Scripps Research
Science Changing Life

DETECT

An app-based health study by Scripps Research

www.detectstudy.org

An individual's resting heart rate is a novel vital sign of the digital age. While "normal" resting heart rate between people varies substantially, it remains quite stable at an individual level when a person is healthy. Small changes in a person's resting heart rate may indicate the onset of viral illness.

Thanks to smartwatches and activity trackers, a person's normal resting heart rate pattern can now be easily tracked and potentially alert a wearer of illness before other signs and symptoms, such as fever or shortness of breath, manifest. Scientists at Scripps Research are leveraging the power of these digital tools in an effort to improve real-time surveillance of contagious respiratory illnesses like COVID-19.

The app-based DETECT study is crowdsourcing anonymized wearable data from hundreds of thousands of smartwatch and activity tracker users across the United States. By evaluating individual changes to measurements like heart and breathing rate, sleep, activity, and more, as well as logged respiratory symptoms and diagnostics test results, scientists hope to complement traditional public health surveillance methods, potentially leading to earlier detection and containment of current and future outbreaks in various geographical locations.

Prior research conducted at Scripps Research has inspired numerous similar platforms to be launched in countries around the world. In the tremendous spirit of scientific collaboration that has been witnessed during the COVID-19 pandemic, the DETECT study team is actively working with multiple international partners and seeking more to grow the study worldwide.

In a previously published study, Scripps Research scientists showed that data from activity trackers can significantly improve real-time predictions of influenza-like illness at the state level when compared with data from the Centers for Disease Control and Prevention. Recent work in China duplicated that methodology and found wearables to similarly improve the prediction of local COVID-19.

Potential applications of the DETECT digital study platform for COVID-19:

- Real-time and geographically-specific surveillance to guide testing, tracing and isolation
- Identification of pre-symptomatic and asymptomatic individuals
- Surveillance of people returning to work to prevent spread
- Combining early detection with at-home diagnostics

The MyDataHelps™ study platform was developed by CareEvolution, a health technology company and Scripps Research collaborator that enables secure and reliable sharing of clinical health information. The platform currently enables e-consent of study participants, integration with a wide range of smartwatches and activity trackers, symptom tracking, electronic health record sharing and data visualization.

With an expanding network of outreach partners, including Fitbit, CVS/Aetna, Walgreens, Garmin, Withings and the American Osteopathic Foundation, the DETECT study team seeks to analyze data from hundreds of thousands of adult wearable users across the United States.

Over 50 million Americans currently use a smartwatch or activity tracker, which allow for continuous collection of key vital sign data.

*Over 34,000 participants have enrolled in the DETECT health study.**

*As of June 5, 2020

Download the MyDataHelps™ study app

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Learn more:

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The DETECT study is approved by the Scripps Research Institutional Review Board (IRB). MyDataHelps™ has undergone rigorous assessment and evaluation to ensure it meets the same stringent security practices implemented by the federal government to protect sensitive data.