



Healthcare Market Updates



Symbol	Change
TMX	+0.15
CHK	+2.38
AAPL	+0.14
PRTG	-0.73
AMZN	+1.08
TSLA	-0.87
AVGO	-3.00
SIRI	-0.65

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Wearables

Apple's latest patent is for a blood pressure monitor (1/2) – June 11, 2018

Applicable Product Categories:

Wearables

 Technologies	Wearable (Device)	 Therapeutic Areas	Lifestyle and chronic health conditions / remote monitoring
 Applications	Smartwatch Self-health Management	 Geographic Focus	USA / Global
 Segment Focus	Consumer / Clinical	 Topics (News type)	Tech Innovation / Competitive Intelligence
 Companies	Apple	 Others	Asus (VivoWatch BP); Omron (HeartGuide)

ANALYST TAKE:

- **Synopsis:** A patent application filed by Apple, for a (possibly Bluetooth-connected) wearable blood pressure monitor, became public last week.
- **Industry Need:** Blood pressure is one of the most critical health vitals monitored to facilitate early diagnosis of a patient's deteriorating health condition. With increasing prevalence of chronic diseases and a geriatric population, the healthcare industry needs advanced blood pressure monitoring devices that are designed for promote self-health management practices and help track the health status of a patient remotely.

Apple's latest patent is for a blood pressure monitor (2/2) – June 11, 2018




- **Value Proposition:** This is at least the third Apple patent that has come to light, that deals specifically with blood pressure, which suggests it's an area the company has at least a passing interest in. As per the Verge report, "The device could come in a similar package to the current Apple Watches on the market, as the patent application mentions a possible touchscreen face and Bluetooth connectivity."
- **Competitive Intelligence:** Frost & Sullivan believes, given Apple being one of the selective companies in FDA's digital health fast-track program, the inclusion of BP monitoring feature into Apple's Smartwatch could finally mark its entry into the medical-grade wearable arena (FDA-cleared hardware). However, the tech giant is expected to face significantly more competition in marketing a connected blood pressure monitor, as a number of other companies already have such devices on the market. For example, Frost & Sullivan foresees increased competition in the clinical-grade BP monitoring wearable segment as leading vendors such as Asus (VivoWatch BP) and Omron (HeartGuide) are expected to release their smartwatch-style BP monitor in next 12-18 months time. Entry of Apple is expected to intensify this competition further, given its reputation and large ecosystem of complementing healthcare data solutions (CareKit and ResearchKit). However, future success of all these consumer tech giants largely depends on their capability to receive FDA approval.
- **Target End-User:** Healthcare consumers, Homecare/ remote care settings, research and clinical trials sponsors, Insurance and wellness programs.

WEBLINK: <https://bit.ly/2JRB0a8>

FDA Clears Wearable Device to Treat Opioid Addiction – June 12, 2018

Applicable Product Categories:

Wearables

 Technologies	Wearable (device)	 Therapeutic Areas	Opioid Addiction / Mental Health / Chronic Pain
 Applications	Treatment Adherence/ Behavioral Health	 Geographic Focus	USA
 Segment Focus	Clinical Grade	 Topics (News type)	Market Launch
 Companies	DyAnsys, Inc.	 Others	NA

ANALYST TAKE:









- **Synopsis:** DyAnsys Inc. announced that the U.S. FDA has cleared its auricular neurostimulation device, Drug Relief®, to be used as an aid to reduce the symptoms of opioid withdrawal without narcotics.
- **Industry Need:** As per the 'Substance Abuse and Mental Health Services Administration' 2016 report, an estimated 11.5 million Americans 12 years and above misused prescription pain medicine in 2016. National Institutes on Drug Abuse also reports 2.5+ million Americans suffer from opioid use disorders.
- **Value Proposition:** The Drug Relief wearable device sends electrical pulses through tiny needles inserted in the ear to alleviate symptoms such as anxiety, agitation, depression, nausea, opiate cravings, and more. Considering the Opioid crisis in the US market, Frost & Sullivan views Drug Relief as the ideal non-narcotic alternative that can make a significant difference for individual patients and their families. For example, the device is reported to ease the process of detoxification, which is the first step in a comprehensive rehabilitation program. According to providers, patients may see a reduction in the symptoms of opioid withdrawal within 30 to 60 minutes of beginning treatment.
- **End-user:** Drug Relief® is available now for providers to prescribe for use during opioid detoxification.

WEBLINK: <https://bit.ly/2t9NGlj>

Fitbit Reaches Kids With The Launch of Fitbit Ace (1/2) – June 14, 2018

Applicable Product Categories:

Wearables

 Technologies	Wearable (Device + App)	 Therapeutic Areas	Childhood Obesity
 Applications	Child Behavioral health	 Geographic Focus	USA/ Global
 Segment Focus	Consumer	 Topics (News type)	Product Launch/ Competitive Intelligence
 Companies	Fitbit	 Others	NA

ANALYST TAKE:

- **Synopsis:** Fitbit announced its first wearable for kids called Fitbit Ace, which will be now available worldwide after its US launch earlier this year.
- **Industry Need:** Based on industry estimates today, 1 in 3 every children and adolescents, ages 2-19, are overweight or obese - triple the rate from just one generation ago. If current trends continue the number of overweight or obese infants and young children globally will increase to 70 million by 2025. As per a WHO 2016 report, the vast majority of overweight or obese children live in developing countries, where the rate of increase has been more than 30% higher than that of developed countries. Sedentary lifestyle and poor food habits among current generation kids are the major factors contributing to the increasing prevalence of childhood obesity.

Fitbit Reaches Kids With The Launch of Fitbit Ace (2/2) – June 14, 2018

- **Value Proposition:** Fitbit Ace is designed for children aged 8 and older with a vision to help get kids moving as childhood obesity rates rise and parents become more concerned about their children's health. The Ace wearable features customizable step, active minute and sleep goals as well as incentives like badges and congratulatory messages and challenges for kids and their families. Fitbit also reported that, even parents can control who their children connect with and what information they view on the device.
- Based on Frost & Sullivan research, a scalable approach of combining wearables, and principles from digital behavioural therapies have demonstrated positive results to increase activity levels among individuals, treatment adherence, and higher engagements across self-health management and preventive care programs. Considering the increasing prevalence of childhood obesity among kids, Fitbit Ace comes as a handy wearables-based digital therapy for worried parents. Frost & Sullivan views this as a winning strike by Fitbit to beat growing competition. As the company tries to shift its focus from commoditized fitness trackers to less crowded, targeted clinical use cases, childhood obesity management provides Fitbit the ideal market application to ensure future growth and further penetrate into the healthcare industry.
- **Target End-User:** Parents, children hospitals, research and clinical trials sponsors, Insurance and wellness programs

WEBLINK: <https://bit.ly/2l85mdw>











Mobile Phones/ mHealth

SleepScore Labs Launches World's First Non-Contact Sleep Tracking Mobile App (1/2) — June 12, 2018

Applicable Product Categories:

Mobile Phones

 Technologies	Software Solutions, Sensors, mHealth Apps	 Therapeutic Areas	Sleep Disorders, mental health, multiple chronic health conditions
 Applications	App built on sleep detecting sonar algorithms, which analyses inaudible sound waves using smartphone speakers	 Geographic Focus	Global
 Segment Focus	Consumer grade	 Topics (News type)	Market Launch / Care Delivery Innovation
 Companies	SleepScore Labs	 Others	ResMed, Dr. Mehmet Oz, and Pegasus Capital Advisors L.P.

ANALYST TAKE:

- **Synopsis:** SleepScore Labs, a joint venture between ResMed, Dr. Mehmet Oz, and Pegasus Capital Advisors L.P., created to advance technologies around definitive sleep measurement and improvement, launched its free SleepScore mobile app, which turns smartphones into a non-contact, standalone sleep tracker.
- **Industry Need:** Around 1.2 billion people worldwide suffer from a variety of sleep issues, and nearly 60 percent of all people misunderstand their own sleep problems due to a lack of measurable insights.

SleepScore Labs Launches World's First Non-Contact Sleep Tracking Mobile App (2/2) — June 12, 2018

- **Value Proposition:**

- SleepScore has positioned the app as a convenient, free standalone smartphone app with the verified accuracy of sleep-detecting sonar algorithms developed over the past 13 years by ResMed, and tested and validated against polysomnography at accredited sleep labs worldwide.
- The app accesses a smartphone's speakers to send inaudible sound waves which are reflected off the user's body and received back into the microphone. The app's sonar algorithms then interpret the reflected sound waves to sense full breathing wave form and body movements. The combination of these signals is used to decipher which sleep stage the user is in (wake, light sleep, deep sleep or REM), as well as the number of times users wake up through the night and the time it takes to fall asleep.
- The app offers a host of features which include daily score on sleep quality in terms of sleep length and interruptions, the user's sleep history for the past 7 days, and smart alarms which wake up the users at the ideal moment in sleep cycle within a timeframe they select. Additionally, the app also enables users to customize their sleep goals such as "Sleep Longer" or "Wake Up Less" and offers advice to help achieve the goals. After seven recorded nights, SleepScore will suggest if users should move on to a different goal.
- The app also has a premium paid version which allows users access to their complete sleep history, trend and correlations analytics, exportable data, and a sleep report for their doctor to view and discuss clinical sleep recommendations, if needed.
- Frost & Sullivan opines specialized sleep trackers which combine a wearable patch to monitor sleep, often prove to be obtrusive. Additionally, there are a few standalone apps such as Sleep Cycle, SleepBot, MotionX-24/7, and Sleep Time, which don't require a wearable patch and offer various insights into sleep quality, average time in bed, sleep pattern, and disturbances based on sensors data on the user's smartphone. However, there are hardly any clinically validated standalone apps which offer a comprehensive bouquet of features as intended to be offered by SleepScore. The company has also developed a well devised monetization strategy in terms of its ability to analyze the user's sleep data over a period of time and offer them personalized recommendations on third party products and services to further improve sleep quality. The recommendations are from a select number partners and could range from innovative pillows to sound machines, snoring solutions and potentially, clinical and diagnostic recommendations as well.

- **Target End-User:** Healthcare consumers, patients and individuals with sleep disorder like sleep apnea





WEBLINK: <https://prn.to/2ya0NsB>

CMS Embraces mHealth With Reimbursement for Smartphone CGM Links

— (1/2) June 13, 2018

Applicable Product Categories:

Mobile Phones

 Technologies	mHealth Apps, iOS, Software Solutions	 Therapeutic Areas	Diabetes
 Applications	Continuous glucose monitoring (CGM) through smartphones now included under reimbursement coverage	 Geographic Focus	USA
 Segment Focus	Clinical Grade	 Topics (News type)	Regulation
 Companies	Centers for Medicare & Medicaid Services (CMS)	 Others	NA

ANALYST TAKE:

- **Synopsis:** CMS will change its coverage policy for CGMs to include devices that pair with smartphones, tablets, etc. thereby enabling reimbursement coverage under Medicare.
- **Industry Need:**
 - Unlike a blood glucose meter (BGM), which provides just a single glucose reading, CGM systems provide real-time, dynamic glucose information enabling valuable insight about glucose levels, rate and direction of change, and additional insight to proactively manage diabetes, reduce A1C levels and decrease time on hypoglycemia. Pairing CGM devices with smartphones offers greater benefits in terms of easy data sharing and better care management. The agency announced the modification this week after reviewing inputs from numerous stakeholders that said coverage limitations prevented patients from sharing data with family and caregivers.

CMS Embraces mHealth With Reimbursement for Smartphone CGM Links

— (2/2) June 13, 2018

- **Value Proposition:**

- The latest CMS ruling will allow for coverage of CGMs that transmit data to a smartphone. The data can then be shared by the user with care providers and others and still be eligible for Medicare reimbursement.
- As per an earlier CMS ruling in January 2017, the agency had kept smartphones, tablets etc. out of its permitted definition of durable medical equipment (DME) which could be paired with a CGM to display glucose data, to be eligible for reimbursement coverage. That ruling drew a storm of protest from patients, mHealth vendors and healthcare providers, who said the ban on smart devices prevented patients and their care providers from collaborating on care management.
- The newer ruling would enable greater access and sharing of glucose data with the clinician, thereby enabling effective care delivery.
- Frost & Sullivan believes that the new ruling would allow further integration of interoperable CGM systems with easily accessible data sharing systems such as smartphones and tablets. The patient now doesn't have to choose between a Medicare reimbursement and the ease of sharing vital health data, in time with the clinician. The resultant synergies are further expected to further streamline care delivery, reduce costs and hassles for care providers. Ultimately, this will also help increase the penetration of expensive CGM devices. Additionally, this is a big step forward in the quest of industry lobbyists to urge FDA to classify digital medical devices as DME for greater reimbursement coverage.

- **Target End-User:** Home health-care, care providers, manufacturers of CGM and smartphones

WEBLINK: <https://bit.ly/2LNgl05>










Smart Home Devices & Appliances

WiFi Radio Signals Let MIT Researchers Track Movements of People (1/2)

– June 13, 2018

Applicable Product Categories:

Smart Home Services

 Technologies	Artificial Intelligence	 Therapeutic Areas	All
 Applications	Software Solutions	 Geographic Focus	US / Global
 Segment Focus	Medical Grade / Hospitals	 Topics (News type)	Care Delivery Innovation
 Companies	Massachusetts Institute of Technology	 Others	NA

ANALYST TAKE:

- **Synopsis:** An AI algorithm can track people's movement through walls, allowing real-time tracking of people in hospital buildings.
- **Industry Need:** Tracking patients who wander from their beds (especially those suffering from dementia due to Alzheimer's or Parkinson's), and also ensuring other patients move enough, instead of staying in bed for too long are a constant challenge for nurses. The same challenges also exist for elderly care facilities, senior / assisted living homes and also in the aging-in-place category of care delivery applications.

WiFi Radio Signals Let MIT Researchers Track Movements of People (2/2)

– June 13, 2018

- **Value Proposition:** Using WiFi radio signals that bounce off of human bodies, but pass easily through walls, an AI algorithm can detect human body location and movement, and depict it as stick figures.
 - Because the system uses WiFi, infrastructure for which already exists in most facilities, capital costs are drastically reduced.
 - The system can ‘see through walls’ – which means a direct line of sight is not necessary for the reader to locate and track people. As opposed to CCTV cameras (video feeds from which could also be used for AI-based tracking), this approach reduces cost (of multiple cameras to cover all possible angles to enable a direct line of sight).
 - The system can also work even if multiple people cross paths, tracking all of them efficiently and simultaneously.
 - Applications also exist for tracking muscle and nerve disorder patients’ movements to help with physiotherapy and tracking progress.
 - Frost & Sullivan believes the tech to be very relevant for the Smart Home space as well. With several new research approaches emerging that can monitor residents’ vitals with non-contact, radio frequency based technologies, a system that can track movement of people is very useful. This is because the unobtrusive nature of non-contact monitoring, coupled with an approach that alleviates privacy concerns associated with the use of cameras is an industry need. While sensors can do the same, that requires additional infrastructure installations, while smart homes already have WiFi systems in place. Going forward, the tech has the potential to disrupt even simple motion sensor applications such as turning on lights in a room when detecting the resident’s entry.
- **Target End-User:** Hospitals, Elder-care / senior living facilities, nursing homes and in the future, smart homes.

WEBLINK: <https://bit.ly/2LONyIU>

Dutch Government Mandates 100% Smart Meter Roll-Out By 2020

– June 11, 2018

Applicable Product Categories:

Smart Home Devices

 Technologies	Sensors	 Therapeutic Areas	NA
 Applications	IoT	 Geographic Focus	Netherlands
 Segment Focus	Consumer Grade	 Topics (News type)	Regulation
 Companies	NA	 Others	NA

ANALYST TAKE:

- **Synopsis:** As a country, the Netherlands has mandated the roll out of smart meters to all homes, targeting 100% coverage by 2020.
- **Industry Need:** Smart meters solve several challenges with energy usage today – improved accuracy and efficiency in capturing data on energy usage and billing, so consumers pay the right amount for energy used, and analytics on city block, city, region or national level to ascertain trends and patterns of electricity usage, correlating those with weather changes to enable not just dynamic pricing, but also planning and preparing for energy demands.
- Frost & Sullivan believes this to be the first country to mandate the usage of smart technology on a national level, across applications. This signals a trend towards governments and regulatory bodies adapting to change, and adopting technologies that can demonstrate cost savings or other significant benefits. For healthcare applications, as is the case today with hospitals and payers, any smart home technology will have to demonstrate potential for benefits, and ongoing trends can allow for similar regulations that can drive the industry forward for adoption.

WEBLINK: <https://bit.ly/2JE72tR>