

# mHealth Technologies

## What is mHealth?

The term “mHealth” is used to identify the mobile devices (and software) utilized by patients for health services and information. As mHealth technologies become more accurate and useful to researchers, they will become more prevalent in the clinical trial and healthcare spaces. In this infographic, ISR takes a look at mHealth, how patients choose to engage with mHealth, and examples of its current roles in clinical trials.



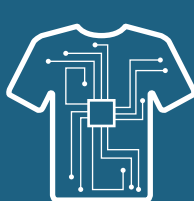
### MOBILE APPS

Users interact with mobile apps on their smartphones to collect data such as sleep quality and to log subjective data like mood and pain level.



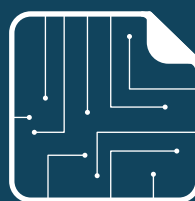
### DEVICES

Both consumer and medical-grade devices are capable of recording accurate health metrics and delivering real-time feedback.



### SMART CLOTHING

“Smart” clothing is embedded with sensors capable of recording and transmitting data, while offering more comfort than some devices.



### SMART ANYTHING

The “smart” label can be applied to any physical object optimized to take readings and transmit data, like “smart” patches that monitor UV exposure.

## How do patients feel about using mHealth?

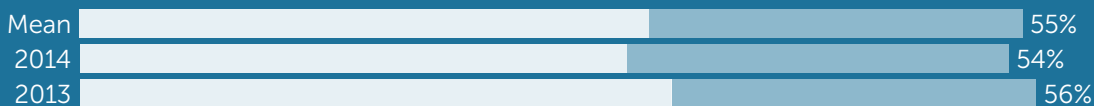
The National Cancer Institute’s Health Information National Trends Survey asked participants about their interest in engaging with health care providers through electronic media. The respondents who indicated they were “Very” or “Somewhat” interested are displayed below.

■ Very ■ Somewhat

### LAB TEST RESULTS



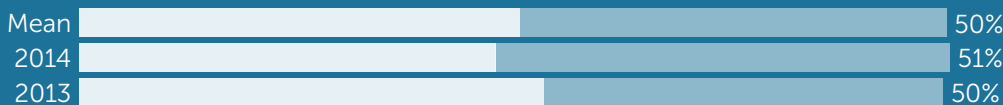
### MEDICATION REMINDERS



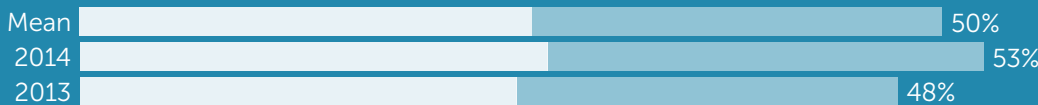
### VITAL SIGNS



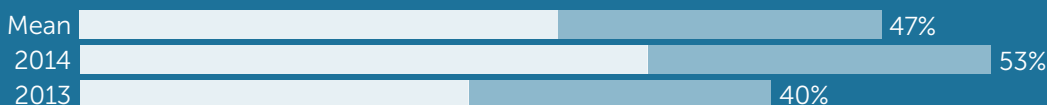
### GENERAL HEALTH TIPS



### SYMPTOMS



### DIAGNOSTIC INFORMATION



### LIFESTYLE BEHAVIORS



### DIGITAL IMAGES/VIDEO



\*2013 question was not asked

0 5 10 15 20 25 30 35 40 45 50 55 60 65  
Percentage of study participants

## How is mHealth used in clinical trials?



### COMMUNICATION

Care instructions can be delivered through mobile apps, such as pre-surgery preparation, as well as clinician feedback on adherence to treatment.



mHealth apps allow patients to be more connected with their PCPs and health care teams, increasing patient involvement in treatment.

Patient cohorts can utilize apps to network with each other, improving their social support and mental health status.



### TREATMENT

Clinicians can use smart devices as therapeutic interventions effect positive outcomes in patients’ physical and mental health.

Devices can monitor medication and care plan adherence; some even provide incentives for patients to take their medications correctly and on time.



Certain device-based therapeutic interventions use collected data to provide real-time biofeedback to patients, improving the efficacy of physical therapy.



### DATA COLLECTION

mHealth devices record metrics like physical activity, caloric intake and expenditure, body weight, blood pressure, heart rate, and sleep duration.



Patients can use apps to log subjective data like stress levels, pain levels, and mood.

The ease of use and portability aspects of mHealth allow data collection over a greater range of time and activity compared to traditional data collection methods.