

Stuttgart-based start-up Actimi GmbH develops telemonitoring system for heart patients

An app that saves lives and promotes a healthier lifestyle

(Stuttgart) – Founded in Stuttgart in early 2021, Actimi GmbH combines conventional medical technology with real-time telemonitoring for patients with chronic diseases such as heart failure. Its aim is to offer a system that is suitable for everyday use and sets a benchmark for digitalisation in the healthcare sector. A significant milestone has already been reached – on 1 January 2022, Germany’s statutory health insurance providers introduced cost items for services and a fixed cost for billing telemonitoring in cases of advanced heart failure. In collaboration with the Fraunhofer IAO, Actimi has also initiated the TESTER research and development project to create an AI-based privacy assistant for health data. This project is receiving funding from Germany’s Federal Ministry of Education and Research (BMBF).

By the time patients are rushed to A&E and seen by internal medicine registrar Maximilian Weiss, it’s often almost too late. “In many cases, the cardiac insufficiency of admissions with acute decompensated heart failure is so advanced that they can no longer pump enough blood around their bodies to keep them alive. This causes oedema, accumulation of fluid in the lungs, shortness of breath and even unconsciousness. Ultimately, too many people die of an illness that actually presented symptoms some time ago,” he says. Sometimes, however, chronic heart failure can be largely asymptomatic for years. A further trigger, such as an infection, can then cause the condition to worsen and become acute, which often ends in an emergency admission to hospital – or worse. “Heart failure is now the most prevalent single diagnosis for inpatients and remains one of the most common causes of death in Germany, even though the number of fatalities has fallen thanks to better treatment options,” reveals Weiss. This is exactly where Actimi comes in. “If patients were monitored professionally, they could be treated in time to prevent decompensation and a stay in hospital. We could then cut both mortality rates and costs,” he continues.

“Telemonitoring is already common practice in the USA”

To put his idea into practice, the young medic developed a real-time telemonitoring platform for patients with chronic diseases such as heart failure. In 2021, Actimi GmbH was founded in Stuttgart by Weiss (CEO), Julian Charisius (CMO) and Dietrich Charisius. The start-up combines conventional medical technology with an innovative SaaS (Software as a Service) platform. In other words, the software and IT infrastructure are operated by an external provider and used by the customer in the form of a service. Actimi now has 15 employees developing the infrastructure so that patients can monitor their condition in the comfort of their own homes using a smartphone app and devices that measure their blood pressure, blood oxygen, ECG, pulse and weight. The company is collaborating with a number of medically certified hardware providers for this purpose. “We regard it as vital for the medical devices to be highly accurate and easy to link to the Actimi telemonitoring app,” explains Weiss. Naturally, the app uses the latest FHIR (Fast Healthcare Interoperability Resources) standard, which is ideal for data exchange between software systems in the healthcare sector and, most importantly of all, the secure transfer of sensitive data.

The Federal Joint Committee (G-BA), the highest decision-making body for the joint self-regulation of healthcare organisations in Germany, has now incorporated heart failure telemonitoring into the statutory health insurance benefits catalogue and established rules for the associated billing. The corresponding cost items for services and a fixed cost were introduced on 1 January 2022 – a step that was long overdue according to Weiss. “Telemonitoring is already common practice in the USA. The necessary telemonitoring centres – which we call TMZs for short – now need to be set up here quickly to pave the way for a successful market launch,” he says. The new offering should not increase the workload of doctors in general practice. “No GP can be expected to monitor patients’ data 24/7. There will be specialised TMZs for that,” emphasises Weiss. Although it is envisaged that a patient’s doctor will be alerted if the readings worsen, a team of medics at a TMZ will provide additional round-the-clock support. “The web-based dashboard displays an overview of critical patients and their health status. If readings lie outside the defined limits, an alarm is automatically triggered,” explains Weiss. Selected family members can also be notified.

Ensuring the security of patient data and easing the pressure on the healthcare system

Besides helping in an emergency, however, Actimi is also intended to become an everyday “companion”. After all, digital self-tracking gadgets are being used by a growing number of people – for fitness and, increasingly, in medicine. “Using apps to help you stay healthy is a lifestyle choice,” comments Weiss. “Ours is intended to help patients follow their doctor’s recommendations. It goes without saying that the app isn’t meant to replace doctors, but rather to identify when they need to be contacted. Actimi is short for ‘activate me!’, you see,” he points out.

Actimi GmbH’s app meets all GDPR requirements and its data can only be hosted on servers located in Germany. The company is also involved in a research and development project that is being carried out by the Fraunhofer Institute for Industrial Engineering IAO in Stuttgart. Together with the universities of Stuttgart and Kassel, the IAO is developing an interactive privacy assistant that offers personalised data processing for users. The “Self-determination in digital self-tracking – TESTER” project aims to explore how the data obtained from self-tracking can maximise transparency. Based on machine learning, the privacy assistant is also intended to make life as easy as possible for users by adapting to their preferences. The three-year joint project is receiving funding from Germany’s Federal Ministry for Education and Research (BMBF).

Actimi’s ambitious plan is to set a key benchmark for digitalisation in the healthcare sector by offering a system that is suitable for everyday use. The electronic patient record (ePA) forms part of this, as does artificial intelligence for data evaluation. Dr. Klaus Eichenberg, Managing Director of BioRegio STERN Management GmbH, and his team are supporting the start-up. “Actimi has created an innovative technology. There are no best practices as yet, so the initial outlay is immense but, if it’s successful, the benefits for those who got involved early on will be huge,” he predicts.

About BioRegio STERN Management GmbH:

BioRegio STERN Management GmbH promotes economic development in the life sciences industry, helping to strengthen the region as a business location by supporting innovations and start-up companies in the public interest. It is the main point of contact for company founders and entrepreneurs in the Stuttgart and Neckar-Alb regions, including the cities of Tübingen and Reutlingen.

The STERN BioRegion is one of the largest and most successful bioregions in Germany. Its unique selling points include a mix of biotech and medtech companies that is outstanding in Germany and regional clusters in the fields of automation technology and mechanical engineering.

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