



A psychologist on your wrist: the future of mental health

Alcimed, an innovation and new business consulting firm, works with the pharmaceutical and medical device industries, to leverage new technologies, partners, and trends for innovative products in mental health diagnosis.

October 12, 2017. Mental and neurological health disorders like depression or bipolar disorder are still largely diagnosed by questioning and observing patient behavior.

This is because physiological and bio-molecular data can rarely detect a disease state in mental and neurological disorders as they can in areas like oncology.

However, soon, mental health diagnoses opportunities could explode, thanks to the potential to analyze behavior computationally.

An expansion in diagnoses will be fueled by new studies and clinical practices demonstrating that human biosensor signal processing of, e.g. heart rate, sweat, temperature, can be used to predict healthy or diseased mental states. Studies already suggest that bipolar disorder and depression behavior profiles can be detected through wearable biosensor data analysis.^{1,2}

Additional interest has been generated by the capabilities to monitor and analyze data from those already diagnosed with a disorder, and such devices will have the potential to be recognized as companion diagnostics.

For example, the Verily (Alphabet subsidiary) smartwatch monitors Parkinson's patients and has the ambition to be recognized as a genuine medical device.³ Data from such tools could fuel Pharma marketing strategies for therapeutics as companion diagnostics that measure whether or not a patient exhibits the symptoms of a disorder that can be treated with a specific drug. The FDA already acknowledges this potential and that of certain companies selected last month to be part of a software precertification pilot program, with the hope to shorten approval times.⁴

24% of respondents in a Pharma industry survey were already leveraging wearables in clinical trials, and the demographic is poised to grow as 44% expect to use the technology within the next five years.⁵

Companies like Spire are already using data specifically to help consumers battle depression by making them aware of their own stress and anxiety. Another is GSK, who is leading the usage of wearable data in clinical trials. Pioneers may discover data-derived biomarkers that will give the company an edge in leveraging wearables to gain drug approvals or to approve diagnostic devices.

About Alcimed

ALCIMED (www.alcimed.com) is an innovation & new business consulting firm, specialized in life sciences (healthcare, biotech, agri-food), chemicals, materials, energy; as well as aeronautics, space & defense. ALCIMED relies on a team of 200 highly-skilled individuals to help its clients with exploring and developing their uncharted territories, covering four key areas: New Technologies, Market Innovation, High-Growth Geographies, and Strategic Foresight. ALCIMED is headquartered in Paris and has offices in Lyon & Toulouse in France, in Germany, Belgium, Switzerland, the UK, the USA and in Singapore.

- 1 [Proceedings of the National Academy of Sciences](#)
- 2 [European Commission](#)
- 3 [Ars Technica](#)
- 4 [FDA](#)
- 5 [Outsourcing Pharma](#)