Health & Productivity Management: Working to Improve Health In The Workplace

Presented by:
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Morgan Edwinson has a Master's degree in Interdisciplinary Studies, with a focus Health Sciences. Her undergraduate degree is in Patient Services and Relations.

Prior to her tenure at Sandia, Ms. Edwinson taught Health Sciences courses at Universities and Colleges in the San Francisco Bay Area, and worked in the corporate sector developing health promotion and wellness programs for major health insurance companies.

Ms. Edwinson was hired to Sandia National Laboratories, at the California site to design and launch their preventive health programs, which includes a full fitness facility, the Life Design Center. Ms. Edwinson specializes in researching current trends in health information and research within multiple disciplines and providing that information to consumers for the benefit of creating positive and healthy lifestyles.
Abstract

Recent research and experience shows that one’s environment and relationships play critical roles in determining chosen lifestyles and health behaviors. The workplace is an ideal environment for shifting cultures towards healthy lifestyles because it is a micro-culture where individuals spend most of their week’s waking hours, sharing common goals and purpose. This presentation will provide strategies and best practices for:

- Implementing health risk reduction programs in the workplace designed to identify and reduce health risks;
- Providing creative ideas for preventive health programming;
- Fostering healthy culture change in the workplace;
- Gaining leadership buy-in;
- Implementing strategies for program evaluation and cost analysis.

Key Words:
Health and Productivity Management
Preventive Health
Health Risks
Program Evaluation
Why Invest in Preventive Health Programs in the Workplace?

- Workplace programs can reach large segments of the population;
- Workplaces contain a concentrated group of people who share common purpose and culture;
- The infrastructure to communicate with workers is in place;
- Peer social and organizational supports are in place;
- Policies, procedures and practices can be introduced and healthy cultures can be fostered.
- Healthy resilient people have less illnesses and injuries and recover more quickly from illnesses and injuries.
- It makes sense for the Bottom Line
The Majority Of Chronic Disease Can Be Prevented Or Better Managed

- The Centers for Disease Control and Prevention (CDC) estimates...
  - 80% of heart disease and stroke
  - 80% of type 2 diabetes
  - 40% of cancer

...could be prevented if Americans did three things:

- Quit smoking/tobacco
- Start eating healthy
- Get in shape
The High Costs of Illness in the U.S.

Using Average Impairment and Prevalence Rates ($23.15/hour wage estimate)

Highest cost of illnesses to employer health plans: Hypertension, Heart disease, Emotional and Mental health, and Arthritis

(Goetzel, Long, Ozminkowski, et al. JOEM 46:4, April, 2004)
Excess Time Away From Work (TAW) Costs due to Excess Risks

- **Low Risk (0-2 Risks)**: $2,199
- **HRA Non-Participant**
  - Excess Costs: $840
  - Base Cost: $1,261
- **Medium Risk (3-4 Risks)**: $3,460
- **High Risk (5+ Risks)**: $5,520

Key Health Risks

Health Risk Reduction Targets

- Stress
- High blood glucose
- Overweight (by abdominal circ or BMI)
- Tobacco use
- High blood pressure
- Sedentary Lifestyle
- High cholesterol (TC, LDL, HDL/Ratio)
- Number of Risks (>3) (starting analyses with SNL/Albuquerque)
- Sleep Disturbance

Goetzel, Long, Ozminkowski, et al. JOEM 46:4, April, 2004
Preventive Health Program

Objectives

- Develop Health Risk Reduction program to identify health risks and improve health states among employees;
- Implement strategies to foster a healthy culture at the worksite;
- Provide employees time saving convenience and access to health and fitness resources;
- Provide employees easy access to healthy foods;
- Increase awareness and education through onsite wellness programming;
- Reduce short & long term health care costs
- Reduce productivity losses rates due to illness/injury;
- Enhance work life satisfaction among employees;
- Help to attract and retain a highly talented pool of employees.
Health Assessments

The Corner Stone to Preventive Health Programming

- Provide Onsite Health Assessments: Biometrics And Health Survey.

- Implement Incentive Strategy.

- Implement Stratified Follow-up Program: High, Medium, Low Risk (Change Takes 2-3 Interfaces).\(^1\)

- Implement Preventive Health Programming To Mitigate Major Population Risks.

- Consider Implementing Interdisciplinary Disease Management & Lifestyle Training, For High Risk Employees (Medical, Preventive Health, EAP, Physical Therapy).

Shifting Site Culture
Education & Leadership

- Grass Roots Strategies
  - Survey, interview, implement, report
  - Engage healthy mentors

- Leadership Involvement
  - Executive & manager outreach
  - Encourage communication about health and work life balance.
  - Engage participation in programs

- Creating a Health-Minded Site
  - Stairs
  - Walking paths
  - Getting involved with new building initiatives
- Onsite fitness facility and/or fitness classes
- Wellness kiosks
- Food service and vending strategies
- Healthy events

- Tobacco Free Environment

- Wellness Programming
Fitness Programming

- Fitness Assessments
- Consultations & Orientations
- Safety Briefings
- Site Fitness Resources: Cardio, Strength, Resiliency, Flexibility, & Balance.
- Group Challenges And Creative Activities To Maintain Interest And Fun Factor

- **Active For Life Health & Fitness Labs Challenge.** A 10 week health and fitness challenge with events and activities to get people moving and eating healthy. Seven (7) DOE Labs participated this year. We (Sandia Livermore) had 25% of our employees participate with 23 teams.
Healthy Foods

- Get Involved in Food Service Provider Contracting

- Vending Machines
  - 50% healthy (selecting standards).
  - Lower price for healthy foods and beverages

- Onsite Cafés and Cafeterias
  - Feature healthy food menu options & specials
  - Implement food labeling strategies

- Onsite Organic Produce Deliveries

- Posters and Pamphlets – Tips for ordering healthy

- Healthy Meeting & Celebrations Tips
Wellness Programming

- Stress Reduction Department Workshops
- Sleep Disturbance Assessments & Consultations
- Health Coaching
- Nutrition Consultations & Weight Loss Programs
- Wellness Brown Bag Speakers and Presentations
- Informational Brochures and Hand-outs
Program Evaluation & Reporting

How Do You Know If you Are Hitting the Target?

Key Metrics To Evaluate Program Effectiveness

- Participation Levels
- User Satisfaction Surveys
- Health Risk Reduction Outcomes
- Cost Analysis
- 3rd Party Program Evaluation
Metrics: Health Risk Category Results

The following table lists the yearly totals for the Risk Category Information. The savings and costs are based on the data entered by the user and on the Health Enhancement Research Organization (HERO) 1997 study\(^1\) showing a higher cost for an individual considered high-risk for a risk versus an individual considered low-risk. HERO identified seven risks that are used in this report.

<table>
<thead>
<tr>
<th>Risk Category</th>
<th># of Employees at Risk (Year 1)</th>
<th># of Employees Who Moved Out of High Risk (Over 6 Years)</th>
<th>Estimated Cost Associated with Each At Risk Employee Per Year</th>
<th>Projected Potential/Actual Cost Savings (Over 6 Years*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>9</td>
<td>5</td>
<td>$1,912</td>
<td>$32,504</td>
</tr>
<tr>
<td>High Blood Glucose</td>
<td>9</td>
<td>3</td>
<td>$2,449</td>
<td>$26,939</td>
</tr>
<tr>
<td>Weight</td>
<td>127</td>
<td>25</td>
<td>$2,016</td>
<td>$169,344</td>
</tr>
<tr>
<td>Tobacco Use</td>
<td>22</td>
<td>6</td>
<td>$1,204</td>
<td>$34,916</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>95</td>
<td>38</td>
<td>$1,098</td>
<td>$147,132</td>
</tr>
<tr>
<td>No Exercise</td>
<td>149</td>
<td>27</td>
<td>$1,197</td>
<td>$122,094</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>85</td>
<td>0</td>
<td>$767</td>
<td>$0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td><strong>$532,929</strong></td>
</tr>
</tbody>
</table>


\(^*\) The potential/actual cost saving projections assumes the participant reduced their risk during year 1 of their participation and remained at low risk during the time between tests.

\(^**\) Data for depression was not available due to the HRA that was administered. The estimated cost associated with at risk employees for depression is $4,074.
The following table lists the yearly totals for the Productivity Area Savings. The table shows the savings that can be obtained by using a population health management program. The savings and costs are based on the data entered by the user and the study on Health and Productivity Management by Dr. Ron Goetzel.²

<table>
<thead>
<tr>
<th>Year</th>
<th>Projected Potential/Actual Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-2004</td>
<td>$211,484</td>
</tr>
<tr>
<td>2004-2005</td>
<td>$285,271</td>
</tr>
<tr>
<td>2005-2006</td>
<td>$385,203</td>
</tr>
<tr>
<td>2006-2007</td>
<td>$519,995</td>
</tr>
<tr>
<td>2007-2008</td>
<td>$701,267</td>
</tr>
<tr>
<td>2008-2009</td>
<td>$946,313</td>
</tr>
<tr>
<td>Total</td>
<td>$3,049,533</td>
</tr>
</tbody>
</table>

Life Design Center Preventive Health Programs – Metrics

PROGRAM COSTS
The table shows the costs of the program from 2003 to 2009 based on the data entered.

* Costs are estimates based on the information and costs entered into the program. Actual prices may vary depending on participation rates and program components selected.
** An annual Program Cost of $278,000 per year for 7 years was used in this analysis, which includes HRA/Screening expenses, incentives/giveaways, and operating costs.

<table>
<thead>
<tr>
<th>Description of Costs</th>
<th>2003 - 2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligible</td>
<td>581</td>
</tr>
<tr>
<td>Participation Rate</td>
<td>100%</td>
</tr>
<tr>
<td>Participants</td>
<td>581</td>
</tr>
<tr>
<td>Total Program Cost*</td>
<td>$1,946,000</td>
</tr>
</tbody>
</table>

BREAK-EVEN ANALYSIS
The table below shows the percentage decrease needed in health care costs to break even with the costs of the population health management program. The table shows the decrease needed to break even based on the values shown.

<table>
<thead>
<tr>
<th>Net Yearly Program Costs</th>
<th>Reduction in Yearly Health Care Cost Growth Needed to Break Even</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003-2009 Net Costs</td>
<td>$1,946,000</td>
</tr>
</tbody>
</table>

Average health care expenditure: $8,750
Estimated yearly growth rate for health care expenditures: 12%
Number of individuals eligible: 581
Life Design Center Preventive Health Programs – ROI Estimate

The table below shows the return on investment (ROI) for the program over the multi-year period. Based on the projected savings and net program costs, the net savings have been discounted to show the present value of the savings over the multi-year period.

<table>
<thead>
<tr>
<th></th>
<th>2003-2009</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated High-Risk Savings</td>
<td>$532,929</td>
</tr>
<tr>
<td>Estimated Productivity Area</td>
<td>$3,049,533</td>
</tr>
<tr>
<td>Savings</td>
<td></td>
</tr>
<tr>
<td>Estimated Total Savings</td>
<td>$3,582,462</td>
</tr>
<tr>
<td>Less: Estimated Net Program</td>
<td>$1,946,000</td>
</tr>
<tr>
<td>Costs</td>
<td></td>
</tr>
<tr>
<td>Net Savings</td>
<td>$1,636,462</td>
</tr>
<tr>
<td>Yearly Benefit-Cost Ratio</td>
<td>1.84</td>
</tr>
</tbody>
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