Wearable Health Trackers

Health Fad or Health Revolution?
Wearables – a Health Revolution Through the Power of Technology

Wearable health trackers, such as Fitbit, have become a welcome player in modern-day healthcare—spanning the gamut from Medicaid to cash-pay practices.

There’s no denying...

Technology is playing a bigger and bigger role in patients’ daily lives with each year that passes!
A 42-year-old man from New Jersey recently showed up in an emergency ward following a seizure. After looking at the data collected by his Fitbit Charge HR, the doctors decided to reset his heart rate with an electrical cardioversion.

It’s the first time in history that a fitness tracker was used in this way.

This bit of information is crucially important because it will determine whether or not the medical staff can electrically cardiovert the patient to alleviate the arrhythmia.

Source: *Interrogation of Patient Smartphone Activity Tracker to Assist Arrhythmia Management – Annals of Emergency Medicine*
Wearables are Here to Stay!

According to the research firm, eMarketer:

- **2015** — An increase of 57.7%
  - 39.5 million U.S. adults 18 and over used wearable devices, such as fitness trackers in 2015—an increase of 57.7% over 2014.

- **2018** — 81.7 million predicted
  - Growth trends are expected to continue in 2016 and beyond, with 81.7 million adults predicted to use wearable fitness devices by 2018.

- **2019** — 2 in 5 will use wearables
  - It’s predicted that 2 in 5 Internet users will use wearables by 2019!
The Types of Data Being Tracked

Physicians in all specialties are seeing an increase in patients equipped with wearable devices to track:

- Physical activity (*steps, active minutes, multi-sport*)
- Sleep
- Weight
- Stress levels
- Mood
- Heart rate
- Water intake
- Blood pressure
- Diet trends & calories in/calories out
How Patients Like to Track Health Data

- Head-worn
- Straps
- Shirts
- Wrist-worn
- Clips
- Shoe-worn / Foot pods

Our Focus
Wearable Users

30 year old female making > $100K per year

Source: Nielsen, Connected Life Report

Today’s Wired Patient
Public on Activity Trackers

US Adults That Track Their Fitness or Health Using a Wearable Device or Smartphone App

79% of consumers would consider using Activity Trackers – Makovsky 2015

11% Use a wearable fitness tracker
14.1% Use a smartphone application
14.5% Plan to start using a device or app
60.4% Do not use a device or app

Technology Advice Survey

Public on Activity Trackers

Willingness to Use a Free, Physician-Provided Fitness Tracker

48.2% Willing

51.8% Unwilling

Technology Advice Survey

Public on Activity Trackers

Willingness to Use a Free Fitness Tracker, Provided By a Physician; By Age

Technology Advice Survey

Fitbit User Survey

91% of users believe Fitbit keeps them aware of their activity level so they can reach their health and fitness goals.

90% of users believe that Fitbit motivates them to walk more.

86% of users believe Fitbit provides them with useful and personal health and fitness data.

85% of users claim to take more steps now than before they started using their Fitbit tracker.
Fitbit User Survey – Weight Loss

• **76%** of daily Aria users lose weight in the **first 6 months**.

• Daily Aria users lose an **average of 3 pounds** in the first month.

• Aria users who also use a Fitbit tracker **double their weight loss**.
Keeping A Food Diary Doubles Diet Weight Loss

Date: July 8, 2008
Source: Kaiser Permanente

Summary: A study of nearly 1,700 participants shows that keeping a food diary can double a person's weight loss. The study found that the best predictors of weight loss were how frequently food diaries were kept and how many support sessions the participants attended. Those who kept daily food records lost twice as much weight as those who kept no records.

Weight Loss

Mobile app boosts weight loss by 15 lbs.

- Northwestern University Chicago 10-Dec 2012
- Archives of Internal Medicine
- Using a mobile app that tracks eating and activity helped people lose an average of 15 pounds and keep it off for at least a year.

http://www.eurekalert.org/pub_releases/2012-12/nu-mab120612.php
The Older the Wiser

Project Catalyst, conducted in 2015 in partnership with AARP, was the first study of its kind to focus on activity and sleep tracker use in Americans over 50.

The study found:

• 67% of participants found the trackers to be beneficial.
• In addition to activity and sleep, senior user looked forward to more advanced technologies that would track biometric data, such as heart rate and blood sugar.
The Sicker the Better

Consumers diagnosed with an illness are more likely to use a mobile device

- **Mental Health**: 83%
- **Gastrointestinal**: 79%
- **Obesity**: 79%
- **Pulmonary Condition**: 75%
- **Cardiovascular Condition**: 73%

What About Accuracy?

OBJECTIVES
The accuracy of energy expenditure estimations by wearable trackers.

METHODS
Scientists compared 12 devices like Fitbit Flex & Jawbone Up24 against two proven methods of monitoring energy expenditure.

Are Currently Available Wearable Devices for Activity Tracking and Heart Rate Monitoring Accurate, Precise, and Medically Beneficial? El-Amrawy F, Nounou MI.
Accuracy of Activity Trackers

RESULTS

Compared to the scientific measurements, half of the fitness trackers underestimated energy expenditure and the rest overestimated it.

CONCLUSIONS

“It is currently quite challenging to tell which fitness trackers are accurate and reliable and which are not since there aren’t much data available . . . These studies continue to demonstrate that even the most popular applications and devices may be inaccurate or highly variable.”
Accuracy of Steps

Are Currently Available Wearable Devices for Activity Tracking and Heart Rate Monitoring Accurate, Precise, and Medically Beneficial?

El-Amrawy F¹, Nounou M².
Accuracy of Heart Rates

Are Currently Available Wearable Devices for Activity Tracking and Heart Rate Monitoring Accurate, Precise, and Medically Beneficial?

El-Amrawy F¹, Nounou MI².
Wearables are a natural fit for Integrative, Anti-Aging, Functional Medicine & Concierge Practices
Wearables – Perfect for Integrative & Concierge Practitioners

Patients seeking care outside of the traditional insurance model are typically more:

- Motivated
- Organized
- Technology-savvy

... as compared to patients working with the insurance model.
Using Wearables to Improve Patient Outcomes
It’s All About the Data!

TREND TRACKING
The future of wearables is not just in the device, but in analyzing and using the numbers over time.

IMPROVED OFFICE VISITS
Having instant access to the data allows you to provide immediate recommendations and/or education in the moment, which increases motivation.

GREATER VALUE
Patients want the valuable, actionable insights that wearables deliver.
It’s All About the Data!

For patients seeking rapid health improvements, wearables inspire:

- **Motivation**: The data becomes empowering!
- **Accountability**: Important data goes right to the doctor.
- **Calorie Counting**: For those with difficulty losing weight.
- **Awareness of sleep patterns**

Patients already on-board with lifestyle changes may continue to “hack their bodies” with new data!
The Future of Wearables

- Location (GPS)
- Emergency Signaling
- Health Tracking
  - Blood sugar
  - Blood pressure
  - Respiratory Rates
  - Blood oxygen saturation
  - Hydration
  - Electrolytes
  - Hormones
- Early Warning Device
  - Electrocardiograph (ECG)
Power2Practice Survey - 2016

77% of doctors recommend activity trackers to patients as part of their treatment plan.

93% said would be beneficial to have Fitbit data integrated into the EMR/patient record.
1 out of 3 Doctors are already recommending apps.

73% Patients report that they are healthier because of health apps.

90% Chronic patients would accept a prescription for a mobile app.

3.4 Billion People will have devices with access to mobile health by 2017.
Conclusion

The future of wearables is not wearables, but more about analyzing and using that data.

People want valuable, actionable insights.

It is about data and recombining data to make sense of it while creating something actually useful for users.
Thank You!

Paul Savage MD, FACEP, FFARM

Questions? email: sales@power2practice.com