

# 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 25  
26<sup>th</sup> October, 2018

# Table of Contents

| Category/ News Heading  | Page No.                     |
|---|------------------------------|
| <b>Wearables</b>  | <a href="#"><u>3-9</u></a>   |
| Garmin-Fitabase integration offers new data management platform for wearable-powered research | <a href="#"><u>4</u></a>     |
| BayCare Health puts self-service biometric kiosks in Publix grocery stores                    | <a href="#"><u>6</u></a>     |
| VivaLNK and RB launch electronic skin patches for fever monitoring                            | <a href="#"><u>7</u></a>     |
| LEO, Northwestern University, wearable startup partner to explore new dermatology devices     | <a href="#"><u>8</u></a>     |
| <b>Mobile Phones/ mHealth</b>   | <a href="#"><u>9-14</u></a>  |
| Philips unveils IntelliVue app for improved patients monitoring                               | <a href="#"><u>10</u></a>    |
| Novo Nordisk to launch two connected insulin pens, taps Flex to manage data                   | <a href="#"><u>12</u></a>    |
| Brain training app helps reduce OCD symptoms, study finds                                     | <a href="#"><u>14</u></a>    |
| <b>Smart Home Devices &amp; Appliances</b>  | <a href="#"><u>15-18</u></a> |
| A step toward personalized, automated smart homes   | <a href="#"><u>16</u></a>    |
| Study: Unresolved Technical Problems with Smart Home Devices Rise 240% in 3 Years             | <a href="#"><u>17</u></a>    |
| Other Interesting Articles  | <a href="#"><u>18</u></a>    |











# Wearables

---

# Garmin-Fitabase integration offers new data management platform for wearable-powered research – October 23, 2018 (1/2)

## Applicable Product Categories:

Wearables

|   |  |   |  |
|---|--|---|--|
|  <b>Technologies</b>  | Wearable (device + data platform)          |  <b>Therapeutic Areas</b>  | Lifestyle and chronic diseases management (e.g. activity, sleep, heart rate) |
|  <b>Applications</b>  | Remote Patient Monitoring; Quantified-Self |  <b>Geographic Focus</b>   | US/ Global   |
|  <b>Segment Focus</b> | Consumer Grade                             |  <b>Topics (News type)</b> | Competitive Intelligence   |
|  <b>Companies</b>     | Garmin and Fitabase                        |  <b>Others</b>             | Apple, Fitbit  |

## ANALYST TAKE:

- **Synopsis:** Garmin is partnering with Fitabase to give its line of mHealth wearables a connected health platform, from which clinical and research programs can draw digital health data.
- **Industry Need:** 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. In fact, based on Frost & Sullivan estimates for every 100 wearable technologies, less than 5% make it through that door. This makes industry experts believe that healthcare wearable technologies are approaching a tipping point to transform healthcare delivery model through data- and intelligence-driven customer-centric platform services for meaningful preventive care use cases. This mandates wearables OEMs to go beyond the device mind-set and reposition their value proposition as actionable health insight providers to monetize the future health data economy.

# Garmin-Fitabase integration offers new data management platform for wearable-powered research – October 23, 2018 (2/2)

- **Value Proposition:** The company will be working with Fitabase, a San Diego-based research company known for its work with Fitbit, to integrate digital health data from its wearables. Fitabase has reportedly worked with more than 150 academic and clinical partners on some 500 digital health projects. Officials say the partnership will help supply healthcare providers and researchers with data taken directly from wearables, rather than relying on users to send in that data. That integration aims to give providers a much objective view of the user's daily life.
- As per Garmin's product lead, this collaboration would enable to meaningfully capture continuous data from Garmin wearables and provide researchers with a comprehensive window into activity, heart rate, sleep, and even pulse ox data that may help to better understand the relationship between lifestyle behaviors and health outcomes.
- At present the tag team (Garmin wearable + Fitabase's research platform) are being used in a Copenhagen University study on physical activity during pregnancy.
- Frost & Sullivan view this a natural extension for wearable OEM such as Garmin, to go beyond the device mind-set and reposition their value proposition as actionable health insight providers to monetize the future health data economy. The wearable data platform service market so far has been dominated by Apple, with its ResearchKit and HealthKit platforms and newly enhanced Apple Watch 4, and Fitbit, which is involved in hundreds of clinical and research programs and recently unveiled the Fitbit Care platform for providers, businesses and health plans.
- Frost & Sullivan believes, as researchers increasingly look to consumer wearables as a means to track metrics (digital biomarkers) such as activity, sleep and heart rate, data management platform designed from the ground up for clinical research will gain prominence.
- However, as the competition at the data platform layer intensify it will be critical for vendors to carve out their application scope (home care/clinical trials/point-of-care) and therapeutic niche to ensure differential value proposition and future sustainability.
- **Target End-User:** Clinical Trials, Home care, Healthcare Consumers, Health systems, and Employee Health Programs

WEBLINK: <https://www.mobihealthnews.com/content/garmin-fitabase-integration-offers-new-data-management-platform-wearable-powered-research>











# BayCare Health puts self-service biometric kiosks in Publix grocery stores –

October 25, 2018

## Applicable Product Categories:

Wearables

|   |                                     |   |   |
|---|-------------------------------------|---|---|
|  <b>Technologies</b>  | Wearable                            |  <b>Therapeutic Areas</b>  | Lifestyle and chronic diseases management |
|  <b>Applications</b>  | Patient Monitoring; Quantified-Self |  <b>Geographic Focus</b>   | US  |
|  <b>Segment Focus</b> | Consumer/Clinical Grade             |  <b>Topics (News type)</b> | Marketing Strategy, Commercial Channels   |
|  <b>Companies</b>     | BayCare Health System               |  <b>Others</b>             | NA  |

## ANALYST TAKE:

- **Synopsis:** BayCare Health System is rolling out TechDeck, a pair of commerce-connected retail stores that will sell a variety of healthcare wearables and be staffed by service representatives that also are trained as health and wellness coaches.
- **Value Proposition:** BayCare Health System plans to roll out Tech Deck across its 15 hospitals and hundreds of other provider locations throughout the Tampa Bay and central Florida regions. More interestingly, to make the retail kiosks more aesthetic, BayCare is actually making the retail store mimicking Apple stores, known for their sleek interior. BayCare's commerce-connected retail stores will sell a variety of healthcare wearables and be staffed by service representatives that also are trained as health and wellness coaches.
- Frost & Sullivan believes, as concept such as healthcare consumerism gain momentum, the mix of brick-and-click e-commerce strategy will become ideal marketing channel to lure healthcare consumer to peruse emerging care concepts like self-health management, and quantified health. Additionally, Frost & Sullivan finds the point-of-care self-service biometric kiosks model interesting – as it would provide the opportunity to influence buying decision backed with vetted clinician advice. Given this Frost & Sullivan finds BayCare's biometric kiosks ideal channel for OEMs to position and market their wearables.









WEBLINK: <https://www.healthcarefinancenews.com/news/baycare-health-puts-self-service-biometric-kiosks-publix-grocery-stores>

# VivaLNK and RB launch electronic skin patches for fever monitoring

October 25, 2018

## Applicable Product Categories:

Wearables

|   |                                     |   |   |
|---|-------------------------------------|---|---|
|  <b>Technologies</b>  | Wearable (skin patches)             |  <b>Therapeutic Areas</b>  | Body Temperature Monitoring             |
|  <b>Applications</b>  | Patient Monitoring; Quantified-Self |  <b>Geographic Focus</b>   | Global                                  |
|  <b>Segment Focus</b> | Clinical Grade                      |  <b>Topics (News type)</b> | Marketing Strategy, Commercial Channels |
|  <b>Companies</b>     | VivaLNK and Reckitt Benckiser       |  <b>Others</b>             | NA                                      |

## ANALYST TAKE:









- **Synopsis:** VivaLNK, a leading provider of connected healthcare solutions, announces today a partnership with Reckitt Benckiser (RB) to market and distribute VivaLNK's wearable continuous temperature monitor worldwide.
- **Value Proposition:** Unlike typical thermometers, VivaLNK's Enfasmart FeverSense and Nurofen FeverSmart are FDA cleared and CE certified product for real-time temperature, history, alerts, and continuous monitoring. The devices as designed as rechargeable wearable patches that can continuously monitor changes in body temperature over a multi-day period, with a seven day battery live. Both products are available now to parents who wish to automatically track temperature changes in their child and take immediate action upon detecting a fever.
- Frost & Sullivan finds it a winning deal for VivaLNK to gain access to RB distribute network globally. This will help VivaLNK to accelerate their go to market efforts much efficiently, which is often one of the time and cost consuming activity for start-ups deciding future success. For example, as part of this collaboration VivaLNK's products are available now in the US, UK, Germany, South Africa, Australia and New Zealand, with additional markets pending. Given temperature being one of the most common body vital across diseases condition, Frost & Sullivan also find VivaLNK's skin patches a much needed product especially catering to infant and elderly care segment.

WEBLINK: <https://www.idtechex.com/research/articles/vivalnk-and-rb-launch-electronic-skin-patches-for-fever-monitoring-00015695.asp?donotredirect=true>

# LEO, Northwestern University, wearable startup partner to explore new dermatology devices – October 25, 2018

## Applicable Product Categories:

Wearables

|   |   |   |                    |
|---|---|---|--------------------|
|  <b>Technologies</b>  | Wearable (Device)   |  <b>Therapeutic Areas</b>  | Dermatology        |
|  <b>Applications</b>  | Patient Monitoring; Quantified-Self                       |  <b>Geographic Focus</b>   | US                 |
|  <b>Segment Focus</b> | Clinical /Consumer Grade                                  |  <b>Topics (News type)</b> | Product Innovation |
|  <b>Companies</b>     | LEO Science & Tech Hub and Northwestern University Center |  <b>Others</b>             | NA                 |

## ANALYST TAKE:

- **Synopsis:** The collaboration between LEO Science & Tech Hub, LEO Pharma's R&D unit aims to develop battery-free wearables that could help inform personalized skin disease treatments.
- **Value Proposition:** Researchers at Northwestern University Center, dermatology department claim that, wearables targeted in this partnership represent a powerful opportunity for biomarker discovery that may create new approaches to diagnose disease, predict clinical deteriorations, and track individual treatment responses. To investigate whether such capabilities can be incorporated into Wearifi's miniature devices, the project will begin with a proof-of-concept study conducted in joint with Northwestern's engineers and dermatologists, according to a statement.
- Based on Frost & Sullivan research, LEO Science's has a good track record of sticking co-innovation/R&D partnership with leading academic/research institution such as MIT, Epicore Biosystems, Massachusetts General Hospital and others for projects concerning minimally invasive biomarker technologies and dermatology. Additionally, Wearifi and Northwestern's Center have also previous expertise around dermatology as part of their collaborations with companies looking to incorporate wearables, such as L'Oreal and Gatorade. Given the expertise of these companies, Frost & Sullivan view this tri-party collaboration a good mile-stone to advanced novel wearables application in the dermatology space.

WEBLINK: <https://www.mobihealthnews.com/content/leo-northwestern-university-wearable-startup-partner-explore-new-dermatology-devices>











# Mobile Phones/ mHealth

---

# Philips unveils IntelliVue app for improved patients monitoring – October 25, 2018 (1/2)

## Applicable Product Categories:

Mobile Phones

|   |   |   |                          |
|---|---|---|--------------------------|
|  <b>Technologies</b>  | mHealth app, Predictive Analytics                 |  <b>Therapeutic Areas</b>  | Inpatient Monitoring     |
|  <b>Applications</b>  | Predictive patient monitoring and risk management |  <b>Geographic Focus</b>   | Global                   |
|  <b>Segment Focus</b> | Clinical Grade                                    |  <b>Topics (News type)</b> | Competitive Intelligence |
|  <b>Companies</b>     | Royal Philips                                     |  <b>Others</b>             | NA                       |

## ANALYST TAKE:

**Synopsis:** Royal Philips has designed a new inpatient monitoring app called IntelliVue GuardianSoftware, that gives clinicians updates on a patient's condition and deterioration.

## Industry Need:

- Monitoring of critical care patients in hospitals has been a consistent pain point in terms of proactively assessing the stability status and predicting any adverse events in terms of deterioration of the patient health, falls or bed exits. Hospitals leverage clinical data analytics enabled solutions and patient surveillance platforms to monitor such patients, however, such solutions continuously grapple with issues of lack of data standardization, integration and interoperability between various connected streams.
- Additionally, the lack of mobility of such solutions, mean that the monitoring is often centralized, resulting in high chances of false alarms and missed alerts, further complicating the care provision.

# Philips unveils IntelliVue app for improved patients monitoring – October 25, 2018 (2/2)

## Value Proposition:

- The Philips IntelliVue GuardianSoftware app, which is both FDA and CE cleared, integrates with other Philips technology platforms, such as the Early Warning Scoring (EWS) system to help clinicians better predict patient deterioration through related early warning scores and vital signs captured by various compatible medical devices such as wearable biosensors.
- The added mobility and ease in terms of the alerts transferred directly on the clinician's smartphone means that there is more time to react and offer timely effective intervention.
- Frost & Sullivan believes that this is part of the greater push towards offering regulated digital health tools by top medtech companies such as Philips, which has been highly active in enablement of sensor based remote monitoring as well as predictive and proactive health management through various connected technologies such as wearables, patient monitors and clinical decision support systems. Other recent examples of the company's push, include its deal with US Air Force for its remote monitoring sensor called the Battlefield Airmen Trauma Distributed Observation Kit (BATDOK). Additionally, the company also launched a variety of connected products at HIMSS18 such as a system called FocusPoint, to provide hospitals an overview on the performance on its various monitoring technologies (in line with the overall industry theme of offering data based insights on product performance for value based pricing strategies) as well as the next gen HealthSuite collection of digital health tools, which leverage analytics and AI to improve proactive patient care.
- **Target End-User:** Hospitals; Acute care settings; ED









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

# Novo Nordisk to launch two connected insulin pens, taps Flex to manage data

## – October 23, 2018 (1/2)

### Applicable Product Categories:

Mobile Phones

|   |                                |   |  |
|---|--------------------------------|---|--|
|  <b>Technologies</b>  | Software platform; mHealth app |  <b>Therapeutic Areas</b>  | Diabetes                                 |
|  <b>Applications</b>  | Diabetes care platform         |  <b>Geographic Focus</b>   | Global                                   |
|  <b>Segment Focus</b> | Clinical Grade                 |  <b>Topics (News type)</b> | M&A/ Collaborations/ Investments         |
|  <b>Companies</b>     | Novo Nordisk; Flex             |  <b>Others</b>             | Dexcom, Glooko, Roche, IBM Watson Health |

### ANALYST TAKE:

**Synopsis:** Novo Nordisk has enhanced a partnership with Flex Digital Health, to tap into its BrightInsight platform to deliver enhanced insulin management through its soon to be launched insulin pens

### Industry Need:

- Diabetes management is on the verge of being disrupted by innovative technologies such as artificial pancreas, non-invasive glucose monitoring sensors, wearables, apps, and inhalable insulin.
- Various players in the diabetes management space are moving towards offering holistic solutions to manage the entire continuum of the condition as opposed to offering a part solution like a drug, a device or an app.

# Novo Nordisk to launch two connected insulin pens, taps Flex to manage data

## – October 23, 2018 (1/2)

### Value Proposition:

- The partnership with Flex, is part of Novo Nordisk's efforts to enhance the speed to market for its connected insulin pens, NovoPen 6 and NovoPen Echo Plus, which are aimed to be launched by early 2019. The insulin pens, via connectivity with the patient and clinician's smartphones, will enable greater visibility into patient's insulin usage patterns, missed dosages as well as the impact of the dosage on the patient's diabetes status, so that the clinician could accordingly alter care protocols.
- In addition to announcing the new products, the company announced non-exclusive technology partnerships with Dexcom, Glooko and Roche to allow their respective apps to be used with Novo Nordisk's insulin pens. Frost & Sullivan believes this integration and interoperability with other company apps will go a long way in enhancing the market adoption on the Novo Nordisk insulin pens. Novo Nordisk also has an existing relationship with IBM Watson Health.
- Frost & Sullivan believes that the development is in line with the broader industry transition towards integrated care platforms where various companies will play a part into a patient's care management continuum through their own solutions working in tandem with their counterparts to develop a robust care strategy. While, for a disease like diabetes this has already started taking shape via partnerships between various healthcare stakeholders like medtech, pharma and digital health, this model will eventually evolve across other chronic disease areas with the nearest possibilities being respiratory, cardiovascular and oncology, in that order of feasibility.
- **Target End-User:** Hospitals; Primary Care Centers; Patients









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



# Brain training app helps reduce OCD symptoms, study finds – October 23, 2018

## Applicable Product Categories:

Mobile Phones

|   |                         |   |                          |
|---|-------------------------|---|--------------------------|
|  <b>Technologies</b>  | mHealth App             |  <b>Therapeutic Areas</b>  | Mental Health            |
|  <b>Applications</b>  | Video based OCD therapy |  <b>Geographic Focus</b>   | US                       |
|  <b>Segment Focus</b> | Consumer Grade          |  <b>Topics (News type)</b> | Care Delivery Innovation |
|  <b>Companies</b>     | Cambridge University    |  <b>Others</b>             | -                        |

## ANALYST TAKE:

- **Synopsis:** A Cambridge University study found evidence that a new app that lets patients watch a video of themselves washing their hands or touching a dirty object could be key to improving obsessive compulsive disorder (OCD) symptoms in patients with contamination fears.
- Contamination distress is very common in patients living with OCD, impacting 46% of people with the condition, according to the study. The disorder is difficult to treat — individuals are typically given a combination of medication and exposure therapy, where they are gradually put in contact with containments. However, about 40% of patients “fail to respond” to these treatments, according to the researchers.
- Frost & Sullivan believes while mental health apps have been highly common in the digital wellbeing space, there has been recent industry focus on tackling OCD as a disease condition through mHealth, as evident by recent funding of a similar mHealth app named nOCD in February.

WEBLINK: <https://bit.ly/2yz636O>



# Smart Home Devices & Appliances

---

# A step toward personalized, automated smart homes

## October 17, 2018

### Applicable Product Categories:

Smart Home

|  |                 |  |                       |
|--|-----------------|--|-----------------------|
|  Technologies  | IoT, AI         |  Therapeutic Areas  | NA                    |
|  Applications  | Personalization |  Geographic Focus   | US                    |
|  Segment Focus | Consumer Grade  |  Topics (News type) | Technology Innovation |
|  Companies     | MIT             |  Others             | -                     |

### ANALYST TAKE:









- **Synopsis:** MIT researchers have developed a system to automatically identify people moving around in the house, to enable personalization.
- Every smart home needs to enable personalization, but this is easier said than done for all residents of the home. Bill Gates' mansion uses wearable devices to allow this personalization, but is not a practical approach (nor is the use of mobile devices on person). Existing approaches cannot identify the individuals. MIT's system called Duet, uses wireless signals' reflections and inputs from nearby mobile devices, who last used them and projected movement trajectory to identify individuals.
- Frost & Sullivan believes this will be extremely useful from a healthcare scenario. For a basic fall detection example, differentiating between an elderly person having fallen and a child having fallen will trigger very different responses or actions, for example.

WEBLINK: <https://bit.ly/2yp6hxa>

# Study: Unresolved Technical Problems with Smart Home Devices Rise 240% in 3 Years – October 18, 2018

## Applicable Product Categories:

Smart Home Devices

|  |                      |  |              |
|--|----------------------|--|--------------|
|  Technologies  | IoT                  |  Therapeutic Areas  | NA           |
|  Applications  | Tech troubleshooting |  Geographic Focus   | US           |
|  Segment Focus | Consumer Grade       |  Topics (News type) | Other Trends |
|  Companies     | Parks Associates     |  Others             | -            |

## ANALYST TAKE:

- **Synopsis:** Professional installation of smart home services is valuable, as 12% smart home device owners report unresolved technical problems, compared to only 5% over last three years.
- Frost & Sullivan agrees with the view of a necessity of professional installation services. In the first issue, we covered Alcove, a startup providing these services. However the challenge for these service providers is convincing smart home owners to use their services, versus a majority of them trying to use the DIY or ask a friend approach. This need will become even more important in the view of health devices, as their integration in the home systems will be crucial for optimal functioning and any breakdowns will have to be immediately resolved. In our view, the potential for professional installation services market is huge, however in need of the right business model to entice consumers for leveraging these. [Communication service providers or companies such as Best Buy are best positioned to serve this need.]

WEBLINK: <https://bit.ly/2O81OE6>

# Other Interesting Articles

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

| News Title  | Link  | Remarks   |
|---|---|---|
| Mui is an interactive wooden panel that can control your smart home | <a href="https://bit.ly/2O6jEau">https://bit.ly/2O6jEau</a>   | Newest display format: wooden panel instead of E Ink or OLED screens. Now on Kickstarter.   |
| Hackers Target IoT-Enabled Appliances To Spark Blackouts            | <a href="https://bit.ly/2O6qDAp">https://bit.ly/2O6qDAp</a>   | Another study that confirms the potential of IoT devices in smart homes to be hacked and used against public infrastructure.  |
| Stop designing female-only AIs                                      | <a href="https://bit.ly/2z1lpAy">https://bit.ly/2z1lpAy</a>   | Samsung Bixby's ability to switch between male and female voices is useful in this regard.  |
| UAE to be ready for mass IoT adoption by 2020                       | <a href="https://bit.ly/2E1NAjAn">https://bit.ly/2E1NAjAn</a> | The Middle East region is also actively looking to up the ante on its real estate market with 'smart home' services. Telecom providers now capitalizing on this opportunity are providing the requisite infrastructure. |