



Weight Control and the Workplace

EMPLOYERS AND HEALTH PLANS EXPLORE THEIR TOUGHEST HEALTH IMPROVEMENT CHALLENGE

By Laurel Pickering, MPH; Jasmine Macies; Erika Flores Uribe, MPH;
Sadiqa Mahmood, BDS, MPH; Carlos Duarte, MD, MPH; Jeremy Nobel, MD, MPH

ENGAGING EMPLOYERS IN SOLUTIONS TO THE PROBLEM OF OBESITY

The national epidemic of obesity presents significant problems for employers. Obesity and its related comorbidities contribute to lost productivity, wage replacement, and increasing medical costs, all of which impact a business's bottom line. Can employers play a role in mitigating these negative effects? While wellness programs and innovative benefit designs address the growing problem of obesity, the question of how to provide effective help to overweight workers is a sensitive and challenging issue, and solutions remain to be discovered.

OVERWEIGHT EMPLOYEES:

\$73.1 Billion
Cost to employers each year

Northeast Business Group on Health conducted a structured roundtable with employers and health plans to explore their perspectives on obesity's impact on employee health and costs, determine its priority among a range of other health issues, investigate current strategies and those being considered, and identify potential opportunities. The roundtable was held in March 2013 in New York City, with 13 organizations participating, including large employers and national and regional health plans.

The roundtable began by exploring how obesity burdens both employers and employees and progressed to an exchange of ideas about how new approaches to prevention and effective management can contribute to improved health, reduced risk for future illness, and ultimately, lower costs.

As roundtable participants were conducting this exploration, the American Medical Association (AMA) officially recognized obesity as a disease. This has tremendous implications for better identification of individuals

who could benefit from weight control programs and the engagement of physicians.

Specifically, most employers use the care management programs offered by health plans, their critical partners, to address chronic illness. Almost all those programs include weight management as part of health improvement, but rarely do they focus on weight control exclusively. The AMA's position on obesity as a disease could lead to the development of targeted weight control programs.

This report examines the challenges obesity poses to the workplace and summarizes key themes that emerged as employers and health plans at the roundtable shared issues and ideas. Participants

noted the problems and opportunities presented by existing approaches, and key considerations were identified for designing successful future approaches.

Northeast Business Group on Health strongly recommends further investigation of high-priority opportunities for reducing the negative effects of obesity on the workplace.

A worsening national epidemic brings rising costs

Obesity is an epidemic in the United States. More than one-third of American adults are obese, and the incidence continues to rise. Currently, health care spending due to obesity is as high as \$210 billion (in 2008 dollars), which is approximately 21% of total health care spending. If indirect costs are included, spending costs due to obesity are as high as \$450 billion.¹ According to the CDC, chronic diseases such as arthritis, diabetes, and heart disease, which are linked to obesity, account for 75% of national health care expenditures.² More specifically, 95% of diabetics are type II diabetics, and

of those, 55% are obese. Diabetes care costs the nation \$147 billion annually. In addition, each year cancer costs the United States \$200 billion and 4.4–7.5% of new cancer cases can be attributed to obesity. The CDC projects, if trends continue, that obesity rates will double by 2030 and rise even higher in some states, increasing expected spending by \$48–\$66 billion.^{1, 2}

Obesity's toll on the workplace

Overweight employees cost their employers \$73.1 billion a year and file twice the number of workers' compensation claims. The average medical claims cost per 100 employees is \$51,019 for obese employees versus \$7,503 for the non-obese—a staggering 7.3 times differential.³ Obese men take six more sick days a year than non-obese men; obese women take 9.4 more days a year than their non-obese counterparts. The resulting obesity-related absenteeism costs employers about \$6.4 billion a year.⁴

Presenteeism—coming to work despite illness—which often results in reduced productivity, has been shown to be the single largest cost driver associated with obesity. The productivity-related costs of presenteeism more than double the medical expenses for obese employees compared to non-obese employees.⁴ For a company of 10,000 employees with an average annual salary of \$50,000, presenteeism can cost employers between \$7 million and \$8 million per year.³

The workplace as the logical target for weight control strategies

According to the Bureau of Labor Statistics, employed Americans spend almost nine hours a day working—about 55% of waking hours.⁵ That means most of their time is spent where employers have some access to them and can exercise some level of influence. A majority (67%) of employers identified “employees’ poor health habits” as one of their top three challenges to maintaining affordable

health coverage.⁶ That has led employers to try to influence healthy behaviors both to keep health care affordable and to contribute to employees' long-term health and well-being.

Many employers have begun addressing poor habits leading to obesity among their employees by adopting health promotion and disease prevention strategies. These range from changes to the work environment, such as providing healthy food options in the cafeteria, to comprehensive interventions that support employees in adopting and sustaining healthy lifestyles. In addition to the immediate stake employers have in reducing medical expenses and improving health among employees, extending wellness habits into the home can lead to lower costs for dependents, improved community health, and a more productive workforce now and in the future.⁷

OVERWEIGHT EMPLOYEES:

2X the number of workers' comp claims than other employees

Roundtable employers indicated that while obesity and weight management are top priorities, it is difficult to effect change in these areas. Despite the challenges, however, intervention efforts have been successful by recognizing there is no single solution but that approaches can be shaped to fit each individual's needs. Employers are also beginning to embrace alternative interventions to weight control such as pharmacological therapies, bariatric surgery, and innovative technology approaches, in order to engage more of their population.



CURRENT WEIGHT CONTROL INTERVENTION STRATEGIES IN THE WORKPLACE

Current intervention strategies fall primarily into four categories: behavioral, pharmacological, surgical, and provider-focused.

Behavioral interventions

Behavioral programs that combine education with ongoing motivational support have demonstrated success in both face-to-face and online settings. A typical comprehensive weight control program includes biometric screenings, risk assessments, educational materials, access to fitness centers, nutrition classes, lifestyle and behavioral coaching, mental and emotional health services, disease management programs, and most recently, group fitness challenges.⁶ Studies have shown these wellness programs can improve health and lower costs, which has stimulated increased interest in the business community. Research has found that for every dollar invested in wellness programs, medical costs fall by \$3.27 and the costs of absenteeism by

\$2.73.⁸ Additional benefits of wellness programs include improved employee morale and retention as well as increased productivity and a decrease in the number of sick days by about 25%.⁹

Lifestyle Modification

Many employers offer lifestyle modification programs, which focus on diet, exercise, and behavioral therapy, through their health plans and wellness vendors. They also host onsite programs such as Weight Watchers and create environments that support healthy eating and exercise. Some employers have implemented food policies that provide healthy options in the cafeteria and/or vending machines and ban junk food, like cookies, from internal meetings. In terms of exercise, some employers offer onsite fitness facilities and fitness classes, provide discounts to gyms, and encourage walking

during breaks and standing or walking meetings. A growing number of employers offer treadmill work stations and/or standing desks. Behavioral therapy can be conducted in individual or group settings and includes goal setting, strategies for overcoming day-to-day barriers, and keeping a food diary. Johnson & Johnson Family of Companies has one of the longest running wellness programs, first implemented in 1979, which includes many of the offerings mentioned above such as on-site gyms, Weight Watchers, and health coaching. A study of this wellness program showed that health promotion programs can lead to savings on costs as well as population health benefits.¹⁰

Competition

Employers are introducing competition—commonly known as “gamification”—in their programs aimed at promoting health. Gamification uses game-like features in non-game situations to motivate behavior change.¹¹ Sprint employees, for example, participated in a 12-week “Biggest Loser” competition to lose weight and get in shape, with teams of employees across the country competing against each other. As a result of the Get Fit challenge, participants lost an average of 8.4 pounds and a total of more than 20 tons.¹² Similarly, a local health system, North Shore-LIJ, sponsored a “Walk to Paris.” Teams that completed the estimated 7.2 million steps it would take to walk from New York to Paris were entered into a drawing to win an all-expenses-paid trip to that European capital.

Technology

Cell phones, computers, and even virtual games seem to be at the fingertips of almost every American. Their technology may prove to be one of the most effective means of modifying behavior and combating obesity in the



Overall, the prevalence and cost of obesity make it a leading concern for employers and therefore a critical area to target for intervention. The employers in the roundtable indicated that obesity was their single biggest health issue and therefore a top priority for seeking solutions.

workplace. Effective models and devices enlisted to modify behavior will be easy to use and accessible, less costly than current alternatives, and sustainable. New technologies being implemented to assist in weight control include smart phone applications (apps) and social media. Commonly used apps provide self-monitoring tools that track users' meals and exercise throughout the day to encourage healthy choices through awareness. According to current data, cell phone and telehealth technology, which promote self-monitoring, can help in weight reduction, and studies have shown technology can improve a user's adherence to a weight loss program, resulting in greater weight loss than would otherwise occur. Telehealth technology includes devices like home-based digital scales, which are linked to patient portals, and virtual coaching.¹³ Key considerations for expanding the use of technology to promote health include making tools more user-friendly and adaptable with smart phone technology, ensuring ease of personalization, facilitating real-time connectivity with health providers, and developing a return-on-investment business case.

Incentives

Employers are using incentives that either reward or penalize certain behaviors to encourage employees to engage in managing their own health. Penalties for not participating in wellness programs are less common than rewards for positive engagement;

according to a RAND workplace wellness study, 84% of employers use rewards rather than penalties.⁷ Incentives can include cash or other financial incentives and novelty items, including t-shirts and coffee mugs. Incentives have most often been used to encourage participation in programs, including completing a health

risk assessment, participating in a disease management program, joining a weight loss program, or completing a smoking cessation program. However, while RAND found that employers are three to four times more likely to reward participation in programs rather than rewarding behavior change or outcomes, outcomes-based incentives are growing in popularity.⁶ These results-based incentives target sustained improvements in population health by setting goals and standards and then rewarding employees who meet these standards. Some of the most commonly used measures are weight, blood pressure, cholesterol, and tobacco use.¹⁴ Evidence from the peer-reviewed literature suggests that targeted incentives can help influence behaviors in the short term and increase participation in wellness programs.^{15, 16} Employers who choose to implement outcomes-based incentives should be aware of restrictions under HIPAA and HHS regulations.

Pharmacotherapy

Previously, drug therapies for weight control have been limited. However, in recent months, new medications, recognized as potentially important, have become available, which could expand the options for employer-sponsored weight management programs. Coverage for weight control

drugs is dependent on health plans, and many require approval before coverage is granted.¹⁷ Despite availability of new and effective products, barriers and obstacles to access may be significant issues. The roundtable recommended a review of access considerations, including formulary coverage and pre-authorization, to better understand issues that may need to be addressed. Particularly in light of new medication options, education on these approaches and direct communication to employees and dependents who may benefit appear worthy of consideration. Further research on evidence-based guidelines as well as cost-benefit analysis for pharmacotherapy are warranted and could lead to promising options for employee populations. Employers in the roundtable indicated that they were interested in learning what role medications can play in improving employee health, including weight control. Employers may work with plans and PBMs to cover these therapies as part of more comprehensive strategies.

OVERWEIGHT EMPLOYEES:

More sick days per year than other employees—

+6 days for men

+9.4 days for women

Surgery

Bariatric surgery has been shown to be effective in weight reduction in those who are morbidly obese, defined as having a Body Mass Index (BMI) greater than 35.¹⁸ BMI is calculated by dividing an individual's height by his or her weight. Bariatric surgery has also demonstrated long-term benefits in decreasing or in some cases reversing metabolic disorders such as diabetes or dyslipidemia. One study showed diabetes resolution in 78% of subjects and improvement or resolution in 87% of subjects.¹⁹ In

addition, bariatric surgery has shown a mean pharmaceutical utilization rate decrease over a two-year period from 10.5 prescriptions per person per year to 9.0.²⁰ In these studies, the greatest absolute cost reductions were observed in therapies used to treat diabetes and cardiovascular disease.²⁰ Bariatric surgery often has a high upfront cost—about \$24,500 in the United States—but has shown cost reductions mirroring reductions in prescription drug use, hospital visits, and physician visits related to comorbidities.²¹ For employees who do not benefit from behavioral or pharmacological interventions, but are greatly affected by morbid obesity, surgery may be considered an appropriate alternative.

Employers in the roundtable noted that they are not entirely convinced that bariatric surgery is the right solution in most cases. Complications from bariatric surgery have created some of the highest-cost cases for employers, and the ROI is still being studied. However, employers endorsed using centers of excellence for bariatric surgery to assist in minimizing complications. Further calculations and consideration of ROI, as well as the use of centers of excellence to reduce complication rates related to bariatric surgery, seem warranted for this approach to obesity treatment.

Provider strategies

Representatives of health plans who participated in the roundtable indicated that efforts also need to be directed toward providers. Physicians don't currently code for BMI, which makes it difficult for plans to identify people who may be the best candidates for available weight management programs. While the AMA's recognition of obesity as a disease does not directly influence coverage for prescription drugs or the stigma attached to obesity, the AMA anticipates a change in the way the medical community deals with this issue. The hope is to open the door for more treatment options for obese patients and build a better understanding of this complex disease, while at the same time lowering rates of

CHALLENGES TO WEIGHT CONTROL IN THE WORKPLACE

Stigma

Although obesity has been recognized as a complex condition affecting increasing numbers of people, there is still a stigma attached to being overweight or obese in the United States. In order to have more frank conversations about weight and healthy habits, obesity must first be destigmatized and treated like any other health issue so that solutions unique to each individual can be identified. To change the culture around obesity, it will be important to focus on healthy lifestyles and not just weight control. And to shine a more positive light on employee efforts, terms such as "health coaches" could replace "weight loss coaches." Nevertheless, identifying and engaging candidates for weight loss and weight control programs will remain tough challenges.

cardiovascular disease and type II diabetes.²² The AMA's recognition follows the Centers for Medicare & Medicaid Services (CMS) decision in 2011 to pay physicians for obesity screening and behavioral counseling for obese Medicare patients. The CMS recommends measuring and recording BMI as well as other data for these patients, followed by counseling for diet and exercise, known as Intensive Behavioral Therapy. Broadening the effect of the CMS decision, the preventable services benefit of the Affordable Care Act (ACA) will require most insurance companies to cover obesity screening and counseling.¹ This new legislation will play an important role in increasing BMI assessment and recording for more patients.

Identifying individuals who could benefit from weight management programs within the claims system is critical, since the aim is getting them to use available resources. But a health

Engagement

While employees may say they find weight control programs in the workplace helpful, most employers cite weak engagement as the biggest obstacle to changing their employees' health risk behaviors. Answering key questions such as "What's in it for me?" and "Where do I sign up?" may seem elementary but is crucial for engagement.²³ Organizations with dedicated staff to promote wellness initiatives generate greater participation. One of the most cost-effective ways to enhance patient engagement is having employees meet one-on-one with a benefits provider. In fact, 96% of employees who meet individually with benefits counselors say it improved their understanding of their benefits package.²³ Lack of knowledge and information about health care resources affects participation, and this lack is significantly higher among younger workers (64%), less educated workers (64%), and lower-paid workers (70% of those earning less than \$35,000 a year).²³ If significant numbers of employees fail to engage, employers won't enjoy the benefits of improved lifestyle behaviors, lower health care claim costs, and improved productivity.²³

plan representative at the roundtable indicated that training physicians in how to code for BMI and counsel an overweight patient was the most difficult program challenge; in order to bring physicians on board, the plan offers them CME credits and a healthy dinner! With the introduction of new payment models—such as Patient-Centered Medical Homes and Accountable Care Organizations—that incentivize providers to get and keep people healthy, it will become more common for physicians to work with patients on losing weight and provide resources to help them do so.



OPPORTUNITIES: WHERE CAN EMPLOYERS GO FROM HERE?

Using an evidence-based process with a focus on outcomes and return on investment could help employers determine which weight control interventions are worth considering. Roundtable contributors defined these elements of successful programs:

58% of employees say incentives are very important for participation

Leadership Support

The organizational culture to support weight control initiatives needs to be established at the executive leadership level. Leadership support is essential for buy-in from employees as well as for equipping programs with the resources needed for successful interventions. Senior managers need to consider wellness a priority in order to shift organizational culture.⁶ Change efforts that are institutionalized by leadership have proven most effective and sustainable.

Employee Engagement

Weight control initiatives work only when the employees most in need

participate, and incentives are therefore perceived as a key strategy for engaging workers. Almost 58% of employees say incentives are “very important” to their participation in employer-sponsored wellness programs.²³ In addition, 39% of employers strongly agree that firms should offer discounts/incentives for participation in obesity management programs.²⁴ The successful use of incentives to engage employees remains a combination of art and science, but a survey by OptumHealth showed companies that offer incentives have a 30% higher rate of participation than those that do not.²⁵

Branding the Program

Branding for weight control programs demonstrates benefits similar to branding in other marketing efforts: it focuses attention, builds trust, and enhances reputation. Employers participating in the RAND study cited broad outreach through various channels and clear messaging as key components of a successful program.⁶ A prominent example of successful branding that has led to engagement and adoption of healthier behavior is Emblem Health’s Wellness PATH Program. This program offers employees

health risk assessments; wellness coaching for weight management, stress reduction, and healthy living; employer-based health challenges to help employees change behavior; and member support.

The Key: Developing a Business Case

Early data show that employers can shy away from initiating wellness programs because of upfront investments like financial incentives for employees, adding resources such as constructing gyms in office buildings, and the length of time required to show an ROI. However, a survey of 505 randomly selected public and private employers demonstrated that employees are willing to pay higher premiums for workplace wellness programs, which can offset sustainability costs.²⁴ Moreover, employers with robust wellness programs report positive returns on investment as reflected by healthier employees, increased employee productivity, lower premiums paid per employee, and decreasing total health care costs.

Capturing data for health risk assessments, employee engagement, education, and measurement tools is essential for tracking the effectiveness of wellness efforts as well as for measuring the ROI of weight control initiatives. With the increase of employer-sponsored weight control services, data on ROI will be critical



to further adoption and investment. In the process, it will be important to capture trend data on utilization of preventive and curative health services, insurance premiums, and costs of

30% higher rate of participation in programs when incentives are offered

services not covered by health plans, as well as missed days of work and employee satisfaction. Note that these data points do not have to be in dollars to be able to understand and assess a wellness program; qualitative data can add a deeper understanding of program outcomes and guide changes to improve program efficiency.²⁶

Additionally, to identify efficient and cost-effective new programs for employers, employees, and health plans alike, studies on the comparative effectiveness and cost of existing programs will be beneficial. For example, in a Johnson & Johnson program, its employee population benefited from reduced obesity rates and improvements in high blood pressure, tobacco use, physical inactivity, and other comorbidities, while the company's average annual savings per employee was \$565—showing a return on investment equal to a range of \$1.88 to \$3.92 saved for every dollar spent on the program.¹⁰ Because wellness metrics are not yet standardized, it is currently difficult to calculate ROI. However, to improve ROI analysis, there is a move toward establishing a global benchmark standard while supporting data collection and reporting.²⁶ The roundtable recommended an assessment of the relationship between effective plan design and delivering ROI.

Defining Success

Health plans and employers are evaluating their wellness program strategies to develop better ways to combat the obesity epidemic. Health-

related outcomes are often used as a measure of success, with increased exercise level, risk reduction, and smoking cessation most commonly reported.²⁷ Health plans have the ability to collect data on populations over time, which will be invaluable in evaluating the long-term effects of obesity prevention and weight control strategies for all stakeholders.

Health plans and employers argue that the biggest challenges for wellness programs are employee engagement, defining success, appropriate use of financial incentives, and sustainability

NEXT STEPS IN MOVING TOWARD BETTER EMPLOYER-DRIVEN WEIGHT CONTROL SOLUTIONS

Obesity creates enormous health risks for employees and an enormous burden through direct and indirect costs for employers and employees alike. As more employers aim to counter the obesity trend, there is great potential for innovative interventions and workplace weight control initiatives. The roundtable discussion resulted in three key findings, which deserve to be explored further:

1. While the areas that need consideration for developing successful programs are clear—including employer leadership, employee engagement, program branding, business case development, and clear definitions of success—weight control programs that work will not be generic. Critical steps need to be taken to find weight control programs that are adaptable and best fit the needs and resources of each employee and each organization.
2. Given that employee engagement is key to achieving the best outcomes, including employees in designing, rolling out, and optimizing weight

of health outcomes. Success measures for future consideration should therefore include employee engagement and satisfaction; health outcome measures such as BMI, weight, and waist to hip ratio; and productivity outcomes such as presenteeism, absenteeism, cultural changes, and respective ROI analysis. Plan representatives indicated that they had moved beyond activity-based programs to results-based programs, in which employees are measured and incentivized not just on participation, but on the outcome: actually losing weight. Many employers have been slow to move in that direction.

control programs is critical to success. Employee involvement in this effort will help reach the people who most need these programs.

3. Scalability is critical for large employers with employees working throughout the country and globally. Addressing how employee obesity and weight control programs can be scaled according to employer size and needs is important for adoption and sustainability.

At Northeast Business Group on Health, we believe that there are many opportunities for promoting weight control in the workplace, and we hope to work with employers, their partners, and other stakeholders to expand knowledge and understanding in this important area.

Employers clearly recognize obese and overweight employees increase health care costs and decrease productivity. They are all ears when it comes to what might work in addressing this problem. Now is the perfect time to engage them.



About NEBGH

Northeast Business Group on Health is a network of employers, providers, insurers, and other organizations working together to improve the quality and reduce the cost of health care in New York, New Jersey, Connecticut, and Massachusetts. A not-for-profit coalition comprised of over 150 members and over a million covered lives, NEBGH speaks with one voice for quality, accountability, and value in the region's health care system. NEBGH helps large, midsize, and small businesses by informing health care decisions, improving the health care delivery system, and controlling costs.

About the NEBGH Solutions Center

Northeast Business Group on Health (NEBGH) is well positioned to act as an information gatherer and knowledge disseminator at a general level, but more importantly, facilitate discussions, relationships, and knowledge-sharing about best practices, all of which need to be explored at the local level.

As one of the largest purchasers of health care services, employers play a major role in forcing the health care system to deliver value. To better participate in the creation of value in health care, NEBGH has launched the Solutions Center (SC) as a new

opportunity to identify and evaluate effective solutions; investigate and disseminate innovative ways to improve the quality and value of health care for employees, retirees, and dependents; and implement these solutions.

Acknowledgements

NEBGH gratefully acknowledges Vivus for their unrestricted financial support of this publication and the related activities that contributed to its content and direction. We also recognize them as an important stakeholder in the system-wide quest for safe, high-quality, and value-driven health care in New York, New Jersey, Connecticut, and nationally.

In addition, we would like to express our gratitude to the stakeholder contributors—listed below—who made this project work possible. Their enthusiastic and insightful participation and collaborative spirit were crucial to the success of this investigation.

The authors are solely responsible for the conduct of the research, analyses, and content of the manuscript. NEBGH also recognizes Ms. Louise Kertesz for her contributions to the editing of this publication as well as Mr. Robert Murphy for fashioning the report's formatting, graphic design, and layout.

Roundtable Participants

- **Michelle Alexander, MD**
*Medical Director, Occupational Health
Con Edison*
- **Michael Beaudoin**
*Health Promotion Manager
MediFit Corporate Services
Under contract for PSEG*
- **Scott Breidbart, MD**
*Chief Medical Officer
Empire Blue Cross Blue Shield*
- **Kristen Carlucci**
*Registered Dietician
Pitney Bowes*
- **Lynder Festa**
*Vice President, Benefits
MSCI*
- **Sarah Giese**
*Manager of Health and Welfare
Columbia University*
- **Leah Jacobson, MD**
*Medical Director
Aetna*
- **Sunil Karnawat**
*Director, Market Access
Vivus*
- **Michelle Martin**
*Director of Health & Welfare Benefits
CBS Corporation*
- **Jacob McDowell**
*National Account Manager
Vivus*
- **Ronald Menzin, MD**
*Senior Medical Director
Cigna*
- **Richard Moggio, MD**
*Medical Director
L-3 Communications*
- **Lyn-Marie Pilgrim**
*Lead Specialist, Compensation & Benefits
National Grid*
- **Scott Richterich**
*Benefits Analyst
CBS Corporation*
- **Karen Smith-Hagman, RN, MSN**
*Vice President, Medical Management
Emblem Health*
- **Cynthia Tobia**
*Director of Compensation, Benefits &
Wellness
Horizon Blue Cross Blue Shield*
- **Dorothy Wolfe**
*Director of Employee Benefits Program
NYC Office of Labor Relations*

References

1. Brill, A. (2013, April). The long-term returns of obesity prevention policies. Matrix Global Advisor
2. Centers for Disease Control and Prevention. (2012). Adult obesity facts. Retrieved from <http://www.cdc.gov/obesity/data/adult.html>
3. Finkelstein, E., et al. (2010). The costs of obesity in the workplace. *Journal of Environmental Medicine*, 52(10), 971-976
4. Begley, S. (2012). As America's waistline expands, costs soar. Reuters. Retrieved from <http://www.reuters.com/article/2012/04/30/us-obesity-idUSBRE83T0C820120430>
5. Bureau of Labor Statistics. US Department of Labor, (2012). American time use survey. Retrieved from website: <http://www.bls.gov/tus/charts/>
6. Mattke, S., et al. (2012). A review of the U.S. workplace wellness market. RAND Corporation. Retried from http://www.rand.org/pubs/occasional_papers/OP373
7. National Business Coalition on Health. (2013). NBCH action brief: community health. Retrieved from http://www.nbch.org/nbch/files/ccLibraryFiles/Filename/000000002820/NBCH_AB_Community_Health_FINAL.pdf
8. Baicker, K., et al. (2010). Workplace wellness programs can generate savings. *Health Affairs*, 29(2), 304-311
9. US Corporate Wellness Inc. (2012). Get well: ROI-based analysis of employee wellness programs
10. Henke R., et al. (2011). Recent experience in health promotion at Johnson & Johnson: lower health spending, strong return on investment. *Health Affairs*, 30(3), 490-9
11. Hall, B. (2013, March). Gamification and social media and how they impact employee engagement
12. OptumHealth. (2012) Sprint get fit challenge. Retrieved from <http://www.optumhealth.com/consultant-resources/-/-/media/OptumHealth/Podcast/Pdfs/Publications/OH-Sprint-CS-fit-challenge.pdf>
13. Burke, L., et al. (2012). Using mHealth technology to enhance self-monitoring for weight loss: a randomized trial. *American Journal of Preventive Medicine*, (3) 1-12
14. Joint Committee of the Health Enhancement Research Organization, American College of Occupational and Environmental Medicine, American Cancer Society and American Cancer Society Cancer Action Network, American Diabetes Association, and American Heart Association. (2012). Guidance for a reasonably designed, employer-sponsored wellness program using outcomes-based incentives. *Journal of Occupational and Environmental Medicine*, 54(7), 889-896
15. Osilla, K. C., et al. (2012). Systematic review of the impact of worksite wellness programs. *The American Journal of Managed Care*, 18(2), 68-81
16. Volpp, K. G., et al. (2009). A randomized, controlled trial of financial incentives for smoking cessation. *The New England Journal of Medicine*, 360(7), 699-709
17. George Washington University Department of Health Policy. (2011). State employee benefit coverage for weight loss interventions. Retrieved from http://www.stopobesityalliance.org/wp-content/themes/stopobesityalliance/pdfs/State_Employee_Health_Benefits_Plans_Treatment_of_Obesity_Interventions.pdf
18. Terranova, L., et al. (2012). Bariatric surgery: cost effectiveness and budget impact. *Obesity Surgery*, 22, 646-653
19. Buchwald, H., et al. (2009). Weight and type II diabetes after bariatric surgery: systematic review and meta-analysis. *The American Journal of Medicine*, (122), 248-256
20. Keating, C., et al. (2013). Pharmaceutical utilization and costs before and after bariatric surgery. *International Journal of Obesity*. Retrieved from <http://www.ncbi.nlm.nih.gov/pubmed/23459325>
21. Crémieux, P., et al. (2008). A study on the economic impact of bariatric surgery. *The American Journal of Managed Care*, 14(9), 589-596
22. Kaiser Health News. (2013, June 19). AMA: obesity is a disease. Retrieved from <http://www.kaiserhealthnews.org/Daily-Reports/2013/June/19/AMA-recognizes-obesity-as-disease.aspx>
23. Colonial Life. (2012). Well on the way: Engaging employees in workplace wellness. Benefits at Work Series
24. Gabel, J., et al. (2009). Obesity and the workplace: current programs and attitudes among employers and employees. *Health Affairs*, 28(1), 46-56.
25. OptumHealth. (2011). Wellness in the workplace 2011: an OptumHealth research study. Retrieved from <http://citationmachine.net/index2.php?reqstyleid=2&mode=form&reqsrcid=APAJournalArticle&srcCode=3&more=yes&nameCnt=1>
26. The Workplace Wellness Alliance. (2013). Making the right investment: employee health and the power of metrics. World Economic Forum. Retrieved from http://www3.weforum.org/docs/WEF_HE_WorkplaceWellnessAlliance_Report_2013.pdf
27. Kaspin, L., et al. (2013). Systematic review of employer-sponsored wellness strategies and their economic and health-related outcomes. *Population Health Management*, 16(1), 14-21



NEBGH works with employers in:

- **NEW YORK**
- **NEW JERSEY**
- **CONNECTICUT**
- **MASSACHUSETTS**

Northeast Business Group on Health
61 Broadway, Suite 2705
New York, NY 10006

Phone: 212-252-7440 x223

Fax: 212-252-7448

www.nebgh.org

© 2013 Northeast Business Group on Health.
All Rights Reserved.