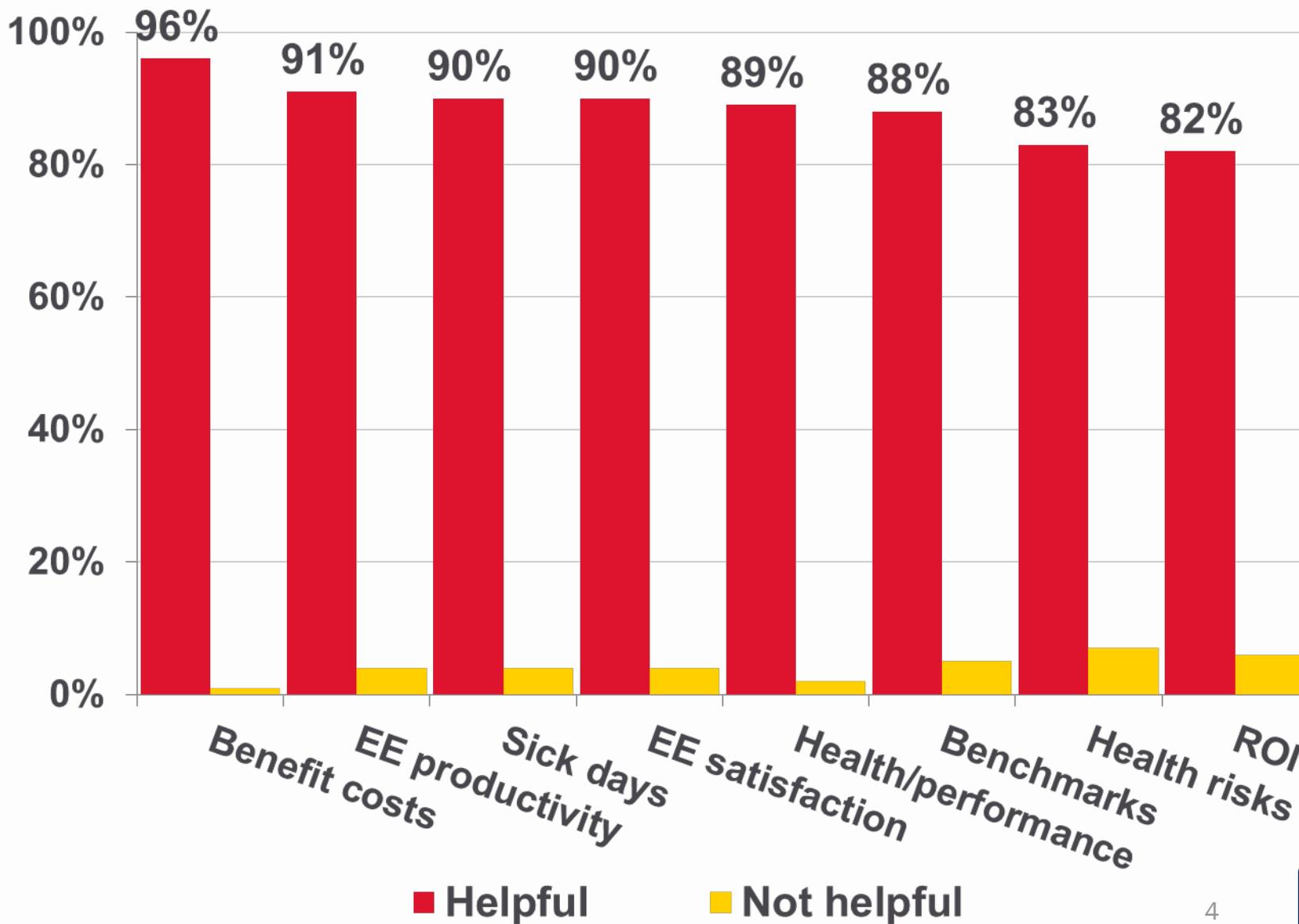
Total Costs =
\$13,504 PEPY

Sources: 2006 Mercer Employer Annual Survey; Edington DW, Burton WN. *Health and Productivity*. In McCunney RJ, Editor. *A Practical Approach to Occupational and Environmental Medicine*. 3rd edition. Philadelphia, PA. Lippincott, Williams and Wilkins; 2003: 40-152. Loeppke, R., et al. Health-Related Workplace Productivity Measurement: General and Migraine Specific Recommendations from the ACOEM Expert Panel. *JOEM*. April, 2003, Volume 45, Number 4, Pages:349-359.

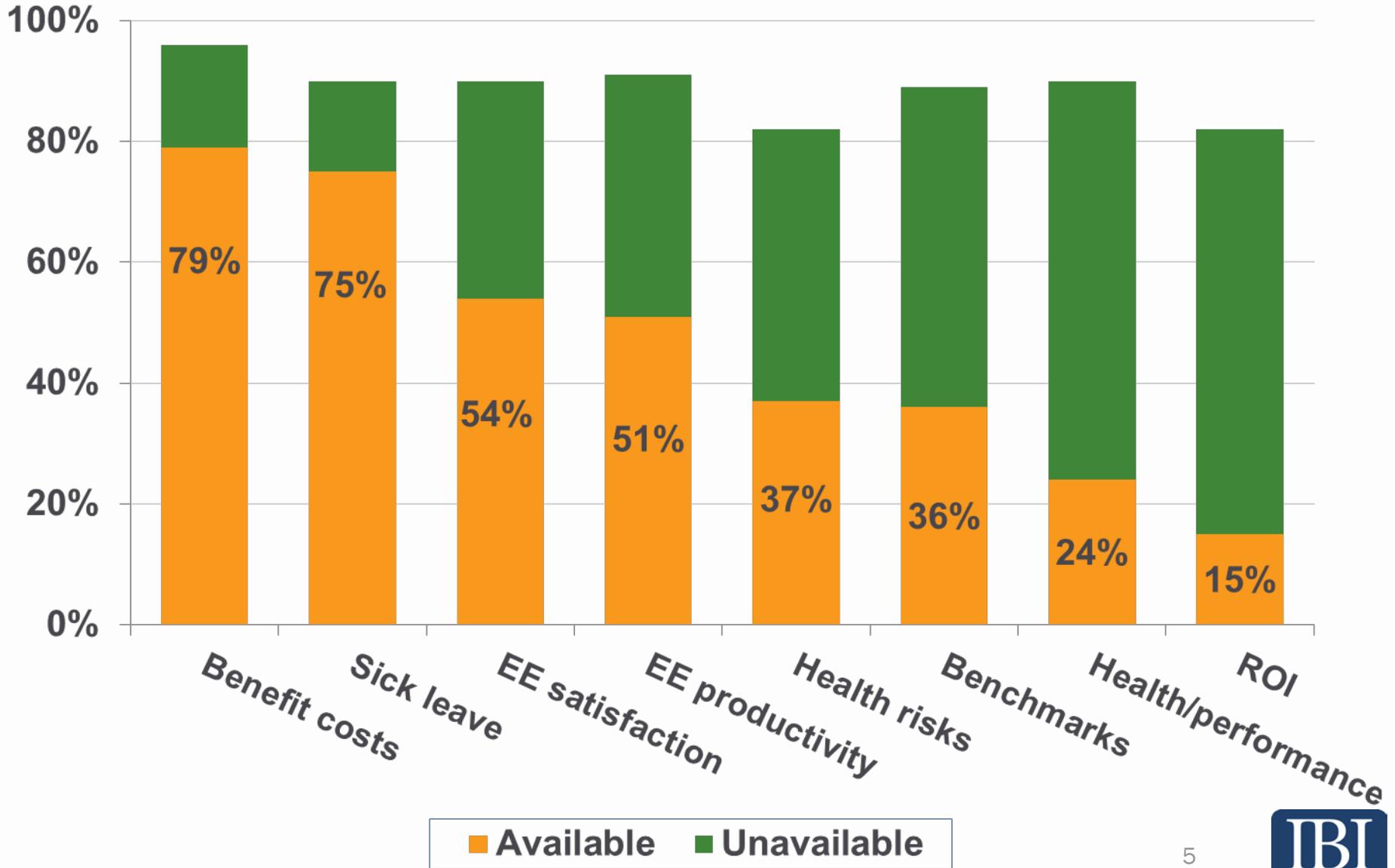
Findings from IBI's Series of CFO Surveys (2002, 2006, 2012)

- CFOs are key participants in benefits decision making
- Health is an organizational priority
- Productivity is critical to bottom line but the role of health is less clear
- CFOs understand health impacts financial performance
- Internal information is most credible but critical information is lacking
- CFOs suggest ways to measure productivity

Broad Information is Useful



... But Not Very Available



Connecting Investments in Health to Work Outcomes

- **Health risks impact medical costs, absence and performance (presenteeism)**
- **Particular chronic health conditions (e.g., diabetes, depression, RA, back pain) increase total health-related costs but often are undertreated or not treated at all**
- **The employer bears the burden of wage replacement payments and the opportunity costs from lost work time (i.e., financial lost productivity)**
- **Health interventions (including worksite-based programs) can reduce medical costs, absence and performance, particularly over the longer term**

Source: IBI 2014 literature review of 156 “health and productivity studies” in the scholarly literature.

Findings from a Selection of Diabetes Studies with Work-related Outcomes*

- Diabetes, particularly if unmanaged and undertreated, is associated with more work disruption in the form of higher absence, lower job performance and extended periods of work disability.
- Acute symptoms that may disrupt work include fatigue, irritability, mobility-limiting infections.
- More severe events include stroke, limb amputations and other events with long-term implications including the potential for permanent work disability.
- Normal blood glucose levels were associated with less absence and higher performance.
- Reliable treatment and monitoring methods might diminish these negative work outcomes.

***Sources:** IBI Study, Diabetes - how employers can defuse a looming time bomb in their workforce, November 2011. Brod, M., et al. The impact of non-severe hypoglycemic events on work productivity and diabetes management. 2011 Jul-Aug;14(5):665-71.; Davis RE, Morrissey M, Peters JR, et al. Impact of hypoglycaemia on quality of life and productivity in type 1 and type 2 diabetes. *Curr Med Res Opin* 2005;21:1477-83; Harris SB, Leiter LA, Yale JF, et al. Out of pocket costs of managing hypoglycemia and hypoglycemia in patients with type 1 diabetes and insulin-treated type 2 diabetes. *Can J Diabetes* 2007;31:25-33; Leckie AM, Graham MK, Grant JB, et al. Frequency, severity, and morbidity of hypoglycemia occurring in the workplace in people with insulin-treated diabetes. *Diabetes Care* 2005;28:1333-8; Davila, E.P., et al. "Long work hours is associated with suboptimal glycemic control among US workers with diabetes." *American journal of industrial medicine* 2011; 54.5: 375-383.