

Healthcare Market Updates



TMX	15
CHK	
AAPL	+2.35
PRTG	+0.14
AMZN	-0.73
TSLA	+1.08
AVGO	-0.87
SIRI	-0.65

Weekly Newsletter
Issue 16
24th August, 2018

Table of Contents

Category/ News Heading	Page No.
Wearables	<u>3 – 9</u>
Fitbit's Latest Fitness Tracker Will Not Outrun the Apple Watch Dragon	<u>4</u>
Best Buy's remote patient monitoring falls short, but the potential is there	<u>6</u>
Anthem to Give Propeller Health Digital Tool to Ohio MA Patients With COPD	<u>8</u>
Mobile Phones/ mHealth	<u>10 – 17</u>
Birth control: The condom, the pill and now, the smartphone?	<u>11</u>
UK health chiefs block controversial app for patient safety concerns	<u>13</u>
ResApp partners with DoD on deployment readiness app	<u>15</u>
Smart Home Devices & Appliances	<u>17-19</u>
Printable tags turn everyday objects into smart, connected devices	<u>18</u>
Subaru selects Ottawa startup to connect cars to smart homes	<u>19</u>

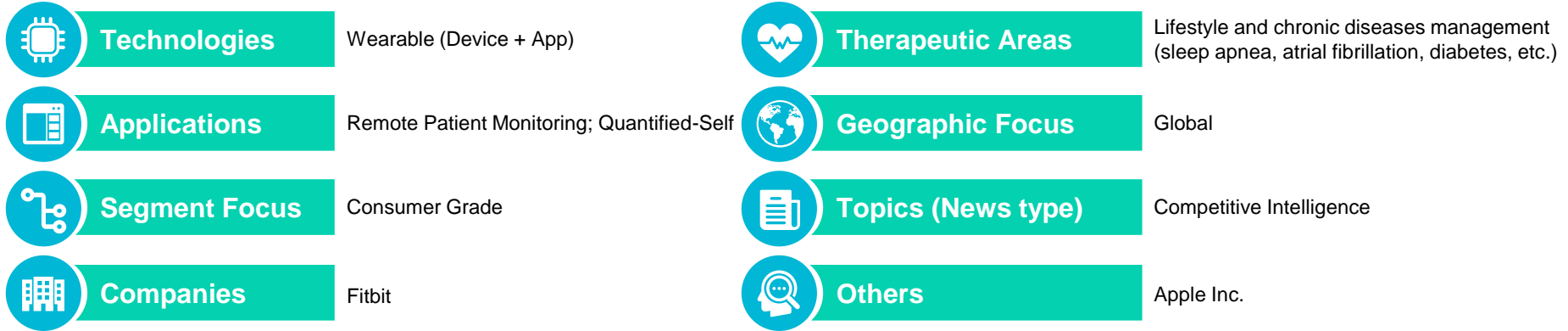


Wearables

Fitbit's Latest Fitness Tracker Will Not Outrun the Apple Watch Dragon – August 20, 2018 (1/2)

Applicable Product Categories:

Wearable



ANALYST TAKE:

- **Synopsis:** Fitness tracker maker Fitbit Inc. (NYSE: FIT) introduced its latest Charge 3 tracker – updates to its wearable line with health tracking features and the stock got a boost of nearly 5% to around \$6 on the announcement.
- When it comes to wearables technologies and healthcare, strong customer demand and surging sales are only part of the story. The other part is the highly volatile marketplace, where due to intense competition there is a revolving door of company entries and exits. This makes industry experts believe that healthcare wearable technologies are approaching a tipping point that will elevate the focus from fitness or activity tracking devices to more seamless and clinically vetted devices (smartwatch/hearables/smart-glass) with intelligence solutions for meaningful health use cases. For example based on industry estimates, the compound annual growth rate (CAGR) for smartwatches in the period 2018 to 2022 is 19.6%, while wristband shipments are forecast to grow at a CAGR of 0.4%.

Fitbit's Latest Fitness Tracker Will Not Outrun the Apple Watch Dragon – August 20, 2018 (2/2)









- **Value Proposition:** Fitbit launched a new iteration of its fitness tracker product-line, which include new features such as SpO2 sensing to detect changes in blood oxygen levels that can be leveraged to indicate problems such as sleep apnea or asthma. The Charge 3, which rolls out in October 2018, for \$150, includes more than 14 goal-based exercise modes and female health tracking. The company also announced a new Sleep Score beta, available later this year, that uses heart rate sensors to provide a nightly score and more complete picture of a user's sleep quality.
- Fitbit continues to harness its data to give users actionable insights into their health and wellness. A recent study in the Annals of Behavioral Medicine showed that having patients use a Fitbit during hospitalization [can lower patient readmissions](#) after surgery for metastatic peritoneal cancer.
- Frost & Sullivan believes, despite Fitbit's efforts to steadily make inroads into the clinical space, the value proposition of its fitness tracker against next-gen smart-wearables (smartwatch/hearables/smart-glass) limits the competitive appeal and miss on the innovation index of tech-savvy millennial consumer expectations. It is further evident from the fact, how Fitbit once the leader in health wearable space have been losing market share to competition. For example, Apple Inc. (NASDAQ: AAPL) lifted its share of the wearables market from 10.8% in 2016 to 15.3% while former top contender Fitbit saw its share dip from 21.5% to 13.3%.
- Based on Frost & Sullivan's research - For wearable technologies often use case dictates the market positioning and key target audience. With the shifting focus toward more clinically meaningful use cases, wearable devices once seen as niche devices appealing only to B2C gadget lovers and early adopters are slowly getting into the mainstream with broader application into B2B healthcare arena. This necessitates health wearables to go beyond consumers and justify their value to other potential stakeholders (payers, patients, clinicians, hospitals, employers, and so on) to instill trust and buy-in for the stated use cases and health applications.
- **Target End-User:** Healthcare consumers, homecare, fitness/wellness, behavioral health

WEBLINK: <https://247wallst.com/consumer-products/2018/08/20/fitbits-latest-fitness-tracker-will-not-outrun-the-apple-watch-dragon/>

Best Buy's remote patient monitoring falls short, but the potential is there – August 22, 2018 (1/2)

Applicable Product Categories:

Wearable

 Technologies	Wearable (Device + App)	 Therapeutic Areas	Lifestyle and chronic diseases management (sleep apnea, atrial fibrillation, diabetes, etc.)
 Applications	Remote Patient Monitoring; Quantified-Self	 Geographic Focus	Global
 Segment Focus	Consumer Grade	 Topics (News type)	Tech Partnership; Competitive Intelligence
 Companies	Best Buy; GreatCall	 Others	NA

ANALYST TAKE:

- **Synopsis:** Recently, Best Buy has made headlines with major business moves in the healthcare space, first highlighting its partnership with Assured Living, and now acquiring GreatCall for \$800 million.

Industry Need

- One of the most transformative shifts we are starting to see in Healthcare is the rise of this concept called 'Consumerism', where average individual demand a retail-like buying experience for healthcare services. Entailing this Frost & Sullivan view a fundamental convergence of healthcare with IT and retail industry to leverage best practices in tech and business models to ensure patient-centricity and innovation. Moving forward progressive digital marketplace vendors such as Amazon, Ali Health and Best Buy among others are expected to disrupt the current commerce models enabling a higher level of customer experience around B2C healthcare interactions (e.g. Fitness, nutrition, wellness and self-health management programs).

Best Buy's remote patient monitoring falls short, but the potential is there –

August 22, 2018 (2/2)









- **Value Proposition:** With the purchase of GreatCall, known for its line of consumer-facing health and wellness communications devices, flip phones and wearable personal emergency response services (PERS) devices, Best Buy is certainly putting together the pieces to serve the wellness and healthcare needs of the growing senior population. But breaking down what capabilities it has now and what has potential is important. Buzzwords like remote patient monitoring have begun to be thrown around too loosely. Best Buy reported that, it will bring its merchandising, marketing, sales and services capabilities to GreatCall's services. The retailer notes that it already has a growing health and wellness products business, and has recently invested in health initiatives for older consumers, partnering with health care providers and insurers.
- Frost & Sullivan view this move from Best Buy a symbolic evolution of digital retailers (such as Amazon and Ali Health) growing interest in the healthcare space to provide more all-encompassing services than sales of goods to their existing customer base. Given the increasing trend of healthcare consumerism (where average healthcare consumers expect a retail like buying experience) the foray of Best Buy (and others) in collaboration with wearable/ mHealth vendors further accentuate that there is very strong synergy for digital retail to the increasingly personal and one-to-one nature of health care. Despite speculations around Best Buy's expedition in the healthcare space to explore possible synergies and monetization opportunities with remote patient monitoring services, Frost & Sullivan believe it will be rough road given the complexities and highly regulated nature of healthcare industry (unlike others). Certainly, segments such as homecare, self-health, fitness/wellness services that often target out-of-pocket spending by healthcare consumer demonstrate low hanging opportunity when compared to reimbursement driven clinical services/products.
- **Target End-User:** Healthcare consumers, homecare, fitness/wellness, behavioral health

WEBLINK: <https://www.dotmed.com/news/story/44160/>

Anthem to Give Propeller Health Digital Tool to Ohio MA Patients With COPD – August 22, 2018 (1/2)

Applicable Product Categories:

Wearable

 Technologies	Wearable (Device + App)	 Therapeutic Areas	COPD and Lifestyle diseases management
 Applications	Preventive care; Remote Patient Monitoring	 Geographic Focus	UA (Ohio, Ma)
 Segment Focus	Consumer Grade	 Topics (News type)	Tech Partnership; Competitive Intelligence
 Companies	Anthem; Propeller Health	 Others	NA

ANALYST TAKE:

- **Synopsis:** Anthem Blue Cross and Blue Shield in Ohio (Anthem) recently announced the rollout of an innovative new program, with Propeller Health's collaboration, to help improve health outcomes for Ohio consumers enrolled in Anthem's Medicare Advantage health plans who have chronic obstructive pulmonary disease (COPD).
- **Industry Need:** Frost & Sullivan view a majority of current health insurance policies being aged and often fail to meet the personalized needs of individuals. To ensure future growth, globally a number of progressive insurers (e.g. United Health, Oscar, Vitality, etc.) are already providing data and digital-driven healthcare services and wellness programs to promote preventive care practice with personalize recommendations and reduce the overall cost from claims. Given the annual spending on asthma alone in the United States is about \$18 billion, wearable enabled preventive healthcare programs provide a compelling opportunity for optimal management of COPD conditions, helping patients to live a better and longer life.

Anthem to Give Propeller Health Digital Tool to Ohio MA Patients With COPD – August 22, 2018 (2/2)

Value Proposition:

- Under the newly launched Anthem Blue Cross and Blue Shield for its Ohio Medicare Advantage (MA) plans, now patients with chronic obstructive pulmonary disease (COPD) with a history of at least 1 emergency department visit or hospitalization are eligible for a new digital health initiative, where it will cover digital sensors from Propeller Health.
- The digital medicine consists of small sensors that easily attach to consumers' existing inhalers. The sensors are paired with a mobile app to automatically track medication use and provide personal feedback and insights that help individuals manage and cope with symptoms. Anthem's care management team will also use Propeller's online provider portal to help understand consumers' progress in managing their COPD, providing more targeted, personalized care and treatment. Consumers need a history of at least one emergency room visit or hospitalization caused by COPD to be eligible for this program.
- Propeller Health also vouch that its system results in fewer respiratory hospitalizations as well as ED visits. For example, Propeller Health believe its systems would help to improve control by more than 60% and can warn of oncoming exacerbations for conditions such as asthma.
- Considering the fact that, currently there is no cure for majority of COPD conditions, Frost & Sullivan view, wearable-enabled digital health coaching platforms and wellness programs with proven behavioural therapies emerging as efficient alternatives to manage lifestyle driven chronic health conditions such as COPD. Frost & Sullivan believes, collaboration between Anthem and Propeller will provide individuals access to connected care technology that will help them more easily manage their COPD, in order to help them have a better quality of life. Additionally, Frost & Sullivan also anticipates favorable policy changes toward reimbursement for digital health and wellness technologies especially in the US market to provide more flexibility for emerging digitally-led insurance models. Moving forward, it will be interesting to track how Anthem will continue to focus on improving consumers' healthcare experience by increasing access to high-quality, meaningful solutions.
- **Target End-User:** Healthcare consumers, homecare, fitness/wellness, behavioral health

WEBLINK: <https://www.ajmc.com/newsroom/anthem-to-give-propeller-health-digital-tool-to-ohio-ma-patients-with-copd>











Mobile Phones/ mHealth

Birth control: The condom, the pill and now, the smartphone? – August 18, 2018 (1/2)

Applicable Product Categories:

Mobile Phones

 Technologies	mHealth App	 Therapeutic Areas	Fertility
 Applications	mHealth	 Geographic Focus	Global
 Segment Focus	Clinical Grade	 Topics (News type)	Regulation; Business/ Monetization Model Innovation
 Companies	Natural Cycles	 Others	NA

ANALYST TAKE:

Synopsis: Swedish start-up, Natural Cycles' mobile fertility app is the first ever digital contraceptive device to get FDA marketing approval. The app, which tracks women's menstrual cycle using the body temperature inputs, uses an algorithm to determine when they're fertile and should abstain from unprotected sex.

Industry Need:

- There are ample number of fertility based apps which track menstrual cycles and offers insights on women's fertility to help them conceive. However, the FDA approval offers the added dimension to this app as a digital contraceptive based positioning.
- The news is in line with the industry trend in the mHealth market, wherein companies, taking the cue from FDA Pre-Cert Program, are moving towards clinically vetted, specialized product categories with meaningful health use cases to enhance their sustainability and appeal.

Birth control: The condom, the pill and now, the smartphone? – August 18, 2018 (2/2)

Value Proposition:

- The Natural Cycles app tracks the women's menstrual cycle through periodic body temperature inputs. An inbuilt algorithm tracks monthly cycles and offers suggestions on the fertile period to encourage usage of contraceptives.
- The app received EU certification in 2017 and has already reported 900,000 users, reflecting the extreme pace of adoption. However, there have been questions on its positioning as a digital contraceptive and its effectiveness due to some reports of unwanted pregnancies and resulting investigations by authorities.
- The app, while being similar to any other period tracker, is marketed as a digital contraceptive based on the EU and FDA approval.
- The FDA gave its approval based on data from Natural Cycles involving 15,570 women who used the app for an average of eight months and based on the premise that the app, if used correctly will result in 1.8% of women getting pregnant over one year. The "typical use" failure rate, which factors in human error, was 6.5%.
- Frost & Sullivan estimates peg the global usage of clinically validated mHealth apps at around 85.3 million, with a revenue of \$3.4 billion in 2018. The respective figures are expected to rise to 313.5 million and \$10.9 billion by 2024. Women's health is a growing segment and the app's swift adoption reflects the growth potential of the segment. However, given the regulatory challenges regarding marketing and labeling a medical device based on its intended use and the complications related to strict prescription based usage in the US, it would be interesting to see if the company adapts the positioning while launching the app in the US.
- **Target End-User:** Women

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

UK health chiefs block controversial app for patient safety concerns – August 21, 2018 (1/2)

Applicable Product Categories:

Mobile Phones



ANALYST TAKE:

Synopsis: The roll-out of Babylon Health’s GP at Hand has been prohibited by the NHS officials in Birmingham on concerns of patient safety and cybersecurity.

Industry Need:

- UK is among the countries seeing the lowest amount of primary care funding, at around 15% of total healthcare budget, as opposed to an average of around 20% in other European countries like France and Germany. Consequently, there has been a chronic need for modernization of primary care infrastructure through seamless IT integration as well as tele-health and tele-consultation tools for easy and timely access
- In line with this, the NHS in London partnered with Babylon Health to leverage its GP at Hand AI based chatbot tool to improve its primary care services. The model has been highly successful in London with the app attracting 26,000 users in London, accelerating to a rate of one person every two minutes, despite the fact that these people have had to switch registration from their existing doctor to receive the advice.

UK health chiefs block controversial app for patient safety concerns – August 21, 2018 (2/2)

Value Proposition:

- The issue began in June 2018 when Babylon had applied for an expansion of its site in Birmingham. However, Birmingham and Solihull CCG formally objected to the contract 'on the grounds of patient safety', and, also amidst the [ongoing security concerns](#) owing to WannaCry ransomware attacks due to which the NHS lost 10,000 patient records.
- The officials also fear that serious, less obvious symptoms that doctors pick up when they see patients in real, might be missed through virtual consultations.
- Frost & Sullivan believes that cybersecurity has been a major concern area for a majority of participants in the industry. The lack of basic preventive education of the care staff coupled with loose ends in provider systems, further weakens the overall cyber defense. However, industry participants ranging from medical device manufacturers, digital health players, as well as healthcare IT and consulting companies have all begun working in this space to improve medical data and device security features. They have taken up this issue very seriously and have been working with government agencies as well as security researchers to augment cybersecurity of their devices and systems. They have also been deploying better cybersecurity standards in their design and development process to minimize risks and help reduce exploitation, address known malwares, enhance security controls and expand security awareness. A number of specialized healthcare cyber-security companies also operate in this field. A few examples include Clearwater Compliance, NexusGuard, DB Networks, Digidert and Coalfire. There have been significant collaborations by healthcare industry participants with such firms to augment their systems and prevent any potential breach. There is also a growing interest in using blockchain technology for encryption of patient-generated health data and medical device data security. On the other hand, the concerns regarding misdiagnosis and mistreatment have been mitigated to a reasonable extent by the app's successful run and its ensuing impact assessment which showed that tool is "more likely to address most barriers than traditional GP services" in 10 out of 11 protected groups.
- **Target End-User:** GP, patients, lawmakers









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

ResApp partners with DoD on deployment readiness app – August 22, 2018

(1/2)

Applicable Product Categories:

Mobile Phones

 Technologies	Sensors; mHealth App	 Therapeutic Areas	Preventive care
 Applications	Data Analytics; mHealth Apps; Real-time and Remote Health Monitoring	 Geographic Focus	US
 Segment Focus	Clinical Grade	 Topics (News type)	Technology Innovation, Care Delivery Innovations
 Companies	ResApp, Lockheed Martin	 Others	Defense Advanced Research Projects Agency (DARPA)

ANALYST TAKE:

Synopsis: Australia's ResApp, which creates smartphone apps for the diagnosis and management of respiratory diseases, has announced a partnership with Lockheed Martin, to join the US Government's Warfighter Analytics using Smartphones for Health (WASH) effort and develop mobile applications to help determine the mission-readiness of American military personnel.

Industry Need:

- The immediate need for the defense establishment is to enhance continuous real-time health monitoring for their war fighters and conservation of resources. There have been increasing focus by the American defense establishment DARPA to collect real-time monitoring data of its warfighters through innovative smartphone features including cameras, light sensors, pedometers, fingerprint sensors, microphones and other sources.
- The technology has immense implications for the broader patient population for healthcare access, remote health monitoring, clinical trial management and enable better healthcare outcomes.

Value Proposition:

- As per the agreement, ResApp will leverage its expertise in audio-based machine learning algorithms to diagnose and measure the respiratory conditions using smartphone microphones.
- Frost & Sullivan believes that this is in continuation to a previous announcement by DARPA to contract Kryptowire, a cybersecurity company, to assess service members' health using mobile device sensors for its WASH program. The app was intended to collect data from smartphone features including cameras, light sensors, pedometers, fingerprint sensors, microphones and other sources and use intuitive algorithm based analysis of the raw data to enable continuous, real-time, contextual and cognitive health assessment of soldiers. In addition to assessment of physiological signals, the app would also track medication adherence and detect physical impairment and illness for soldiers, thus enabling effective issue resolution and better resource management .
- **Target End-User:** Clinical trial agencies; researchers and regulatory authorities; care delivery systems; security establishments











Smart Home Devices & Appliances

Printable tags turn everyday objects into smart, connected devices

– August 16, 2018

Applicable Product Categories:

Home Appliances, Smart Speaker

 Technologies	Sensors	 Therapeutic Areas	NA
 Applications	IoT	 Geographic Focus	Global
 Segment Focus	Consumer Grade	 Topics (News type)	Tech Innovation
 Companies	University of California - San Diego	 Others	-









ANALYST TAKE:

- **Synopsis:** Printable metal tags can be attached to any object to make them smart IoT devices.
- Frost & Sullivan believes that in the long term, this could be revolutionary technology, allowing (a) making any everyday object into a smart one (without changing manufacturing or design processes), and (b) make existing products smart, without requiring customers to replace their lights with as smart one, for example (it would still require installation support, or simplified installation instructions). Implications for any smart ecosystem player today include – requirement to connect to more ‘pseudo-smart’ devices and underlying analytics and insight generation capabilities, and also potential for system overload that must be addressed.

WEBLINK: <https://bit.ly/2L3mSud>

Subaru selects Ottawa startup to connect cars to smart homes – August 21, 2018

Applicable Product Categories: Smart Home

 Technologies	Sensors, Smart Speakers	 Therapeutic Areas	NA
 Applications	AI, IoT	 Geographic Focus	US
 Segment Focus	Consumer Grade	 Topics (News type)	Competitive Intelligence, Tech Innovation
 Companies	Subaru, Evolved Vehicle Environments	 Others	-

ANALYST TAKE:

- **Synopsis:** Vehicle manufacturer Subaru has partnered with Evolved Vehicle Environments, a Canadian startup, to integrate EVEConnect software in to Subaru's Starlink in-vehicle tech. The EVE platform "allows drivers to control hundreds of smart home devices such as lights, thermostats and security systems from the car's dashboard", and will be available through Subaru's app on a subscription model.
- Frost & Sullivan believes that in the long run, IoMT (Internet of Medical Things), and IoT ecosystems will evolve to have all environments connected to one another, seamlessly –the focus will be the user, not limited by their location. While we are seeing heart monitoring and vitals detecting technology entering car seat belts and other areas on the one hand, Amazon Alexa is available in Ford, Nissan and BMW models. These partnerships are evidence that are world is getting connected, not just pockets around home or car. The future may also involve such technologies entering our workplace – ensuring almost 24/7 monitoring of health and wellness, in addition to convenience and comfort.

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