Over the past few years, the proliferation of wearable devices, such as the ubiquitous activity tracker, has contributed to a heightened focus on fitness and healthy living. Although wearables in their current form — i.e., wrist-worn tracking devices — have raised health awareness, we expect them to have a greater impact on health-care costs, user adoption and larger-population health as their tracking capabilities become more sophisticated.

A few years ago, most tracking devices on the market were limited to a few models of pedometers, many of which were not incredibly precise in their recordings. Now, several brands are peddling step-tracking devices at a wide range of price points. These products range in abilities from basic step tracking to heart-rate and GPS monitoring, and many are combined with basic smart-watch capabilities.

The dawn of the age of wearables comes at a time when the global population, especially in the U.S., is overweight, as illustrated in Exhibit 1. Today, more than one-third of American adults are obese, with the number climbing yearly. Obesity has been linked to many preventable conditions such as heart disease, stroke, type-2 diabetes and certain types of cancer.¹

Each year, the medical cost of obesity in the U.S. is roughly $147 billion (in 2008 dollars), with an obese person incurring an average $1,429 more in medical costs than a person at a healthy weight.² Since the 2010 passage of the Affordable Care Act, Americans are required to purchase health insurance, meaning that both individuals and insurance companies bear the additional cost of obesity.
Exhibit 1: A Global Trend Toward Obesity

Source: World Obesity Federation, London November 2015. % Prevalence of Adult Obesity (BMI ≥ 30 kg/m²) 2000 to date. Please note in China the Asia specific cut off of applied (BMI ≥ 27 kg/m²). For the most recent data available please view the adult maps and click on the country of interest at www.worldobesity.org.

Incentivizing Wellness

Roughly 50% of people in the U.S. obtain health insurance through their employer as part of a compensation package, shown by Exhibit 2. While employees still contribute to their own medical expenses, employers subsidize the cost of health insurance for their employees and thus have an incentive for lower employee health-care premiums. Several corporations have sought to lower premiums through corporate wellness programs.³

Exhibit 2: Who’s Footing the Bill

Today’s corporate wellness programs can trace their beginnings to the 1950s and the introduction of peer-led groups for alcoholism and mental health support, known as Employee Assistance Program. These programs were designed with the idea that corporations needed to improve their employees’ health in order to boost the company’s quality and quantity of output. In the 1980s, these programs evolved, often giving employees a discount on their yearly health-care premiums or some other financial incentive in exchange for participating in biometric health-care screenings and/or informational programs, with goals of cutting a company’s health-care costs, reducing employee sick days, and attracting talent.

In recent years, many corporate wellness initiatives have expanded to include fitness and activity competitions and tracking. Business, large and small, have begun encouraging employees to wear a pedometer or some other type of wearable device and log at least 10,000 steps (the equivalent of 5 miles or 30 minutes of activity) a day, in line with the Surgeon General’s recommendation for daily activity. Employers often incentivize these wellness programs, which can combine biometric screenings, wearable fitness trackers, and employer-sponsored health coaching, by offering points off employee health premiums or credits to health savings accounts (HSAs). However, the head of one large retailer’s wellness program noted that for many employees, points off their premium are not the major incentive for participating. Rather, they find that improved well-being and team spirit through fitness challenges are more rewarding than financial benefits.

A recent report by Gartner claims that by 2018, 2 million employees will be required to wear fitness tracking devices by their employers. Not all of these employees would be monitored purely for weight-loss-related activity; many trackers are also able to monitor sleep and heart rate (an indicator of stress), making them useful for employers in a wide range of industries.

**Expanding Engagement**

In the U.S., 17% of adults under age 75 who are online use a fitness tracker, according to Gartner. Across the world, at least 10,000 elite athletes use a fitness tracker to monitor their training, proving that these devices can be used by various segments of the population - from athletes, to weekend warriors, to couch potatoes looking to increase their activity level. (See Exhibit 3.)

The challenge for wearable makers is to keep engagement, the number of active users as a percentage of total registered users, high. Recent results from the market leader in wearables suggest that engagement declined in the fourth quarter of 2015. It’s possible that people learn what it takes to achieve 10,000 steps each day and, after a period of time, no longer feel compelled to wear the device. Such an outcome would hurt device upgrades, especially if newer models offer few incremental design and functionality improvements.

Wearable brands have found success integrating their device with an app for both Android and iOS devices, allowing users to easily monitor their progress and compete with friends and family in their daily fitness goals. Many wearable developers hope that this community engagement will keep members engaged longer than the typical user cycle.
In the future, we see the current market for wearables expanding beyond a device worn on the wrist or attached to the hip that tracks steps and heart rate. Recently, Advanced Functional Fibers of America, which is a group of colleges and businesses led by the Massachusetts Institute of Technology, won federal funding to research turning clothing fibers into wearable devices. With wearable technology fully integrated into fabric, the possibilities are endless. Currently, there are several prototypes for clothing that monitors activities such as heart rate, movement and perspiration. In a matter of years, hospital gowns could track vital signs like heart rate and temperature (See Exhibit 4.). Outside a medical setting, a T-shirt could monitor its wearer’s glucose levels and blood pressure, helping to prevent a variety of episodes from hypoglycemia to heart attacks and strokes. Imagine patients arriving at doctor’s appointments with full records of their vitals from the past few months, allowing their physicians to diagnose and treat them more quickly.

Exhibit 3: Why Did You Buy a Fitness Band?

Source: SunTrust Robinson Humphrey, July 2015.

Exhibit 4: Wearable Sweat Sensor

Source: James Provost
This future expansion potential of wearables will change how individuals monitor fitness, how employers track employee health, and potentially how individuals interact with their own doctors. We see wearable technology as becoming integral to daily life. The additional information provided by these devices should increase engagement and help users achieve more personalized fitness and health goals. (See Exhibit 5.)

Exhibit 5: From Head to Toe Wearable Technology

While we see wearable-device makers and clothing companies as some of the most obvious beneficiaries from the adoption of wearable technology, we have identified other industries that could also gain. Companies that employ wearable technology in their corporate wellness programs will likely benefit financially from the lower health-care costs of a healthier workforce. Insurance companies should also benefit from the data provided by wearable devices as they better assess the population’s risks. Similarly, consumer companies stand to benefit from wearable-device data to better market to and target customer behaviors and trends. Health-care companies and hospitals will be better able to monitor patients and gather more complete patient health profiles, potentially reducing the time of each visit and the need for follow-up visits. The potential applications of wearable technology are far-reaching, with each new innovation broadening the number of sectors and companies that will be impacted.
End Notes

2. Ibid.
7. Gartner 19
8. Ibid.
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