COMCAST BUSINESS B4B BUILT FOR BUSINESS™

Wearable Devices in Health Care:

USING TECHNOLOGY TO SERVE PATIENTS' NEEDS

If you exercise regularly, chances are you wear a fitness band, smartwatch or other type of device that monitors your activity to help you work out more efficiently (or simply to motivate you to exercise more). While these devices have found much value among the fitness community, the medical community now is looking to these same devices to help monitor patients' day-to-day health and better diagnose and treat illnesses and chronic conditions.

Wearables have the power to transform health care as we know it, enabling physicians and other caregivers to better manage illness and chronic conditions and even work proactively to prevent health issues before they occur. Research firm Gartner predicts that by 2020, wearables will exceed 500 million shipments and more than 35 percent of the population in mature markets will own at least one wearable electronic device.[1] Digging deeper, market intelligence firm Tractica believes worldwide shipments for healthcare-specific wearables will increase to 97.6 million units by 2021, from 2.5 million units in 2016, and be worth $17.8 billion in annual revenue.[2]

The healthcare wearables market is comprised of more than fitness bands. Smart watches, smart glasses, smart footwear, smart apparel, posture monitors, movement sensors, wrist

devices, heart straps, headbands, wearable patches, pain management devices and medicine delivery pods are some of the myriad devices that make up the vast and growing healthcare wearables market.

A patient with a chronic foot problem, for example, could wear a smart shoe that monitors the patient's stride, how firmly he steps, whether the patient rolls his foot outward when he walks and other factors impacting foot health. The information can be sent to an app on the attending podiatrist's computer, where the data can be analyzed and a diagnosis made.

Wearable devices can be used to monitor and manage more critical health issues as well, including glucose monitoring for patients with diabetes. One device, for example, clips to a user's ear to measure glucose level. Another device, a wearable patch, measures glucose level through human sweat and delivers insulin as needed in a non-invasive manner.

For day-to-day health management of older or less-able patients, physicians can use a device designed to provide constant monitoring of vital statistics and other data. The HealthPatch MD is a reusable biosensor embedded in a disposable patch and includes both ECG electrodes and an accelerometer to monitor heart rate, breathing, temperature and number of steps taken. It even detects the wearer's body position if he or she has fallen. The data is transmitted to an app that shows the information in real time, so healthcare workers can react immediately to any issues or health problems.

Indeed, the healthcare wearables space is in its infancy, but its popularity is growing in leaps and bounds. As such, wearable technologies will need robust networks that can handle the influx of data and support the devices themselves, so caregivers can have access to the information critical to diagnosing and treating patients efficiently and accurately.

A powerful network is needed to provide the performance necessary to power wearable devices and other Internet of Things technologies in health care. Dedicated and broadband connectivity solutions are helping clinics, physician offices and hospitals to provide services related to today's healthcare technologies. A fiber-rich IP network can support a full line of dedicated, broadband and Wi-Fi connectivity services for an always-on, always-connected environment.

Wearables in health care is a phenomenon whose value already has been determined. Make sure your network can handle the needs of all your technology tools to offer the best care—and the best experience—for all users. ■

1 Heather Pemberton Levy, "Wearable Technology Beyond Smartwatches," Gartner, Oct. 21, 2015 http://www.gartner.com/smarterwithgartner/wearable-technology-beyond-smartwatches-3/

2 "Wearable Devices for Healthcare Markets," Tractica, April 15, 2016 https://www.tractica.com/research/wearable-devices-for-healthcare-markets/