

GKEN Reports:

Taking Action Toward Good Health: Global Examples of Promoting Healthy Lifestyles and Reducing Risk Factors Part 1: Corporate, Community, and Government Strategies

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May 2010

OVERVIEW

The health of a society is a reflection of the health of individual members that live in the society. More and more countries are moving toward the belief that for a society to be healthy, individuals must take ownership of their own health, and that it is the responsibility of individuals to actively engage themselves in proper lifestyle and health care decisions. In fact, being healthy benefits more than just individuals. For example, employees are human capital of a company, thus a healthy workforce increases the productivity of a company (Buxton et al., 2004), and company investments in workplace health initiatives can help achieve this. In addition to physical health, mental health is an equally important factor in workforce productivity, and employers should not underestimate the benefit of behavioral health programs (McClanathan et al., 2004). In the U.S. health care costs surpassed \$2.2 trillion in 2007 (Overview National Health Expenditure Data, 2009), therefore national governments and private businesses have a definite and common financial interest in keeping its citizens and employees healthy and thereby reducing costs (Simon et al., 2006). At the same time, with the advancement of technology in the 21st century, web-based social media have become an effective tool to disperse health-based knowledge (CDC - Social Media, 2009). It is the goal of this paper to

identify a variety of strategies used by governments, communities, and the private sector to promote individual active participation in health care to achieve better health outcomes.

INITIATIVES

Health Information Technology and Social Networking

As the advancement in technology allows international trading to be more efficient, the flow of information about personal health and health care systems can also be more readily shared among countries. The ability to access health knowledge will in turn improve public health through enhancing the health literacy of individuals in the community. The American Medical Association Council on Scientific Affairs conducted a research study to examine the scope and consequences of poor health literacy in the United States. They concluded that poor health literacy poses significant threats to public health because those patients that presented with worse health outcomes had less understanding about their medical conditions and treatments (American Medical Association, 1999). Compliance is part of being a responsible patient and quality of life is enhanced when a patient's disease is well managed.

Health Information Technology

Denmark

One approach to promote active citizen engagement in personal health is to empower citizens with knowledge and access to their own health records. Denmark has made great progress in providing accessible health information to its citizens. (National IT Strategy 2003-2007 for the Danish Health Care Service, 2003) The Ministry of the Interior and Health is in charge of the National IT Strategy. The vision of the Danish National IT Strategy is to establish

coordination between patients and health care providers. Coordination brings coherence of information and collaboration of individuals, with help and guidance of governmental institutions, to actively participate in their own health and wellbeing. (National IT Strategy 2003-2007 for the Danish Health Care Service, 2003)

More than merely allowing access to health information, Denmark's centralized IT system connects all health care providers in the country. The country has implemented an Electronic Health Record (EHR) system in more than 90% of primary care practices in the country. After successfully implementing the EHR system, a Personal Health Record (PHR) system was then created. While the EHR system connects health care providers to other providers, the PHR system connects health care providers to patients. The PHR system bridges the gap between patients and professional knowledge. (Danish Personal Health Records Initiative Individual Responsibility, 2009)

A retrospective study done by Frolich et al. showed the effectiveness of the health care system in Denmark. The research team compared the Danish Health Care System (DHS) to the Kaiser Permanente health care system (KP) in California. The Danish Health Care System covered 5.3 million citizens while KP had 6.1 million members. As a private health provider, KP covers a population that is younger, better educated, and wealthier than the population that DHS covers. Furthermore, the KP health care system does not usually cover patients who are unemployed, elderly, low-income, or handicapped, because those patients are covered by Medicare or Medicaid in the United States. The Danish Health Care System is a public system and thus covers all the patients mentioned above and provides comparable benefits to KP. (Frolich et al., 2008)

The patients covered by DHS were generally less healthy; for example, 6.3% of DHS patients had diabetes compared to 2.8% of KP patients, and 19% of DHS patients had hypertension compared to 8.5% of KP patients. With a lower percentage of patients with chronic diseases, KP had a lower total physician and staff ratio compared to DHS (134 clinical staff/100,000 patients versus 311 clinical staff/100,000 patients), and also a lower hospitalization rate and length of stay compared to DHS. However, the average per capita operating expenditure was higher in KP (\$1,951) than in DHS (\$1,845). After adjustment in age, education, and income, Danish per capita expenditures were 24% less (\$1,480) than KP. The conclusion was that electronic health records and information technology have allowed Danish to be more efficient, and therefore more cost effective, in the delivery of health care. (Frolich et al., 2008)

Social Networking

Today, there are numerous Internet communication tools, such as e-mail and instant messaging. However, e-mail and instant messaging are not effective public health educational tools because the audience of the two technologies is limited to the people the health promoter knows. For an e-mail message to reach an audience greater than the people the health promoter knows, it has to be done by “word of mouth,” or forwarding the original e-mail to friends’ friends. The spread of the health message will end when the e-mail reaches someone who chooses not to forward the message. Instant messaging as a health promotion tool is even less effective than e-mail. Much like a phone call, instant messaging provides one-on-one live and in-depth communication between individuals, but the very personal nature of instant messaging limits the reach of the message to a bigger market. On the other hand, social networking

websites are known for their capability to share information quickly to a broad audience, and hence they have grown in popularity as a health promotion tool.

Social networking websites can serve as an online gathering place for users who have similar interests, so collective learning can take place. To achieve wide appeal to the public, social networking websites are designed to be user-friendly and visual graphics are utilized to attract users and for easy navigation. Numerous studies have recommended that social networking websites to be implemented as an educational tool in medicine (Supe, 2008), in pharmacy (Cain, 2008), and in nursing (Russell, 2007).

Facebook, with 250 million international followers, is one of the most popular social networking websites in the world. Any individual or agency can create an account on Facebook and share information on the website for free. Social networking sites comparable to this are often incorporated into an organization's marketing strategy (DeSilets, 2009). When searching "diabetes" on Facebook, many diabetes associations and causes show up on the list of search results, including The Heart of Diabetes, Cure Diabetes, Talk Diabetes, Diabetes Exercise & Sports Association, Diabetes Self-Management, American Diabetes Association, World Diabetes Day, Diabetes Diplomats, and Diabetes Coaches. International organizations, such as Diabetes UK and Diabetes Australia, also use Facebook to reach a broad, international audience.

Twitter is another extremely popular social networking website. When one signs up to "follow" another individual or organization, one can get updates of the individual or organization on one's computer or cell phone as text messages. In 2009, Twitter's popularity as a networking tool increased after a highly publicized competition between news media company CNN and American actor Ashton Kutcher to determine who could be the first to obtain one million followers. At the end of the competition, CNN and Mr. Kutcher each gained over one million

fans to follow their posted messages, or “tweets,” thus demonstrating the potential of this technology to rapidly spread information (useful or not) to large numbers of people. On an international level in Iran, political protestors in June 2009 used Twitter to provide live updates of post-election events to the world, circumventing the Iranian government’s censorship measures of more traditional news sources. (DeSilets, 2009)

In addition to Facebook and Twitter, other social networking websites include MySpace, LinkedIn, Ning, YouTube, Flickr, and Blogger. MySpace functions very much like Facebook, while LinkedIn is a networking website that connects working professionals. Ning serves as a social network for people with similar hobbies and passions. YouTube, Flickr, and Blogger are video-sharing, picture-sharing, and message-posting websites, respectively (Desilets, 2009). When searching for health related terms such as “diabetes” on the websites mentioned above, dozens of results were obtained, underscoring the fact that many health care initiatives (domestic and foreign) have adopted social networking websites as a method to promote their cause.

Mandates and Incentives

Germany

In Germany, citizens are required by law to pay into a public health insurance system through mandatory salary withholding. Employees and employers each contribute approximately 6% to 8% of the employee’s salary into the system. Families of working individuals are covered at no extra cost and the unemployed are covered by the state. (Schmidt, 2007) In order to preserve the benefits of a public health care system, personal responsibility for health has been explicitly addressed in German law since 1988, when legislation suggested that citizens have a “co-responsibility” for their health and should actively engage in healthy lifestyles, preventive

care, and treatments. (Schmidt, 2007) In turn, a number of strategies have been used by various public insurers to encourage greater individual responsibility. For example, individuals who cause their poor health through “deliberate self harm” or criminal activity may be required to pay for medical care to treat the resulting illness. This applies to complications from tattoos, cosmetic surgery, piercings, and other non-medically necessary actions, however the law does not extend to illness caused by other risk factors such as smoking, alcohol abuse, or obesity. Secondly, individuals with chronic illness and cancer are required to comply with stricter insurance guidelines such that failure to keep scheduled doctor’s visits or non-compliance with the medication regimen will result in higher co-payment for the patient’s chronic illness treatment. Thirdly, insured individuals may be eligible to receive “no-claim bonuses” if in the previous year they were not hospitalized or did not obtain any prescription medicine. (Schmidt, 2007)

Various incentive programs are also offered in Germany to encourage its citizens to take responsibility of their own health. In addition to the “no-claim bonuses,” other bonuses are offered for patients who participate in routine screening and other preventive measures. Besides going to the gym and attending fitness classes, screening tests such as mammograms for breast cancer, colonoscopy for colorectal cancer, and prenatal care all qualify for “bonus” points, which are tracked by the insurance providers. To earn “bonus” points, insured citizens submit their receipts of preventive screening visits, proof of attendance to exercise classes, or gym membership to their insurers. The redeemable “bonus” points can be used for cash or for the purchase of things that contribute to a person’s healthy living, things such as health books, exercise equipment, and even iPod and music downloads. Thus, many personal efforts contributing to the maintenance of one’s health are rewarded in Germany. (Schmidt, 2007)

To further ensure that individuals will take an active role in their own health, positive reward programs in Germany are accompanied by punitive measures, with dental care being the most prominent example. By missing any routine check-up in a period of 10 years, the insured will have to pay a much higher co-payment for dental replacements. (Schmidt et al., 2007)

Japan

Japan has one of the healthiest and longest living populations in the world. The rate of obesity is less than 5% in Japan, in contrast to almost 35% in the United States (Nakamura, 2009). The Japanese government is serious about sustaining this positive trend in health, especially when its population is aging rapidly due to the combination of Japanese' long life span and low birth rate. For example, with an aging population, there is concern that the prevalence of chronic diseases such as diabetes will rise. Therefore, the Japanese government has begun its preventive strategy early in order to combat the expected increase in diabetes. In 2008, Japan began by creating a national maximum waistline limit for everyone 40 years old and above. The limit is 33.5 inches for men and 35.4 inches for women. (Nakamura, 2009)

Metabolic syndrome, referred to as “metabo” in Japan, is a combination of symptoms, including obesity, high blood pressure, and high cholesterol that leads to a higher risk of diabetes, stroke, and heart disease. To control “metabo” in its population, Japanese lawmakers require all businesses, public or private, to conduct waistline measurements once a year on all employees. The maximum allowable waistline measurement differs by gender but not by height; in other words, the maximum allowable waistline in Japan is the same for all women and the same for all men, regardless of height. (Nakamura, 2009)

Employees who are not within the waistline standard are asked to participate in mandatory weight-management programs. If the overall prevalence of overweight employees in a company does not decline by 10% by 2012 and 25% by 2015, the company will have to pay a higher insurance contribution into the Japanese national health care system. (Nakamura, 2009)

Though the intention was to encourage its citizens to control their weight, there has been criticism of this Japanese health intervention strategy. The waistline measurement has been described by patients as “humiliating” and by doctors as inconsistent. To accommodate patients who do not feel comfortable showing skin, the government allows that their waistlines be measured over clothes; however, this procedure decreases the accuracy as well as the consistency of the measurements. Furthermore, some argue that the lack of consistency in these kinds of standards makes their usefulness questionable. For example, the Japanese government guidelines are inconsistent with standards recommended by the International Diabetes Federation, which recommends 35.4 inches for men and 31.5 inches for women. (Nakamura, 2009)

United States

Another important example is that of the American grocery retail corporation, Safeway Inc. Safeway is one of the largest supermarket chains and food retailers in North America. More noteworthy than its financial success, Safeway has been innovative in creating a nonconventional health care coverage policy that the company offers to its employees. (Burd, 2009)

Similar to Germany, Safeway’s health insurance plan rewards healthy behavior. Safeway is a self-insured employer that developed its current health plan in 2005. Since the initiation of its own health plan, Safeway reports that it kept its per-employee health care cost flat through

four years. In the same time period, the per-employee health care cost of other American companies has increased by an average of 38%. (Burd, 2009)

Safeway holds two beliefs regarding personal health. First is that a person's health care cost is the direct result of his/her lifestyle choices. Second is that 74% of all health care cost in America is contributed by four chronic conditions: obesity, cardiovascular disease, diabetes, and cancer. Of the four chronic conditions just mentioned, 90% of obesity is preventable, 80% of cardiovascular disease and diabetes is preventable, and 60% of cancer is preventable. (Burd, 2009)

Safeway promotes individual responsibility by offering discounts off the "base level" employee health insurance premium. Whether employees qualify for discounts depends on the measurement of four risk indicators, which are tobacco use, weight, blood pressure, and cholesterol level. Third parties perform all health measurements and results are private and are not shared with management. Insurance discounts are applied based on the results of the four health measurements. Even when an employee fails one or more of the risk indicators, he has a year to improve his health. If he passes or makes significant improvement in the one year period, the employee will be reimbursed with the difference equal to the premium discount. (Burd, 2009) Safeway's program is voluntary and covers only the non-union workforce, but 74% of that workforce has opted in to the plan. As a result, smoking and obesity rates among Safeway employees are approximately 30% lower than the national average. Seventy-eight percent of Safeway employees are favorable of the Safeway health plan and 76% of the employees want more financial incentives that reward healthy behavior. (Burd, 2009)

During the recent health care reform debate in the US, some legislators were prompted by Safeway's success to include an amendment to the health care bill that would promote employee

responsibility for health choices by increasing the health insurance discount that businesses can offer to their employees (Alliance for Natural Health, 2009). However, the “Safeway Amendment” received some criticism from groups asserting that Safeway’s claims of keeping costs flat are not accurate. Other opponents argued against the amendment on the grounds that health status should not affect the price of individual health insurance premiums. (Hilzenrath, 2010)

Urban Planning, Land Use, and Environment

United States

Seventy-eight million Americans are obese according to the Centers for Disease Control and Prevention (CDC) and 20.8 million Americans have diabetes according to the American Diabetes Association (Chitale, 2009). The economic cost of obesity in the United States was \$79 billion in 2008 (Humphries, 2009) and the economic cost of diabetes in the United States was \$132 billion in 2002 (CDC's Diabetes Program, 2002). Sixteen percent of the United States Gross Domestic Product (GDP) is spent on health care, second among all the member nations in the United Nations (WHO | World Health Statistics, 2009). It is an understatement to say that the United States has a health problem.

Unfortunately, the reality is that not everyone in the United States has the means to make healthy decisions, whether it is due to lack of time, education, or financial resources. In many cities and states in the US, governments and communities are raising awareness of the benefits from healthy living and committing resources that encourage individuals to make healthy lifestyle choices. Numerous examples are presented below to demonstrate that environments

that support and encourage healthy lifestyles are very much attainable with collaboration and a willingness to change.

Access to Healthy Food

In order to make healthy food available and affordable to residents who receive food stamps, New York City started the Health Bucks Program. Food stamp users are given two dollars in “Health Bucks” for every five dollars spent using food stamps. Health Bucks can be used to purchase fresh food and vegetables at participating farmers’ markets, as a way to make healthier food choices more readily available. (New York City Department of Health and Mental Hygiene, 2007)

The Advisory Commission of Food Policy in Hartford, Connecticut, created a special bus route to connect low-income neighborhoods to major supermarkets on the other side of the town. The new bus route reduced the travel time for the residents to access healthy food by half. (McCann, 2006)

A high rate of home foreclosure created many deserted houses and vacant buildings in Detroit, Michigan. Neighborhood crime rates rose with the increased number of boarded-up homes. The solution was a collaboration between local county government and Urban Farming, an international nonprofit organization. The partnership turned 20 abandoned properties into community gardens. Local residents get to enjoy outdoor physical activities while working in the gardens, as well as benefiting from the consumption of the fruit and vegetables grown in the gardens. Neighborhood crime rates have also declined with the decreased number of neglected properties. (Bear, 2008)

Land Use and Transportation

To promote outdoor physical activity for the area residents, the City of Eugene, Oregon, and the Bethel School District collaborated to purchase and develop a 70-acre piece of land. Half of the 70-acre land was used to build a school and the other half became a community park. In addition to playing in the park, students who live across from the park are encouraged to walk through the park to get to school. (Oregon Transportation and Growth Management Program, 2005)

The Community Schools and Recreation Program (CSR) in Pitt County, North Carolina, has been working in partnership with the Pitt County School District since 1978. Because of the collaboration, all school facilities are made available to surrounding agencies and residents for a small service fee or with no charge at all. The community thus has had a safe place to enjoy physical activity for more than 30 years. (Active Living by Design, 2006)

The City of Boulder, Colorado, encourages its residents to live actively by using bicycles as transportation. To do that, Boulder allocated 15% of its annual transportation budget to renovate and maintain bicycle lanes on the streets and facilities around the city. The city also launched a website with bike route information to ensure safe travel. (League of American Bicyclists, 2005)

The Amtrak station in Emeryville, California, is a transit-oriented development (TOD), a city planning concept that centers on using a public transit station to encourage the use of public transportation. In addition to being a TOD, the Emory station is also a mixed-used development (MUD) that combines residential and commercial units into one relatively compact area (one-quarter to one-half mile radius). Because of the short distance and easy access to different places

in a TOD and MUD complex, this city planning concept promotes walking and biking. (Parker & Arrington, 2002)

Local government must improve traffic safety before it starts encouraging the residents to walk. That was what the City of West Palm Beach, Florida, did in the mid-1990s. The city implemented a traffic calming policy in the downtown area. The streets underwent extensive reconstruction to meet the new standard of pedestrian safety. The safety measures included road narrowing, raised intersections, shortened pedestrian crossings, wide sidewalks, and tree-lined streets. The effort not only promoted walking but also raised property values significantly. (Lockwood & Stillings, 1998)

CONCLUSION

Governmental involvement is a way to encourage its citizens' active participation in their own health. Lawmakers at all levels can make a more conscious effort in city planning to provide their citizens access to healthy food and safety that allows outdoor physical activity (Twiss, 2003). Government can also form partnerships with businesses to improve public health (Buehler, 2006) and take the lead on the initiative of health IT (Blumenthal, 2006).

Countries are using a variety of strategies to engage individuals in choices and behaviors affecting their own health. Denmark is a world leader in health IT implementation and utilization. With readily available information via online personal health records, the Danish population is empowered with health care knowledge. The country's Personal Health Record is a convenient tool that allows Danish citizens to actively participate in their personal health.

Germany promotes active participation in health among its citizens by rewarding individual healthy behavior. Cash and/or health-related goods can be redeemed if one makes

healthy lifestyle choices and maintains a healthy lifestyle. On the other hand, punitive measures such as higher co-payments for patients making poor health choices are used to further manage patient behavior.

As one of the healthiest nations in the world (BBC News, 2000), Japan takes strict preventive measures on chronic diseases. Waistline measurement was shown as an example of how employers can be a means for lawmakers to exercise health policy. Under the new waistline policy, individual employees are motivated to take care of their health by losing weight.

In the United States, collaborations among local organizations and governmental agencies have made healthy living possible for many Americans. Access to affordable fruit and vegetables, and creation of safe environments to enjoy physical activity are all results of the continuous effort to improve the nation's public health. Nonetheless, the health of the nation ultimately lies in the hands of the individuals. Businesses such as Safeway are leading the reform of health care through their design of health care plans as a means to motivate insured individuals to be accountable and to actively participate in their health decisions.

While research in public health and medical treatment has increased tremendously in recent history, there are still many individual-dependent factors that may affect the health of each individual. With increasing globalization, it is hoped that citizens of any country will be able to receive and share excellent health knowledge and be able to translate that into good health outcomes and prolonged life as they are empowered by improved health literacy. Individuals' health behavior will change when they are able to integrate physician recommendations with their own public health knowledge of the disease.

The benefits of information technology should not be limited to private for-profit businesses in the world. Governmental agencies and public health practitioners should also take

advantage of this global trend and engage citizens in the effort to improve the overall health of their respective societies. The ripples from one person's better health behavior will be felt through his/her family and friends, and the community around them. If one health care policy or one health behavioral practice is shown to be successful, that model may be adopted by governments as well as citizens of other countries. Information exchange can help countries better fulfill public health needs. As a result, an individual's barriers to living a healthier lifestyle can be overcome and a better quality of life can be achieved.

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