Physical Activity Promotion at the Workplace: Design Matters

IOM Physical Activity Workshop

Obesity Solutions Roundtable

April 13-15, 2015
Outline

- The changing workplace
- The need for physical activity and movement
- Organizing framework
- Design principles for best practice programs
- Case example
- Discussion
The Workplace is Changing...

Among other important shifts,

• Technology is changing the energy requirements of the job
• Sedentary job types create positive energy balance
• Technology enables employees to work remotely
• The workforce is aging and people are working longer prior to retirement
• Media and communications technologies vary widely in reaching workers/families to promote PA
Work is Changing...

On-the-job energy expenditure has reduced over the past 50 years by ~100 kcal/day  
Workers are Changing...

Obesity levels of the U.S. workforce have ~doubled over the past 30 years


Figure 3
Employee obesity prevalence over time, based on nationally representative study populations.
The Need for Physical Activity and Movement

- Physical activity is associated with 4.7% lower health care charges per active day per week
  \((\text{Pronk, et al. JAMA, 1999})\)

- Physical inactivity, overweight, and obesity combined were associated with 23% of health plan health care charges and 27% of national health care charges
  \((\text{Anderson, et al. PCD, 2005})\)

- Based on a systematic review of population-level physical activity interventions, the most efficient programs are those that increase walking and biking. Cost effectiveness indicators:
  - community rail-trails ($0.006/MET-h)
  - Pedometers ($0.014/MET-h)
  - School health education ($0.056/MET-h)
  \((\text{Laine, et al. AJHP, 2014})\)
Making healthy choices easy choices

Health Potential

Individual Effort

Environmental (physical, psychosocial) and Policy Interventions (Public, organizational, etc)

What Works to Promote PA at the Workplace?

• Building PA into the workday
  – Workflow design, PA “booster” breaks, walking meetings

• Building PA into the physical workplace
  – Staircases, sit-stand devices, activity-friendly campus, incentives, leadership, etc.

• Creative use of technology
  – wearable PA tracking devices, online resources

• Promotion of active commuting
  – Bicycle-to-work programs; public transportation

• Building a PA-friendly work culture
What Works to Promote PA at the Workplace?

- Based on systematic reviews:
  - pedometer programs can increase daily step count
  - active travel (bike/walk to work) can increase daily PA
  - Workplace coaching can increase daily PA

- Barriers to PA occurs at multiple levels of influence—program design should use ecological or multi-level models

- Recommendations for PA promotion at the workplace include those from the National Physical Activity Plan [NPAP]:
  - Comprehensive, multi-component, socio-ecological model based
A Translational Framework for Program Design

<table>
<thead>
<tr>
<th>Levels of Influence</th>
<th>Possible</th>
<th>Simple</th>
<th>Socially rewarding</th>
<th>Financially rewarding</th>
<th>Personally relevant</th>
<th>Organizationally relevant</th>
<th>Community connected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inter-Personal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Make Being Active...**

- Exceptional Customer and User Experience

**Outcomes**

Health, Productivity, Financial ROI

Identification of Best Practices

• Review of 28 scientific and “grey” literature, industry reports, and consensus statements

• Generated 44 best practices, such as:
  – Organizational commitment to a healthy culture
  – Adequate resourcing
  – Meaningful and relevant incentives
  – Wellness champion network

• Some are tactics, some are approaches, some are strategies...

• *What are the design principles we should pay attention to?*
Best Practice Program Design Principles

• Design for success
  1. Leadership
  2. Relevance
  3. Partnership
  4. Comprehensiveness
  5. Implementation
  6. Engagement
  7. Communications
  8. Data-driven
  9. Compliance

Based on 44 Best practices

Best Practice Program Design Principles

1. Leadership
   - Setting vision; assign accountability; ensure structural support/resources; engage leaders; set policy

2. Relevance
   - Address needs and interests that optimize participation; linked to long-term engagement

3. Partnership
   - Integration with multiple stakeholders (internal and external)
Best Practice Program Design Principles

4. **Comprehensiveness**
   - Meet the definition of comprehensive programs as per Healthy People 2010 (health education, supportive environments, integration into the company’s structure, linkage to other programs such as EAP, screenings)

5. **Implementation**
   - A planned, coordinated, and fully executed work plan

6. **Engagement**
   - Promotion of respect, trust, and co-ownership; leveraging company culture; use of incentives that optimizes intrinsic motivation; environments that make healthy decisions the easy choice
7. **Communications**
   - Use of a formal communications strategy linked to goals and objectives; multiple delivery channels and modes

8. **Data Driven**
   - Insights based on data and ongoing measurement and monitoring; continuous improvement approach; data security, data integrity

9. **Compliance**
   - Meeting regulatory standards and requirements (HIPAA, ADA, GINA, State law, etc.); data confidentiality
Case Example: Building Vitality at IBM

- PA and fitness as part of an overall employee well-being effort
- An online PA resource called the “Virtual Fitness Center” (VFC)
- The VFC serves as an interactive behavior change tool with goal setting, activity logging, team-based campaigns, progress reports, coaching access, and incentives to participate

Case Example: Building Vitality at IBM

• Results
  – Year 1 participation: ~16,000 users (12.5%) (no incentive)
  – Year 2-4 participation: >80,000 users (63%) (incentives added)
  – Improvements among VFC users in:
    • PA-related risks (52%), health perceptions, life satisfaction, smoking, body weight, overall risk status
  – Average annual health care costs among VFC users between 2003 and 2005 increased by $291/yr compared to $360/yr for non-users
  – Significantly lower inpatient hospital costs, heart disease costs, and costs to treat diabetes among VFC users

Conclusions

• The workplace is a complex and dynamic environment
• PA and movement enhance worker performance and support positive business outcomes
• PA promotion should be an integral part of an overall well-being strategy
• Organizing frameworks and principles for best practice program design are available
Thank You!