

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
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Wearables

Connected armband detects 85 percent of nighttime epileptic seizures in new trial – October 29, 2018 (1/2)

Applicable Product Categories:

Wearables



ANALYST TAKE:

- **Synopsis:** A new study in the journal Neurology shows that the NightWatch, a connected armband from Leiden, Netherlands-based LivAssured, detected nighttime epileptic seizures 85% of the time.
- **Industry Need:** Till date, night time (nocturnal) seizures and their mechanisms are poorly understood. Research also suggests that, nocturnal seizures may also be predictors of obstructive sleep apnea (OSA) in epilepsy patients. However, night time seizures are among the most dangerous aspects of epilepsy and current ways of monitoring for them are inaccurate. Based on academic research, sudden unexpected death in epilepsy (SUDEP), is a major cause of mortality in epilepsy patients. For example, people with an intellectual disability and severe therapy resistant epilepsy, may even have a 20% lifetime risk of dying from epilepsy.

Connected armband detects 85 percent of nighttime epileptic seizures in new trial – October 29, 2018 (2/2)









- **Value Proposition:** The device, called the NightWatch has been under development for 20 years by a consortium that includes Kempenhaeghe Epilepsy centre, Eindhoven University of Technology, the Foundation for Epilepsy Institutions in the Netherlands (SEIN), UMC Utrecht, the Epilepsy Fund, patient representatives and LivAssured. It uses a combination of heart rate and activity monitoring to detect night time seizures, then wirelessly communicates to alert caregivers or nurses.
- **Clinical Validation Study Design and Results:**
 - In the study, 28 patients were monitored over a total of 1,826 nights (averaging 65 nights per participant), in which 809 major seizures occurred. Researchers compared the wearable to a standard-of-care bed sensor and used video monitoring to identify seizures both devices might have missed. In this multicenter, in-home, prospective, video-controlled cohort study, nocturnal seizures were detected by heart rate (photoplethysmography) or movement (3-D accelerometry) in persons with epilepsy and intellectual disability.
 - The study findings reported that, combining heart rate and movement resulted in reliable detection of a broad range of nocturnal seizures. For example, NightWatch performance was better compared to traditional bed sensors - detected 85% of seizures and 96% of tonic-clonic seizures, the most serious variety. The study showed that NightWatch is not only reasonably accurate, but also that care providers found the system easy to use, giving it an average score of 7.3 out of 10 for user-friendliness.
- Given that, epilepsy monitoring has been recognized as a prime use case for connected wearables for a number of years, Frost & Sullivan finds NightWatch a much needed product for epilepsy patients and their caregivers. The results from clinical validations are certainly encouraging given there are very few competing products in this space (e.g. Empatica). However, it will be interesting to watch how LivAssured approaches regulatory approvals for NightWatch and later finds the optimum market positioning to commercialize the product with intended end-users.
- **Target End-User:** Clinical Trials, Home care, and Health systems

WEBLINK: <https://bit.ly/2SGfwS8>

Atlazo Announces Plans to Launch Health-System-on-Chip™ for Intelligent Body-Worn Devices and IoMT – October 31, 2018 (1/2)

Applicable Product Categories:

Wearables

 Technologies	Wearable (device + mhealth app)	 Therapeutic Areas	NA
 Applications	Remote Patient Monitoring; Quantified-Self	 Geographic Focus	US / Global
 Segment Focus	Clinical / Consumer Grade	 Topics (News type)	Technology Innovation
 Companies	Atlazo	 Others	NA

ANALYST TAKE:









- **Synopsis:** Atlazo Inc, the leader in semiconductors for intelligent healthcare, announced today plans to launch the first Healthcare-System-on-Chip (HSoC) for applications in wearables and implants.
- **Value Proposition:** Atlazo aims to bring best of breed technology such as machine learning (ML), ultra-low power semiconductor technology, and wireless connectivity into single chip solutions. The new integrated platform will offer device manufactures unprecedented computational power for on-device artificial intelligence (AI) and ML, dramatically reducing cost and time-to-market for next generation healthcare products, while improving clinical outcomes and quality of care. The company also announced the appointment of Adnan Shennib as President of Life Sciences to lead Atlazo's healthcare product and business development. Under Shennib's leadership, the company will expand partnerships with manufacturers of innovative wearables, hearing devices, and implants, as well as semiconductor manufacturers, distributors, and researchers seeking medical-grade personal healthcare data.
- Frost & Sullivan views Atlazo's HSoC platform timely, as wearable/medical device OEMs are looking to leverage the convergence potential of cutting-edge tech such as AI and monetize data. However, given competing chip makers' products such as Qualcomm 3100 and MEZOO IoMT Platform among others also being launched, it will be interesting to see how Atlazo differentiates its market positioning against current competition.

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

Gesture monitor Klue launches Type 1 diabetes feature – November 01, 2018

Applicable Product Categories:

Wearables

 Technologies	Wearables	 Therapeutic Areas	Diabetes: Type 1
 Applications	Patient Monitoring; Quantified-Self	 Geographic Focus	US
 Segment Focus	Consumer/Clinical Grade	 Topics (News type)	Product Innovation
 Companies	Klue	 Others	-

ANALYST TAKE:









- **Synopsis:** San Francisco-based startup Klue announced that its platform will now include a reminder feature designed specifically to help people with Type 1 diabetes manage their condition around meals.
- **Industry Need:** [The American Diabetes Association](#) reports that approximately 1.25 million American children and adults have Type 1 diabetes. Managing diabetes can be time consuming and complicated for patients.
- **Value Proposition:** Klue uses gesture monitoring to track eating behaviors. Its platform can integrate with smartwatches and can measure how much a person is eating or drinking as well as the duration of that meal. However, the technology cannot detect what the user has eaten. The latest feature will also include an automatic text messaging component. The user has the option to include other people on their data — for example, a parent can find out if their child is eating and how often.
- With increasing burden of lifestyle driven chronic health condition, treatment adherence and condition management are becoming critical priorities for health systems and payers. Given this Frost & Sullivan believes Klue's seamless design with gesture monitoring technology to track eating behaviours makes a compelling use case to induce positive food habits among diabetes patients.

WEBLINK: <https://bit.ly/2PyDct6>

CMS finalizes rule for remote patient monitoring reimbursement under Medicare – November 01, 2018

Applicable Product Categories:

Wearables

 Technologies	Wearable	 Therapeutic Areas	Lifestyle and chronic disease management
 Applications	Remote Patient Monitoring (RPM)	 Geographic Focus	US
 Segment Focus	Consumer / Clinical Grade	 Topics (News type)	Regulatory Reform
 Companies	CMS	 Others	NA

ANALYST TAKE:

- **Synopsis:** CMS Administrator Seema Verma said that the remote monitoring change would promote care innovation and reduce provider burden.
- **Industry Need:** In a fact sheet accompanying the announcement, CMS acknowledged data indicating the benefits of remote patient monitoring adoption. By setting a definition for the technology and including it as an allowable cost on HHA cost reports, more home health agencies will be incentivized to offer the services to patients, the agency hopes.
- **On the record:** As per Seema Verma's announcement, "This rule also innovates and modernizes home health care by allowing remote patient monitoring. We are also proud to offer new home infusion therapy services. Using new technology and reducing unnecessary reporting measures for certifying physicians will result in an annual cost savings and provide home health agencies (HHAs) and doctors what they need to give patients a personalized treatment plan that will result in better health outcomes."
- Frost & Sullivan views this as a great policy milestone for RPM solution vendors (e.g. Wearables/ mHealth/telehealth platforms). This will open the reimbursement payer market for many clinically meaningful RPM solutions and boost the adoption of emerging technologies by home health agencies for effective care planning and coordination. Frost & Sullivan believes this policy will make prescribing physicians key for influencing buying decision for RPM solutions.

WEBLINK: <https://bit.ly/2Oiljc1>










Mobile Phones/ mHealth

FDA approves mobile app for Freestyle Libre – November 1, 2018

Applicable Product Categories:

Mobile Phones

 Technologies	Companion mHealth app	 Therapeutic Areas	Diabetes
 Applications	Continuous Glucose Monitoring (CGM)	 Geographic Focus	US
 Segment Focus	Clinical Grade	 Topics (News type)	Regulatory
 Companies	Abbott Laboratories	 Others	NA

ANALYST TAKE:









- **Value Proposition:** Abbott received the long pending FDA clearance for Abbott's Freestyle LibreLink companion mobile app for use with its Freestyle Libre 10 and 14 day glucose CGM systems. As a result, patients in the US, similar to those in Europe, will be able to scan their sensors with the smartphone app to know their latest readings, rather than requiring a separate, proprietary handheld reader. The app further allows standardized data sharing with the LibreView cloud platform for real time physician reference purposes.
- Frost & Sullivan believes that the companion app enables creation of a whole ecosystem of Freestyle Libre solution consisting of a sensor, the underlying digital health tool as well as the cloud based data platform. The approval will add to the adoption of Abbott Freestyle Libre CGM solution which has already seen robust growth in most markets. While, the app adds to the patient convenience, it's real value lies in the capability of real time data standardization and sharing with the physician, which is a critical aspect of diabetes management.

WEBLINK: <https://bit.ly/2P2yhkw>

LabCorp makes test results accessible through Apple's Health app – October 31, 2018 (1/2)

Applicable Product Categories:

Mobile Phones

 Technologies	Software platform; mHealth app	 Therapeutic Areas	Clinical Laboratory Diagnostics
 Applications	Diagnostics test data integration on Apple Health app	 Geographic Focus	US
 Segment Focus	Clinical Grade	 Topics (News type)	M&A/ Collaborations/ Investments
 Companies	LabCorp, Apple	 Others	NA

ANALYST TAKE:

Synopsis: LabCorp, one of the largest clinical laboratories in the US, has partnered with Apple to make its test results available to its patients through the Apple Health app.

Industry Need:

- Increasing levels of healthcare consumerism and growing awareness levels among individuals to gain a more holistic view of their health has put the onus on industry players to accept and adapt to a consumer centric approach towards their service delivery models to boost their customer relationship and engagement levels.
- A multifaceted customer engagement strategy, driven by enhanced adoption of mobile health tools is often applied by forward looking organizations to gain competitive edge amidst growing competition levels.

LabCorp makes test results accessible through Apple's Health app – October 31, 2018 (2/2)

Value Proposition:









- As per the company announcement, LabCorp has partnered with Apple to enable its registered patients to view their clinical and laboratory test results on their iPhone's health records app. To utilize this feature, patients who have an existing LabCorp Patient account will have to enable integration with the Health Records app.
- As per Apple's website, more than 115 institutions and companies support health records on the iPhone health app. While these consist of a number of health systems and value based care platforms, LabCorp is among the first clinical labs to be listed on it. Its competitors such as Quest Diagnostics do not feature on the list.
- Frost & Sullivan believes that the integration will enable greater engagement levels with the company's services due to the added value of viewing their lab results along with a number of other health related information already available with the app such as allergies, medications and immunizations. While the added data leads to better informed patients, the downside is inability to utilize the integration for further value add to the integrated care provision models of the patient across the continuum of care and across high acuity chronic disease areas. Notwithstanding the patient privacy related risks, it will be interesting to see how the company or any downstream players, such as Apple, utilizes the data integration, to add valuable care insights through a robust generation and harvesting of useful patient data.
- **Target End-User:** Hospitals; Primary Care Centers; Patients

WEBLINK: <https://bit.ly/2qr4rHY>

98point6 collects another \$50M for text-driven primary care delivery platform – October 31, 2018

Applicable Product Categories:

Mobile Phones

 Technologies	mHealth App; Telehealth	 Therapeutic Areas	All
 Applications	Text driven primary care platform	 Geographic Focus	US
 Segment Focus	Consumer Grade	 Topics (News type)	Care Delivery Innovation
 Companies	98point6	 Others	-

ANALYST TAKE:

- **Synopsis:** 98point6, a Seattle-based startup that offers an on-demand, texting-based primary care service for consumers and plans announced additional \$50 million in Series C funding, bringing the company's total backing to \$86.1 million. The round was led by the Merchant Banking Division of Goldman Sachs, with additional support from the company's prior backers.
- The company plans to charge \$20 for the service for the first year with the fees increasing to as high as \$120 annually going into the second year, which is a much lower price point than other services, and does not require insurance. The telemedicine services will primarily be delivered via text, with video or voice calls if necessary.
- Frost & Sullivan believes that evolving primary care models through virtualization has been a mature trend with a variety of players offering different models of telehealth and telemedicine. While most rely on voice or video calls, few such as Babylon Health and Ada Health rely on chatbot interfaces followed by video calls. 98point6 is targeting a niche for primary care, with a text-based approach with the doctors. Most of the other players generally partner with health plans and provider systems to offer value based models, ultimately leading to overall health system efficiencies and cost improvements.

WEBLINK: <https://bit.ly/2yO7PBj>











Smart Home Devices & Appliances

Businesses are using 'smart thermometer' data to target ads to patients – October 25, 2018

Applicable Product Categories:

Smart Home

 Technologies	IoT, Data Analytics	 Therapeutic Areas	NA
 Applications	Targeted Digital Ad Campaigns	 Geographic Focus	US
 Segment Focus	Consumer / Clinical Grade	 Topics (News type)	Business Model Innovation
 Companies	Kinsa, Clorox	 Others	-

ANALYST TAKE:

- **Synopsis:** Clorox paid Kinsa (maker of smart thermometers) for de-identified data on which zip codes have flu season spikes, where it can target digital ads for its disinfectant products.
- While Kinsa sells aggregated, de-identified data from its 500,000 thermometers in the US to pharmacies and manufacturers, the trend points towards the use of connected medical devices data being used for targeted ads – not a very novel concept in the age of targeted campaigns on social media platforms based on search histories, but touches upon the sensitive issue of health data being used.
- Frost & Sullivan envisions a time in the very near future when such practices regarding health data monetization will be regulated – though Kinsa's current approach is absolutely compliant with existing policy frameworks, new regulatory policies will be enforced around this model. There will be critical questions that will need to be answered, including the issue of patients as actual generators of the data benefiting in some form, if their data is commercially benefiting some companies.

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

Panasonic HomeX smart hub wants to control your whole home (fridge included) – October 30, 2018

Applicable Product Categories:

Smart Home Devices, Appliances



ANALYST TAKE:

- **Synopsis:** Panasonic unveiled the HomeX smart home control panel with a touchscreen display, to connect and control all the smart devices in the smart home.
- Note, the claimed differentiating factor from competitors like Google and Amazon (each building ecosystem of devices compatible with respective virtual assistants) , is the ability to interface with a large range of home appliance devices, each of which can then talk to each other (presuming across brands). Frost & Sullivan notes that this limits the capability to only smart home appliances (with some additional devices) targeting a niche where Google and Amazon are probably not as strong (the home appliances segment), but missing out on the larger picture of a variety of smart home devices that go beyond appliances alone. The number of compatible devices for both Google and Amazon runs in thousands. Yet, Frost believes Panasonic has one point right on track – that of learning from users habits and adapting to their preferences over time – again, a definition of a true smart home.

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

iRobot Teams With Google To Advance Smart Home Technology – October 31, 2018

Applicable Product Categories:

Smart Home Appliances

 Technologies	IoT, Indoor Mapping	 Therapeutic Areas	NA
 Applications	Personalization	 Geographic Focus	US
 Segment Focus	Consumer Grade	 Topics (News type)	Business Model Innovation
 Companies	iRobot, Google	 Others	-

ANALYST TAKE:




- **Synopsis:** “Google wants to use iRobot’s Imprint Smart Mapping technology to create room-based controls for other gadgets. It could control connected lighting, thermostats and stereo systems, for instance.”
- Frost & Sullivan believes this is a great move by Google – beyond the obvious use of mapping inside of users’ homes, it can build better ‘user profiles’ to learn more about the users’ habits to help them in a true, personalized fashion by learning their habits. Besides the stated use for controlling smart home better, the anonymized data can hold immense value for multiple uses such as targeted ads for products (thus increasing Google’s ad revenues). But from a healthcare perspective, the data can be useful for helping promote healthy behaviors – spend less time in the living room on the sofa (i.e., be more active), change ventilation patterns during events such as cooking for respiratory issues sufferers, etc. – at an individual level, but also at a population level.

WEBLINK: <https://bit.ly/2JxCmY5>

cue-Rx Launch Revolutionizes At-Home Patient Medication Dispensing – October 31, 2018

Applicable Product Categories:

Smart Home Devices

 Technologies	IoT	 Therapeutic Areas	All
 Applications	Medication Adherence	 Geographic Focus	US
 Segment Focus	ClinicalGrade	 Topics (News type)	Technology Innovation
 Companies	Solbright Group (to be renamed Iota Communications, Inc.)	 Others	-

ANALYST TAKE:

- **Synopsis:** cue-Rx is a newly launched medication adherence connected device for dispensing medication in original containers.
- The medication adherence landscape is getting crowded with several kinds of devices available. From basic connected pill dispensers such as MedMinder or LiveFine, to replacing the caps on pill bottles with connected ones such as Vitality Glow Caps, to replacing the entire pill bottle with connected ones such as AdhereTech, or to the myUbo which is useful for opioids dispensing by releasing only the prescribed dose and not more, and to the established automated dispensers such as those from Philips, there are different kinds of solutions. Other examples include RxPense, Spencer, Karie, Livi, HERO and Pillo. Cue-Rx differentiates itself by making it convenient for the users to get the original pill bottle and place it in the device directly. The other strategy being adopted to differentiate is to go beyond medication dispensing to connect with other wearable data to allow providers to manage patients better.
- Frost & Sullivan believes that such connected medication dispensers can play a small but crucial role even in the smart homes – integrating data from multiple sources to provide a holistic picture of health. In light of PillPack type strategies however, the role of convenience is being underestimated by most of these.

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

Other Interesting Articles

When available, other interesting articles will be covered here in short.

News Title	Link	Remarks
Google, LG to jointly build smart town	https://bit.ly/2F09IG1	While details are not known, an entire smart town built by Google gives it an edge in learning more about needs and preferences for homes users, whereas LG's smart appliance line will get a boost too.
Abode Launches CUE to Help Customers Customize Their Smart Homes	https://bit.ly/2P5OfKW	In a sensible move, DIY smart home security solution provider now provides an automation platform as well.
Alexa will soon order you around at home—politely, of course	https://bit.ly/2Djmloc	Alexa is being taught to learn from users' habits under it's 'Hunches' initiatives – the very definition of a true 'smart' of even an intelligent home.