



Healthcare Market Updates



OHK		
AAPL	+2.35	
PRTG	-0.14	
AMZN	-0.73	
TSLA	+1.08	
AVGO	-0.87	-3.0%
SIRI	-0.65	

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Table of Contents

Category/ News Heading	Page No.
Wearables	<u>3-10</u>
Microsoft's Glasses to Monitor Blood Pressure	<u>4</u>
Fitbit to Share Medical Records Using Google Cloud Healthcare API	<u>6</u>
Fitbit, Blue Cross Blue Shield team up to discount device prices for members	<u>8</u>
V-Go Shown to Have Improved Benefit for Insulin Patients	<u>9</u>
Mobile Phones/ mHealth	<u>11 – 14</u>
CVS Offers Doc Visits via Smartphone Video	<u>12</u>
DoseSmart Medication Adherence Platform and Smart-Pill Bottle are Now Part of the Epic App Orchard	<u>14</u>
Smart Home Devices & Appliances	<u>15-18</u>
This desktop robot from Anki is like Amazon Alexa — but cuter	<u>16</u>
Google Assistant on Android is getting some handy smart home controls	<u>17</u>
Recent Walmart Patent Application Describes Blockchain-Managed Smart Appliances	<u>18</u>



Wearables

Microsoft's Glasses to Monitor Blood Pressure— 07 Aug, 2018 (1/2)

Applicable Product Categories:

Wearables

 Technologies	Wearable (eyeglass device)	 Therapeutic Areas	Lifestyle and chronic health conditions
 Applications	Remote BP Monitoring	 Geographic Focus	US / Global
 Segment Focus	Consumer Grade	 Topics (News type)	Tech Innovation / Competitive Intelligence
 Companies	Microsoft	 Others	Google, Apple, Asus, Omron

ANALYST TAKE:

- **Synopsis:** Microsoft filed a patent for an eyeglass monitor capable of tracking blood pressure called Glabella, that is designed to be easier to use and more accurate than a traditional inflatable cuff.
- **Industry Need:** Blood pressure is one of the most critical health vitals monitored to facilitate early diagnosis of a patient's deteriorating health condition. Based on Frost & Sullivan's research, despite prevalent applications, innovation around BP monitors has been limited in the past few decades. So far BP monitoring devices that comprise an inflatable cuff have been the gold standard for both point-of-care and home-based BP monitoring. However, as the industry move towards preventive care concepts, healthcare industry needs more easy to use critical vital monitors that can seamlessly integrate into users' daily life.

Microsoft's Glasses to Monitor Blood Pressure— 07 Aug, 2018 (2/2)

- **Value Proposition:** Microsoft's eyeglass prototype called 'Glabella' incorporates optical sensors, processing, storage, and communication components, all integrated into the frame to passively collect physiological data about the user without the need for any interaction. The Glabella device continuously records the stream of reflected light intensities from blood flow as well as inertial measurements of the user's head. From the temporal differences in pulse events across the sensors, the Glabella prototype derives the wearer's pulse transit time on a beat-to-beat basis. Microsoft's patent application also states that the Glabella device can continuously measure and store the user's pulse waves at three different sites on the face and employs inertial sensors and a processing unit that compares the continuously recorded pulse waves to obtain the user's pulse transit time – the delay between the moments at which the blood ejected from the heart reaches the three sites.
- Given Microsoft's not so successful past in the wearable space (e.g. Microsoft band and smartwatch), Frost & Sullivan views the Glabella device more of an innovation play – where the software giant aims to go beyond the 'me-too' value proposition and replace the traditional inflatable cuff monitor blood pressure with more patient-centric design to seamlessly integrate with average consumer day-to-day life. Furthermore, Microsoft's eyeglass patent comes as a timely response against other tech giant rivals such as Apple, Amazon, Google, and Samsung who have also all filed multiple patents that offer clues about forthcoming potential ground-breaking technology in the wearable space. For example, Google, recently filed a patent for eyeglasses that could help kids with autism better understand faces & emotions; and Apple filed a patent application for a wrist-worn wearable blood pressure monitoring device.
- Frost & Sullivan also views 2018 as an innovation breakthrough year for BP monitoring solutions and anticipates increased competition especially for the clinical-grade BP monitoring wearable segment as leading vendors such as Asus (VivoWatch BP) and Omron (HeartGuide) are also expected to release their smartwatch-style BP monitor in the next 12-18 months time. However, the future success of all these devices depends on their ability to receive FDA approval and meet the industry gold standards.
- **Target End-User:** Healthcare consumers, homecare/ remote care settings, research and clinical trials sponsors, insurance and wellness programs.

WEBLINK: <https://bit.ly/2On6CpU>

Fitbit to Share Medical Records Using Google Cloud Healthcare API—09 Aug, 2018 (1/2)

Applicable Product Categories:

Wearables

 Technologies	Wearable (Device + Cloud Platform)	 Therapeutic Areas	Lifestyle and chronic health conditions
 Applications	Data interoperability	 Geographic Focus	US / Global
 Segment Focus	Consumer Grade	 Topics (News type)	Tech Partnership / Competitive Intelligence
 Companies	Fitbit; Google	 Others	NA

ANALYST TAKE:

- **Synopsis:** Fitbit, the global wearables manufacturer announced its plans to use Google's new Cloud Healthcare API by connecting user data with electronic medical records (EMR).
- **Industry Need:** Unfortunately, a vast majority of smart wearables available in today's market are not capable to capture data in a meaningful way that would be consistent and reliable enough for making clinical decision making. Moving forward it will become critical to underscore how the wearable generated data can be integrated with mainstream HIT systems (e.g. EHR/EMR), and can be leveraged by physicians / care providers as a secondary diagnostic tool / digital biomarkers for more meaningful clinical and medical applications.

Fitbit to Share Medical Records Using Google Cloud Healthcare API—09 Aug, 2018 (2/2)

- **Value Proposition:** Fitbit is focused on integrating recorded data from wearable devices with the records in healthcare systems to increase the sharing efficiency of medical records with healthcare providers. The company believes that combining Fitbit data with EMRs can provide patients and clinicians a more comprehensive view of the patient profile to provide personalized care. Furthermore, this collaboration is expected to accelerate the pace of innovation, which can define the next generation of healthcare and wearable applications.
- The companies will work on better monitoring and analysis of chronic conditions such as diabetes and hypertension by using services such as Fitbit's recently acquired 'Twine Health'. Using Google's Cloud Healthcare API, 'Twine' can make it easier for clinicians and patients to collaborate on care, helping lead to better health outcomes and positive returns for employers, health plans, and hospitals. Google Cloud will provide Fitbit with next-generation cloud services and engineering support, allowing Fitbit to scale faster. Fitbit products are carried in over 45,000 retail stores and in 86 countries.
- Frost & Sullivan views this collaboration as Fitbit's continuous commitment towards building best-of-breed industry collaborations for future sustainability. For example, to revive its depleting market share in the consumer health wearable segment against competitors (such as Apple and Samsung), Fitbit has collaborated with Google and multiple digital health start-ups in the recent past - to quickly expand its smartwatches based platform solutions, for both, the consumer and clinical health spaces.
- Frost & Sullivan also views this specific Fitbit-Google deal a response to competitor Apple's recent move to provide developers access to Health Records API for improved consumer health care. Moving forward it will be interesting to watch how these tech-giants flesh out their strategy and ecosystem partnership to monetize health data economy.
- **Target End-User:** Healthcare consumers, homecare/ remote care settings, research and clinical trials sponsors, insurance and wellness programs.

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

Fitbit, Blue Cross Blue Shield team up to discount device prices for members— 08 Aug, 2018

Applicable Product Categories:

Wearables

 Technologies	Wearable (Device)	 Therapeutic Areas	Lifestyle and chronic health conditions
 Applications	Incentive-based Wellness Programs	 Geographic Focus	US
 Segment Focus	Consumer Grade	 Topics (News type)	Business Model / Competitive Intelligence
 Companies	Fitbit; Blue Cross Blue Shield (BCBS)	 Others	NA

ANALYST TAKE:

- **Synopsis:** Buying a Fitbit is now cheaper for some BCBS members, following a deal between the major payer and wearable company.
- **Industry Need:** The health insurance policies available today are aged and often fail to meet the personalized needs of individuals. To ensure future growth globally a number of insurers are already providing data and digital-driven healthcare services to their policyholders to personalize experience and reduce the cost from claims.
- **Value Proposition:** The deal gives members special rates on Fitbit devices if they purchase through the Blue365 portal. It will also let employers buy Fitbit devices at a bulk or subsidized rate for their employees. According to the insurer, 60 million members are eligible for the program, which includes trackers and watches. Frost & Sullivan views this as a win-win deal - BCBS can leverage Fitbit wearable generated data to understand the unique needs / risk profile of its members and provide targeted premiums on plans and wellness programs. Fitbit on the other hand, gets easy access to BCBS 60 million members to engage them in a more rewarding way. Furthermore, this brings a new client to Fitbit's on-going employee health programs which include company's employer customers such as York Life, Sharp Healthcare, Humana, and Castlight. Frost & Sullivan also anticipates, moving forward, wearable data-driven incentives impacting premiums will become standard in payer-corporate partnerships, spurring a multitude of wellness programs, globally.

WEBLINK: <https://bit.ly/2vVp950>

V-Go Shown to Have Improved Benefit for Insulin Patients— 30 July, 2018 (1/2)

Applicable Product Categories:

Wearables

 Technologies	Wearable (Device)	 Therapeutic Areas	Diabetes
 Applications	Wearable-based insulin delivery device	 Geographic Focus	US / Global
 Segment Focus	Consumer Grade	 Topics (News type)	Tech Innovation / Competitive Intelligence
 Companies	Google	 Others	NA

ANALYST TAKE:

- **Synopsis:** Valeritas Holdings has developed V-Go, a wearable insulin delivery device and presented data about the technology at the Metabolic & Endocrine Disease Summit in San Diego, CA.
- **Industry Need:** Based on WHO estimates, Diabetes is predicted to become the 7th leading cause of death in the world by 2030. In 2014, diabetes expenditure reached \$612 billion globally; costs US health system \$245 billion per year. Wearable insulin delivery devices hold the potential to empower patients to gain control over their blood glucose levels using and minimizes the hassles of taking insulin and dealing with needles, with discreet delivery options.

V-Go Shown to Have Improved Benefit for Insulin Patients— 30 July, 2018 (2/2)

- **Value Proposition:** The study demonstrated that patients treated by advanced practitioners experienced improved A1c levels while lowering insulin total daily dose (TDD) after switching to V-Go from multiple daily injections (MDI) of insulin. Patients in this study were evaluated after a mean duration of three and seven months. At three months, the mean change in A1c was -1.1% from the mean baseline of 9.1%, and mean insulin TDD decreased to 58 units per day from a mean baseline of 87 units per day. At seven months, the mean change in A1c was also -1.1%, while the mean insulin TDD was 61 units per day. Change in the mean weight was less than 1 kg at both time points.
- Additionally, Valeritas V-GO is an FDA approved all-in-one basal-bolus insulin delivery option for patients and is designed to deliver a continuous present basal rate of insulin over a 24 hour period, while also providing on-demand dosing at mealtimes to help patients control blood sugar levels. The wearable doesn't require the setup of an infusion site, and instead is filled before placing on the body under the clothing. Once applied to the skin, the device inserts a small needle into the skin that can allow patients to move freely throughout the day without experiencing discomfort because of the needle.
- For many patients with type 2 diabetes, being able to adhere to an insulin regimen consisting of MDI is a real challenge as it can be burdensome to daily living. Considering the challenge faced by a large pool of insulin dependent diabetes patients, Frost & Sullivan views the V-GO as an ideal patient-centric wearable solution to improve medication adherence, as well as preventive care practices. Furthermore, a recent end-user survey reveals V-Go has been well received by patients as it removes the need for multiple injections, is simple to use, and has enabled many of my patients to lower their glucose, use less insulin, and not gain the weight normally seen with intensified insulin therapy.
- **Target End-User:** Health Systems, Government, Healthcare Communities, Consumers

WEBLINK: <https://bit.ly/2M55cn4>



Mobile Phones/ mHealth

CVS Offers Doc Visits via Smartphone Video — August 9, 2018 (1/2)

Applicable Product Categories:

Mobile Phones

 Technologies	mHealth, TeleHealth	 Therapeutic Areas	Respiratory Disease
 Applications	Smartphone video visits consultations	 Geographic Focus	US
 Segment Focus	Clinical Grade	 Topics (News type)	Care Delivery Innovation; Tech Innovation
 Companies	CVS Health; Teladoc	 Others	Walgreens, Anthem, RiteAid

ANALYST TAKE:

- **Synopsis:** CVS Health's retail clinic chain, MinuteClinic announced MinuteClinic Video Visits, their new virtual healthcare offering. The offering will start off with assisting people with minor illnesses and injuries, skin conditions, and other wellness needs.
- **Industry Need:**
 - Telehealth and telecare are mainly used to tackle issues pertaining to recurring hospital re-admissions and ED visits. There are high opportunities for these systems to better enable remote-care models across the continuum of care and also to support monitored emergency-response needs.
 - There is growing interest to leverage sensor-based, home-health devices and wearable technologies for reaping telehealth centered growth opportunities to improve patient engagement.

CVS Offers Doc Visits via Smartphone Video — August 9, 2018 (2/2)

- **Value Proposition:**

- The telehealth offering, which is available for both Android and iOS in nine states: Arizona, California, Florida, Idaho, Maine, Maryland, Mississippi, New Hampshire, Virginia and Washington, D.C., will provide 24/7 access to healthcare services via mobile devices.
 - The MinuteClinic Video Visit is expected to cost US\$59 with a potential option of insurance coverage in the coming months. The service is available to patients who are at least two years old and the treatment is limited to minor illnesses, minor injuries, or a skin condition.
 - The MinuteClinic Video Visits are initiated through the CVS Pharmacy app, which runs on the technology platform provided by virtual care provider Teladoc, a CVS partner for the past three years.
 - The company has been piloting telehealth services since 2014 and has collaborated with three telehealth companies — Teladoc, American Well, and Doctor on Demand. This is the first large scale launch of telehealth services by CVS, followed by recent launches by several other players such as Walgreens, Anthem and RiteAid.
- Frost & Sullivan believes that technologies such as tele-consultations, telehealth, remote monitoring, homecare, eHealth, and telemedicine are being increasingly preferred as alternatives to reducing unnecessary ED and physician visits, albeit their penetration levels are quite low. Higher deductible insurance plans, specifically in the US, are making patients think twice about visiting an ED unnecessarily, thereby improving the care efficiency. Recently, a major insurance provider announced that it will not reimburse for out-of-network ED visits for reasons it deems unnecessary, in a bid to force members to consider cheaper options.
- **Target End-User:** Patients, clinicians, hospital networks

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

DoseSmart Medication Adherence Platform and Smart-Pill Bottle are Now Part of the Epic App Orchard — August 9, 2018

Applicable Product Categories:

Mobile Phones

 Technologies	mHealth Apps	 Therapeutic Areas	Medication adherence
 Applications	Healthcare gamification	 Geographic Focus	US
 Segment Focus	Clinical Grade	 Topics (News type)	Care delivery innovation
 Companies	DoseSmart, Epic	 Others	NA

ANALYST TAKE:

- **Synopsis:** DoseSmart announced the availability of its Smart-pill bottle and mobile app based medication management platform: DoseSmart® FHIR in the Epic App Orchard.
- **Industry Need:** Medication non-adherence puts annual cost burden of around \$16.8 billion to US and Western European healthcare systems. EMR integrated medication adherence solutions are expected to further streamline the data interoperability and workflow issues from clinical to patient interface.
- **Value Proposition:** DoseSmart, a physician-driven medication adherence platform reduces the number of steps needed by both the patient and providers to set up medication adherence programs and limits mistakes from patients who self-enter their medications by automating the pre-population of patient data from the provider's EHR systems. Frost & Sullivan believes that in a slowly crowding space of medication adherence solutions, an integration of the platform with Epic EHR would further simplify the patient data population workflow, further reducing the chances of costly data entry errors, thus enhancing the solution's effectiveness for complex medication regimens.



Smart Home Devices & Appliances

This desktop robot from Anki is like Amazon Alexa — but cuter

– August 08, 2018

Applicable Product Categories:

Smart Home Devices

 Technologies	Robot / Smart Speakers	 Therapeutic Areas	NA
 Applications	AI, IoT	 Geographic Focus	Global
 Segment Focus	Consumer Grade	 Topics (News type)	Competitive Intelligence
 Companies	Anki	 Others	-

ANALYST TAKE:

- **Synopsis:** An electronics and AI startup, Anki, has released a small robot called Vector, which has voice controls like smart speakers. It will cost \$250, and will be launched in October.
- Frost & Sullivan believes that with several smart speakers now becoming available, product differentiation will be a challenge. One of Amazon's attempt was to allow users to order from the store using voice, but recent reports claims that only 1% of Echo users actually use this service. Anki, has taken the route of a different form factor, calling it a robot (which is a misused term in our opinion). Apart from the 'cuteness' factor, the underlying technology must be strong and glitch-free (when competing against giants like Google, the accuracy of whose AI for this use is a benchmark in itself) to actually take over. However, new emerging reports also claim that many smart speaker owners actually own more than one smart speaker – which is where such products can find short-term growth. However, true differentiation based in strong value-propositions (with healthcare applications, for example) will support long-term growth and sustainability.

WEBLINK: <https://cnb.cx/2M8banh>

Google Assistant on Android is getting some handy smart home controls

– August 08, 2018

Applicable Product Categories:

Smart Home Control

 Technologies	Smart Speakers	 Therapeutic Areas	NA
 Applications	AI, IoT	 Geographic Focus	Global
 Segment Focus	Consumer Grade	 Topics (News type)	Competitive Intelligence
 Companies	Google	 Others	-

ANALYST TAKE:

- **Synopsis:** Android users could use voice to activate smart home controls and by touch to tweak the controls.
- Frost & Sullivan agrees with this move – voice is a far superior mode of control, especially in certain situations such as for physically disabled, over existing alternatives. Yet, voice may not be the best form of control (yet) for every situation. This analyst personally uses a Google Home, and it's inability to detect 3 or more commands in one go (sometimes even more than 1) makes it a frustrating experience to fine-tune volume when playing a song – but the same experience applies for fine tuning a light's intensity or changing the thermostat temperature. Giving the users a second, touch-based option to do this makes it what the article describes accurately – “best of both worlds”. Given Google Home's increasing popularity for smart home controls, this seems to be a logical step. This control using Google Assistant can also enhance user experience of controlling smart home from even outside the home, and not using voice (from an office meeting for example).

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

Recent Walmart Patent Application Describes Blockchain-Managed Smart Appliances – August 03, 2018

Applicable Product Categories:

Smart Home Appliances

 Technologies	Blockchain	 Therapeutic Areas	NA
 Applications	Smart Appliances	 Geographic Focus	Global
 Segment Focus	Consumer Grade	 Topics (News type)	Competitive Intelligence, Technology Innovation
 Companies	Walmart	 Others	-

ANALYST TAKE:

- **Synopsis:** Walmart's patent application was published on Aug 2nd, and describes the application of blockchain technology for management of smart home appliances.
- Frost & Sullivan believes this is a future-looking move by Walmart. While the patent application describes different use cases such as drone delivery to a specified kiosk, there could be many more applications. Especially when smart appliances need to be more secure when they start becoming involved in financial transactions or dealing with health data of residents and users, where cybersecurity will become of utmost importance. While currently it would be difficult to comment on how important this need will be, current trends do point to the possibility of this happening in the future, especially when considering that wearables tracking health may become part of the smart home platform, to provide a holistic picture of patient health.

WEBLINK: <https://bit.ly/2vxqU8i>