



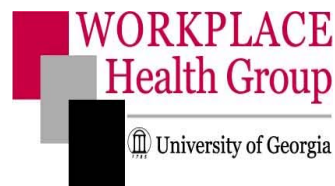
The LightenUP Study

Creating a Healthy Culture

Environmental Approaches to Obesity Prevention and Management at The Dow Chemical Company

Corporate Health Improvement Program (CHIP) Fall Meeting

October 4, 2007

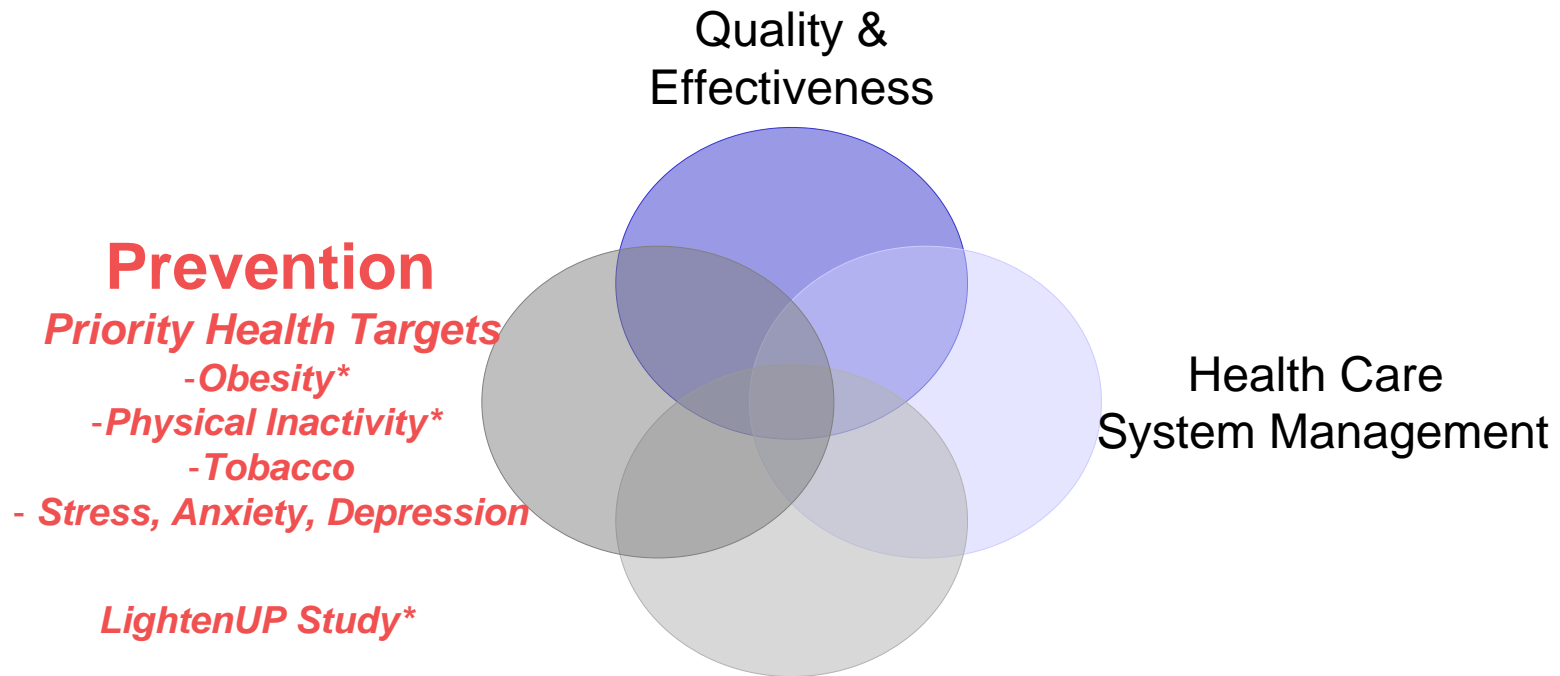


Dow Health Strategy

Vision

Optimize health, human performance, and the long-term value for Dow by offering an array of health programs and services for employees, retirees, and dependents as part of being an employer of choice.

Dow Health Strategy Vision Elements



Advocacy

aligned incentives

communication

A Strategic Approach to Building a Culture of Health at Dow

- "I believe we need a sustained focus on prevention to maintain and improve the health of our people. Prevention has the power to make a real and lasting difference in our individual quality of life...
- ...Our analysis shows that prevention can improve both our direct and indirect health related costs. Our profit potential is inextricably linked to the capability and performance of our employees....
- ...We have recently strengthened our commitment to this effort by adopting a strategic approach to **building a culture of health** with **prevention** as a major pillar in our overall plan."

Andrew N. Liveris, President and CEO

LightenUP Research Project Objectives

- Design and demonstrate the feasibility of implementing *moderate* and *high intensity* **environmental/ecological** interventions directed at overweight and obesity prevention at The Dow Chemical Company.
- Test the multifaceted hypothesis that, relative to individual interventions, environmental interventions:
 - reduce the prevalence of obesity and overweight,
 - reduce the prevalence of other weight-related risk factors,
 - improve health, and reduce healthcare utilization and expenditures, and
 - improve an array of indicators known to be related to employee productivity.
- Test whether savings outweigh program expenses, thus producing a positive return on investment.

Study Design and Methods

- Quasi-experimental:
 - Moderate versus high intensity treatment/pre-post design
 - Five-year study with three data points: **baseline (2006), year 1 (2007),** and year 2 (2008)
- Intervention sites, matched then randomly assigned to moderate- or high-intensity
- Number of eligibles: 10,191 (at 12 sites)
- Other company sites in US providing benchmark/comparison data

Lighten UP Evaluation Overview

- **5-Year Study:** September 30, 2004 – September 30, 2009
 - **Year 1:** Planning and formative research - **COMPLETED**
 - **Years 2-3:** Intervention program implementation directed at obesity and overweight at the worksite – **COMPLETED**
 - **Year 4-5:** Final measurement and evaluation- *IN PROGRESS*
- **Intensity Levels:**
 - Dow worksites are receiving environmental/ecological interventions at varying levels of intensity
 - Intervention sites (moderate & intense): Texas and Louisiana
 - Control sites: New Jersey, West Virginia, and Louisiana

Moderate and Intense Sites: Required Interventions

- **Access to healthy food choices**
Cafeterias, vending, catering (Dow meetings, overtime meals)
 - Education
 - Labeling
 - Promotional Pricing
 - Communications/Prompts/Messaging
- **Access to physical activity**
 - Weight management tracking program: "Why Weight" Challenge
 - Walking paths/routes
 - Communications/Prompts/Messaging
- **Work group healthy culture focal points**
 - Communication/Education
 - Intervention promotion and implementation
 - Interventions advocate
 - Employee recognition identification
- **Employee recognition**

Intense Sites (Only): Required Interventions

- **Site health goals and work group alignment**
 - Participation goals: health screenings, weight management tracking program, leadership learning and training
 - Work group healthy culture focal points expectations:
 - Weight management program—track progress and report
 - Promote and encourage work groups to order from healthy choice meeting menu and promote healthy cupboards
 - Work groups report on goals, supporting site leadership reporting (see below)
 - Implementation of all interventions defined for the site
- **Site leadership reporting to senior corporate leadership**
- **Leadership learning and training:**
 - Health is a priority and benefit to Dow, leadership behaviors help build a culture of health
 - Provide leaders with information about health-related policies, services, programs, resources

Intense Sites (Only): Required Interventions, cont.

- Rewards and Recognition:
 - Site leadership
 - Cross-discipline teams
 - Healthy culture focal points and work groups

*Moderate- and high-intensity environmental interventions complement existing individually-focused interventions already in place at Dow

Optional Interventions

- Employee reimbursement/subsidy to community fitness facilities
- Healthy food cupboards/snacks in work group areas
- Scales in work group areas

Measures and Data Sources

- Health risk of employees—overweight/obesity, diet/nutrition, exercise/physical activity, and other behavioral risk factors: Collected through individual HRAs and biometric screenings.
- Healthcare utilization and costs: Collected via health plan insurance claims and enrollment data.
- Participation in risk reduction programs offered by Dow Collected routinely at the sites.
- Absence from work: Collected for hourly and non-exempt employees using self-report measures.
- Functional health: Collected via the SF-12 Health Survey.
- Presenteeism at work: Collected using the Work Limitations Questionnaire (WLQ)
- Organizational Climate Tool (*Leading by Example*)
- Environmental Assessment Tool (*EAT*)
- Employee Satisfaction Survey



Health Screening and HRA Participation (Times 1 & 2)

	Intense		Moderate		Control	
T1 = 2006 T2 = 2007	T1	T2	T1	T2	T1	T2
Biometric Screening						
Eligible Employees	N=6,620	N=6,668	N=1,398	N=1,386	N=2,267	N=2,123
Respondents	N=2,437	N=2,041	N=496	N=399	N=652	N=646
% Participation	36.8%	30.6%	35.5%	28.8%	28.8%	30.4%
HRA						
Eligible Employees	N=6,620	N=6,668	N=1,398	N=1,386	N=2,267	N=2,123
Respondents	N=3,474	N=2,885	N=751	N=606	N=985	N=929
% Participation	52.5%	43.6%	53.7%	43.3%	43.4%	41.0%

Health Screening & HRA Participation (T1- T2) Cohort Population

T1 = 2006 T2 = 2007	Intense	Moderate	Control
Biometric Screening			
Eligible Employees	N=6,610	N=1,363	N=2,218
Respondents	N=1,362	N=257	N=410
Participation Rate	20.1%	18.9%	18.5%
HRA			
Eligible Employees	N=6,610	N=1,363	N=2,218
Respondents	N=2,102	N=457	N=626
Participation Rate	31.8%	33.5%	28.2%

Summary of Results (T1 – T2)

To date, no statistically significant biometric findings to report, however.....**positive improvements in leading indicators** (behavioral measures) related to building a culture of health:

- Increased employee physical activity levels and improved nutrition
- Increased leadership support for health promotion
- Increased employee and leader awareness and education for importance of improved health
- Increased communications encouraging healthy eating and physical activity

Summary of Results (T1-T2), cont.

- Environmental supports for healthy eating (i.e. healthy options in vending machines, cafeterias and catering) significantly improved
 - Healthy culture focal points at intervention sites are engaged in LightenUP activities and see their role as important
 - Positive Leadership feedback and “engagement” resulting from Leadership Learning and Training
- ❖ With time, the hypothesis is that these leading indicators will lead to improvements in biometric measures.

Dow Employee Communication (090607)

- The LightenUP study team is optimistic about the ability to improve health behaviors through organizational interventions at the worksite. The four-year health study, funded by the U.S. National Institutes of Health (NIH) to evaluate and promote weight management and physical activity in the worksite, is in the third year. Twelve U.S. Dow sites were selected to participate: three control sites, four moderate and five intense intervention sites.
- Mid-point progress is beginning to show improvements in health-related behaviors such as an increase in physical activity, better nutrition habits, increasing leadership support and increasing employee awareness, among other things. LightenUP results will be incorporated into Dow's global health strategy and leveraged to sites globally.
- "Over the course of a lifetime, poor health choices can often become habits. Providing and supporting access to healthy options at the worksite creates opportunities for employees to lead a healthy lifestyle," said Karen Tully, global health promotion leader.

Employee Communication, cont.

- Over 3,000 employees are engaged in LightenUP activities. The following is a comparison of 2006 to 2007:
 - Intense and moderate sites show an improvement in the perception of cultural support for adopting and encouraging healthy lifestyles
 - Environmental support for healthy eating (e.g., healthy vending, cafeteria and catering options) significantly improved
 - Increased communications encouraging healthy eating and physical activity
 - Increased site leadership support for health promotion

Employee Communication, cont.

- The control sites play an important role in the study because their contributions to the evaluation process will help determine what health program efforts are effective and have an impact in the workplace. Evaluation between control and intervention sites will be reported in 2008.
- The nine intervention sites are experiencing exciting successes and there is positive energy among employees, suggesting that Dow's commitment to building a healthy culture is growing.
- "LightenUP is a great initiative," said Rose Wagner of Freeport, Texas. "I am experiencing great results from implementing 'baby step' changes and maintaining my routine of improved nutrition and increased physical activity. All of my numbers have improved – BMI (Body Mass Index), cholesterol and blood pressure, not to mention weight loss! Keys to my success and practical tips: eliminate fried foods, choose healthier snacks including foods higher in fiber and do some form of regular exercise – walking is great!"
- NIH selected Dow to participate in cooperation with other leading health industry experts: Cornell University, The University of Georgia, Thomson Healthcare, and the National Business Group on Health.
- See a full summary of the results.

Study Results

Study Results - 2006 Baseline vs. 2007

Midpoint progress is beginning to show improvements in health-related behaviors:

- Both intense and moderate sites showed improvement in the perception of organizational support for health promotion, while at control sites perception of support declined.
- Environmental supports for healthy eating improved.
- Environmental supports for physical activity remained unchanged, except for the introduction of walking paths at treatment sites.
- Messages encouraging healthy eating and physical activity increased.
- There was heightened awareness and education of leaders and employees in terms of importance of employee health.
- Site leadership support for health promotion has increased.
- Healthy Culture Focal Points at intervention sites are engaged in LightenUP activities and see their role as important.
- Over 150 employees have been recognized for making significant positive health behavior changes or for assisting others in achievement of health goals.
- Time constraints were frequently mentioned as barriers to LightenUP participation.
- There were no statistically significant differences in trends of biometric values for the moderate versus control sites. Evaluation of comparisons between control and intervention sites will be reported in 2008.
- Final LightenUP results will be incorporated into Dow's global health strategy and leveraged to sites globally.

Building a Healthy Culture at Dow

Implementation Critical Success Factors

- Alignment to Dow's Health Strategy
- Sensitivity to organizational processes and timelines when planning and implementing
- Engagement/support at ALL levels, i.e. Leadership and Grass Roots (Employee Champions i.e. Healthy Culture Focal Points)
- Focused efforts to meet existing employee interests and needs at the point of impact (plant/dept "life:" direct supervision, plant/dept focal points, employee involvement (peer nomination for recognition)
- Strong emphasis/communication that interventions are voluntary
- High trust and confidence in Health Services organization by employees and leadership

Leadership
Supported –
Employee
Driven

Alignment to
Current Processes

Dow Health Strategy Prevention Element
LightenUP Study Implementation
Key Stakeholders

Senior Corporate Leaders

Site Leaders

Site Cross Discipline Teams

DHS Steering Team

Site Leadership Teams

DHS Implementation Team

Health Services

Work Group Teams

Corporate Communications

Site Communications

Healthy Culture
Focal Points

Health Services Mgt. Team

Vendors

Facility Management

***Integration and Engagement
at all Levels***

Study *Implementation Learnings and Challenges*

- Understanding and sensitivity to a **dynamic** organizational culture and “real life” situations
 - Leadership Changes
 - Mother Nature (Hurricanes/Weather)
- Balancing study design/methodology and needs with organizational processes and timelines
- Consideration for adequate resources at all points of planning and implementation
- ❖ *Time constraints were frequently mentioned as barriers to LightenUP participation*

Current and Future Study Activities

- **Ongoing Interventions**
 - Intervention phase complete in Spring 2008
 - Bolstering of intervention activities
 - New, improved communication strategy
- **Ongoing Process Evaluation**
 - Monitoring work group alignment with goals
 - Examining employee awareness of health promotion activities
- **Next Steps**
 - Focused effort on intervention implementation & leadership engagement
 - Preparing for final round of HRA/screening data collection (Jan-March 2008)
 - Dissemination efforts
 - Follow-up on process evaluation findings
 - Post study planning to sustain and enhance efforts – Process development, implementation, evaluation and leveraging to other Dow locations globally

Questions and Discussion