Measuring—and recovering—productivity in the workplace

July 10, 2012

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Audience Notes

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• Just type in your question at any time and then click the “Send” button next to the box. Feel free to submit questions as they come to mind during the presentations -- there is no need to wait until the end.

• Audience questions will be asked by the moderator at the conclusion of the presentations.
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Today’s Discussion

1. The business case for human capital management.

2. How do we know presenteeism when we see it?

3. What have we learned about presenteeism?

4. What can we do to reduce it?

5. Q&A
Health Management is a business strategy
The Business Problem: Human Capital Costs

- Direct health costs
- Productivity
  - Absenteeism
  - Presenteeism
- Safety
  - Critical Incidences
Why Manage Human Capital?

Maximize the profitability of the organization!

- Employers provide health information and communicate with employees
- Productivity and safety issues are costly and important
- A culture of empowered employees may have bigger business implications
- Employers are influencing their workforce today
- Employers’ combined purchasing power currently influences the market
It’s Not Just the Direct Medical Cost

<table>
<thead>
<tr>
<th>Condition</th>
<th>Average Per Capita Health Cost</th>
<th>Percent of Workers with Condition</th>
<th>Estimated Work Loss Costs (in billions)</th>
<th>Total Costs for Persons with Condition (in billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mood disorders</td>
<td>$4,328</td>
<td>18%</td>
<td>$11.5</td>
<td>$66.4</td>
</tr>
<tr>
<td>Diabetes</td>
<td>$5,646</td>
<td>10%</td>
<td>$3.5</td>
<td>$57.6</td>
</tr>
<tr>
<td>Cardiac disease</td>
<td>$10,823</td>
<td>37%</td>
<td>$3.8</td>
<td>$42.4</td>
</tr>
<tr>
<td>Hypertension</td>
<td>$4,073</td>
<td>8%</td>
<td>$11.5</td>
<td>$121.8</td>
</tr>
<tr>
<td>Asthma</td>
<td>$2,779</td>
<td>20%</td>
<td>$3.4</td>
<td>$31.2</td>
</tr>
</tbody>
</table>

Source: Druss, Marcus, et.al., Health Affairs, Nov/ Dec 2001
The majority of working-age Americans experience health problems, take sick days, or have reduced productivity.

- 27% Working with 1-5 sick days or reduced-productivity days
- 21% Not working for other non-health reasons
- 18% Working with 6 or more sick days or reduced-productivity days
- 12% Not working because of disability or other health reasons
- 21% Working with no sick days or reduced-productivity days

Note 1: Total excludes among employed adults the self-employed and workers with an undesignated wage rate.

Note 2: Numbers may not sum to 100% because of rounding; sick days are days missed work because self or family member sick; reduced-productivity days are days unable to concentrate fully at work because not feeling well or worried about sick family member.

The Ceiling of Opportunity (Human Factors)

Health Status

Technology
Work Practices
Management Practices
- Quality Improvement
- Training

Productivity
Health Management

- Measure and quantify health-related costs
- Target prioritized significant health issues
- Implement interventions to:
  - Improve health status
  - Reduce lifestyle risks
  - Improve function
- Measure progress in reducing health-related costs
Presenteeism

Describes the degree to which an employee is present and fully functioning while at work. It addresses the situation where an employee is present at work but limited in some aspect of job performance by health problem(s). Includes:

(1) time not on task
(2) decreased quality of work
(3) decreased quantity of work
(4) unsatisfactory employee interpersonal factors
(5) unsatisfactory work culture

Never underestimate the importance of people.
Dennis Richling, MD.
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The Hidden Cost of Poor Health: 

*Measuring -- and recovering -- productivity in the workplace*

Debra Lerner, MS, PhD

Director of the Program on Health, Work and Productivity
Institute for Clinical Research and Health Policy Studies
Tufts Medical Center, Boston, MA
How do we know presenteeism when we see it?

- It does not have a physical reality (height or weight)

- It is not entirely a characteristic of the person; it occurs with an exposure to a task/challenge/context

- It has an experiential component
How do we know presenteeism when we see it?

Through indirect assessment relying on self-report
  • We create a test that relies on human response

Four key challenges to its measurement:

  • Obtaining accurate reports of compromised work activity
  • Identifying the component that is health-related
  • Converting health-related compromises into a productivity metric
  • Translating the metric into money
Reducing Self-Report Bias
- The tendency of some decision-makers to reject any information that is based on self-report as “soft.”

Counteracting the Bias
- The science of self-report has advanced
- Major decision-makers in all fields rely on self-report
- There are few opportunities to validate employee health data against personal productivity data
- The evidence base for self-report is misunderstood
Two main types of validated presenteeism tools:

Type 1: Measures losses in performance due to health and applies a productivity or cost interpretation to the measured losses.

Type 2: Measures lost productivity or effectiveness and applies a health interpretation to the loss.
The WLQ Approach

A functional approach to measuring presenteeism
- Focus on functional limitations in ability to work
- Does not ask about performance or productivity
- Translates functional limitations into productivity equivalents

We know:
- How to measure health
- How to measure health effects on functioning
- How to convert functional losses in terms of productivity equivalents
- How to ascribe monetary value to productivity equivalents
What have we learned about presenteeism?

The US Norm: Industry

National Norms for the Work Limitations Questionnaire: Scale Score by Standard Industrial Category (Means)*

<table>
<thead>
<tr>
<th>Industry</th>
<th>Time Management</th>
<th>Physical Tasks</th>
<th>Mental-Interpersonal Tasks</th>
<th>Output Tasks</th>
<th>% Productivity Lost (presenteeism)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining-construction</td>
<td>10.7</td>
<td>11.6</td>
<td>11.3</td>
<td>8.3</td>
<td>2.8</td>
</tr>
<tr>
<td>Manufacturing non-durable goods</td>
<td>5.2</td>
<td>6.6</td>
<td>5.6</td>
<td>7.2</td>
<td>1.8</td>
</tr>
<tr>
<td>Manufacturing durable goods</td>
<td>10</td>
<td>11.3</td>
<td>9.8</td>
<td>9.9</td>
<td>2.8</td>
</tr>
<tr>
<td>Transportation</td>
<td>13</td>
<td>9.8</td>
<td>12.1</td>
<td>10.3</td>
<td>2.9</td>
</tr>
<tr>
<td>Retail trade</td>
<td>13.6</td>
<td>11.7</td>
<td>10.6</td>
<td>10.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Finance, insurance, real estate</td>
<td>11.1</td>
<td>10.8</td>
<td>10.9</td>
<td>10.4</td>
<td>3.0</td>
</tr>
<tr>
<td>Repair services</td>
<td>14.1</td>
<td>10</td>
<td>10.6</td>
<td>10.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Personal services</td>
<td>9.4</td>
<td>8.9</td>
<td>8.8</td>
<td>8.6</td>
<td>2.6</td>
</tr>
<tr>
<td>Professional and related services</td>
<td>12.7</td>
<td>9.8</td>
<td>11.2</td>
<td>9</td>
<td>2.8</td>
</tr>
<tr>
<td>Public administration</td>
<td>9.6</td>
<td>7.9</td>
<td>8.2</td>
<td>8</td>
<td>2.3</td>
</tr>
</tbody>
</table>

* Based on past two weeks
<table>
<thead>
<tr>
<th>Health Problems</th>
<th>Company A</th>
<th>Company B</th>
<th>Company C</th>
<th>Company D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress Risk</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Lifestyle Risks</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bodily Pain</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Depression</td>
<td>3</td>
<td>4</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Obesity or Weight Risk</td>
<td>5</td>
<td>5</td>
<td>32</td>
<td>10</td>
</tr>
<tr>
<td>Preventive Care Risk</td>
<td>7</td>
<td>6</td>
<td>33</td>
<td>9</td>
</tr>
<tr>
<td>Migraine</td>
<td>6</td>
<td>9</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Arthritis</td>
<td>11</td>
<td>7</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>High Blood Pressure Risk</td>
<td>12</td>
<td>8</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Hypertension</td>
<td>9</td>
<td>10</td>
<td>7</td>
<td>19</td>
</tr>
</tbody>
</table>

Lifestyle Risks = diet (fat/veggies), tobacco, alcohol, exercise
Preventive Care Risk = regular check-ups
Presenteeism Cost Ranking for Health Risk Assessment 2

| Health Problems                        | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X |
| Emotional Health Risk                  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lifestyle Risks                        | 3 | 2 | 2 | 2 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 | 2 | 2 | 2 | 2 | 2 |
| Safety Risk                            | 6 | 4 | 3 | 3 | 2 | 4 | 3 | 4 | 3 | 3 | 3 | 5 | 4 | 3 | 3 | 6 | 3 | 3 | 5 | 2 | 3 | 3 | 3 | 3 |
| Any Depression                         | 2 | 3 | 4 | 4 | 3 | 4 | 3 | 4 | 4 | 4 | 4 | 3 | 7 | 4 | 3 | 4 | 4 | 6 | 5 | 5 | 4 | 4 | 4 | 4 |
| Chronic Pain or Back Problems          | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 6 | 5 | 6 | 6 | 6 | 6 | 5 | 8 | 7 | 5 | 5 | 6 | 7 | 6 | 20 |
| Sleep Disturbance                      | 10 | 6 | 7 | 7 | 9 | 7 | 8 | 7 | 6 | 9 | 9 | 10 | 13 | 18 | 7 | 10 | 10 | 8 | 9 | 18 | 9 | 8 | 6 | 8 |
| Weight Risk                            | 4 | 7 | 10 | 6 | 7 | 15 | 21 | 5 | 7 | 5 | 12 | 5 | 11 | 20 | 10 | 4 | 8 | 10 | 12 | 16 | 3 | 7 | 4 | 5 |
| Triglyceride Risk                      | 7 | 10 | 8 | 8 | 13 | 9 | 6 | 10 | 9 | 8 | 7 | 12 | 8 | 4 | 16 | 6 | 19 | 20 | 6 | 10 | 12 | 9 | 12 | 14 |
| Arthritis                              | 8 | 9 | 11 | 11 | 8 | 6 | 12 | 9 | 8 | 7 | 8 | 11 | 10 | 7 | 11 | 17 | 14 | 7 | 16 | 8 | 8 | 14 | 10 | 9 |
| Migraine                               | 19 | 11 | 9 | 9 | 17 | 8 | 9 | 11 | 11 | 13 | 11 | 15 | 9 | 9 | 6 | 11 | 11 | 12 | 10 | 17 | 14 | 11 | 19 | 11 |

Emotional Health Risk = stress and depression, mood
Lifestyle Risk = nutrition, tobacco, alcohol, sedentary
Safety Risk = seat belts, speed limit, helmets, drinking and drug use, sunscreen, fire extinguisher, smoke alarm
Top Ten Annual Presenteeism Cost Health Problems for HRA 1

Total Cost for Presenteeism: $7.0m

(1) Productivity costs assume 10,000 employees and $50,000 average annual salary.
(2) There are 23 other health problems measured.
Top Ten Annual Presenteeism Cost Health Problems for HRA 2

Total Cost for Presenteeism: $7.9m

(1) Productivity costs assume 10,000 employees and $50,000 average annual salary.
(2) There are 11 other health problems measured.
Presenteeism drivers include per employee impact and prevalence

Productivity costs assume 33,000 employees and $74,000 average annual salary.


1 = Stress Risk  2 = Lifestyle Risk  3 = Depression  4 = Bodily Pain  5 = Obesity/Weight Risk
13 = High Blood Sugar Risk

Per Problem Cost (H=above median; L=below median)

Productivity costs assume 33,000 employees and $73,395 average annual salary.

Based on Prevalence and Total Net Cost Per Problem
What can be done to reduce presenteeism?

My Perspective:

- We need a science of functional improvement.

  Improving functioning is an important economic and health management goal.

  Functional improvement is often not a primary objective in medical care.
Patient Reported Frequency of Physician Assessment of Functional Performance and Emotional Well-Being

<table>
<thead>
<tr>
<th></th>
<th>Asks if Physical Health Limits</th>
<th>Asks About Emotional Health</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Physical Activity</td>
<td>Daily Responsibilities</td>
</tr>
<tr>
<td>Always/mostly</td>
<td>19.1</td>
<td>16.1</td>
</tr>
<tr>
<td>Sometimes</td>
<td>16.3</td>
<td>15.2</td>
</tr>
<tr>
<td>Rarely/never</td>
<td>64.7</td>
<td>68.7</td>
</tr>
</tbody>
</table>

*Total Sample, n=2474

Depression’s Work Impact

- Adversely affects how people think, feel and behave
- Can diminish motivation, self-confidence, energy, thought processes and social skills, many of which are essential to good work performance
- Working-age adults with depression experience high rates of job loss, turnover, premature retirement, disability, absences and at-work performance deficits with productivity losses in the billions of dollars annually
The Work and Health Initiative Study

National Institute of Mental Health, Centers for Disease Control and Prevention, National Institute on Aging, Tufts Clinical and Translational Sciences Institute
The Tufts Work and Health Initiative on Depression

Fully integrates functioning and productivity considerations into intervention

**E-screening**
Eligibility based on levels of depression and impaired work performance

**Intervention**
Work-focused program incorporating in-depth assessment of symptoms and functional deficits with multi-modal approach to reduce barriers to functioning and enhance skill/resources

**Outcomes and Costs**
- Presenteeism
- Absenteeism
- Symptoms
- Costs

March 6, 2012
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Your survey told us that you have symptoms of a medical condition called clinical depression. Currently, your symptoms are severe enough to be interfering with important parts of your life, including work.

The following graphs display your personal results from the survey (in blue) relative to a U.S. norm and other employees who took this survey. Higher scores indicate more difficulty with functioning.

Your level of difficulty functioning at work is moderate.
Your current level of depressive symptoms is moderately severe.

**Level of difficulty functioning at work (0-30)**

- **You**: 15.4
- **National Norm**: 2.7
- **Others in the study**: 5.3

**Severity of depression symptoms (0-27)**

- **You**: 17.0
- **National Norm**: 3.2
- **Others in the study**: 3.2
The Work and Health Initiative Program on Depression

1. Review baseline survey results and discuss how depression impacts work.

2. Educate about multi-modal, approach to functional improvement.

3. Develop consensus about specific work problems to address.


5. Address barriers to service utilization and motivation to engage in interventions.

6. Monitor progress and modify intervention strategies as needed.

7. Develop self-care plan summarizing intervention strategies to maintain progress.

8. Reinforce at booster session.
Screening Result: Major Depression

Patient’s Depression Symptoms
- Feeling tired
- Poor concentration
- Poor sleep
- Feeling down
- Loss of interest
- Losing appetite or overeating

Patient’s Work Impairments
- Keeping mind on work
- Concentrating on work
- Sticking to a routine or schedule
- Working without breaks or rests
- Using hand-held tools or equipment
- Lifting and carrying objects

Patient is currently taking Antidepressants

<table>
<thead>
<tr>
<th>Medicine</th>
<th>Daily Dosage Prescribed</th>
<th>Adherence</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effexor XR</td>
<td>150 mg</td>
<td>Very Good</td>
<td>None</td>
</tr>
</tbody>
</table>

The Tufts Work and Health Initiative on Depression
Coordinating Care with the Employee’s Physician
Pre-Intervention
WHI Treatment and Usual Care Groups

**State Government RCT**

- Usual Care
- WHI Group

<table>
<thead>
<tr>
<th>Baseline Score</th>
<th>Time Management</th>
<th>Physical Tasks</th>
<th>Mental-Interpersonal Tasks</th>
<th>Output Tasks</th>
<th>Productivity Lost (Presenteeism)</th>
<th>Productivity Lost (Absenteeism)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>43.7</td>
<td>18.3</td>
<td>38.5</td>
<td>39.1</td>
<td>10.1</td>
<td>26.6</td>
</tr>
<tr>
<td></td>
<td>45.6</td>
<td>23.3</td>
<td>37.3</td>
<td>40.7</td>
<td>10.3</td>
<td>31.2</td>
</tr>
</tbody>
</table>

WLQ Scales, Productivity Lost and Absenteeism*

* No significant differences between groups on any baseline score
Post-Intervention
The Tufts Work and Health Initiative on Depression

State Government RCT

Outcome Criteria

<table>
<thead>
<tr>
<th>Time Management</th>
<th>Physical Tasks</th>
<th>Mental-Interpersonal Tasks</th>
<th>Output Tasks</th>
<th>Productivity Lost</th>
<th>Days Missed</th>
<th>Absenteeism</th>
<th>Depression Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>10.9</td>
<td>46.8</td>
<td>31.6</td>
<td>34.9</td>
<td>34.0</td>
<td>47.1</td>
<td>42.8</td>
</tr>
</tbody>
</table>

March 6, 2012

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The WHI was superior to Usual Care on every metric

- The estimated annualized reduction savings in at-work productivity was $980 per participant.
- The estimated annualized savings in productivity cost due to absences was $5,062 per participant.
- The WHI resulted in a total estimated annualized savings in productivity of $6,042 per participant.

In addition,

- Depression symptom severity improved only in the WHI group.

The Work and Health Initiative Study suggests a multi-modal functional intervention is feasible and effective.

In a NIA-sponsored study, we are testing the program for middle-aged and older workers with depression.

Focusing on presenteeism is leading to new methods for helping employees to feel better and function better and paying off for employers who benefit from reducing a source of their productivity loss.
Question & Answer Session

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