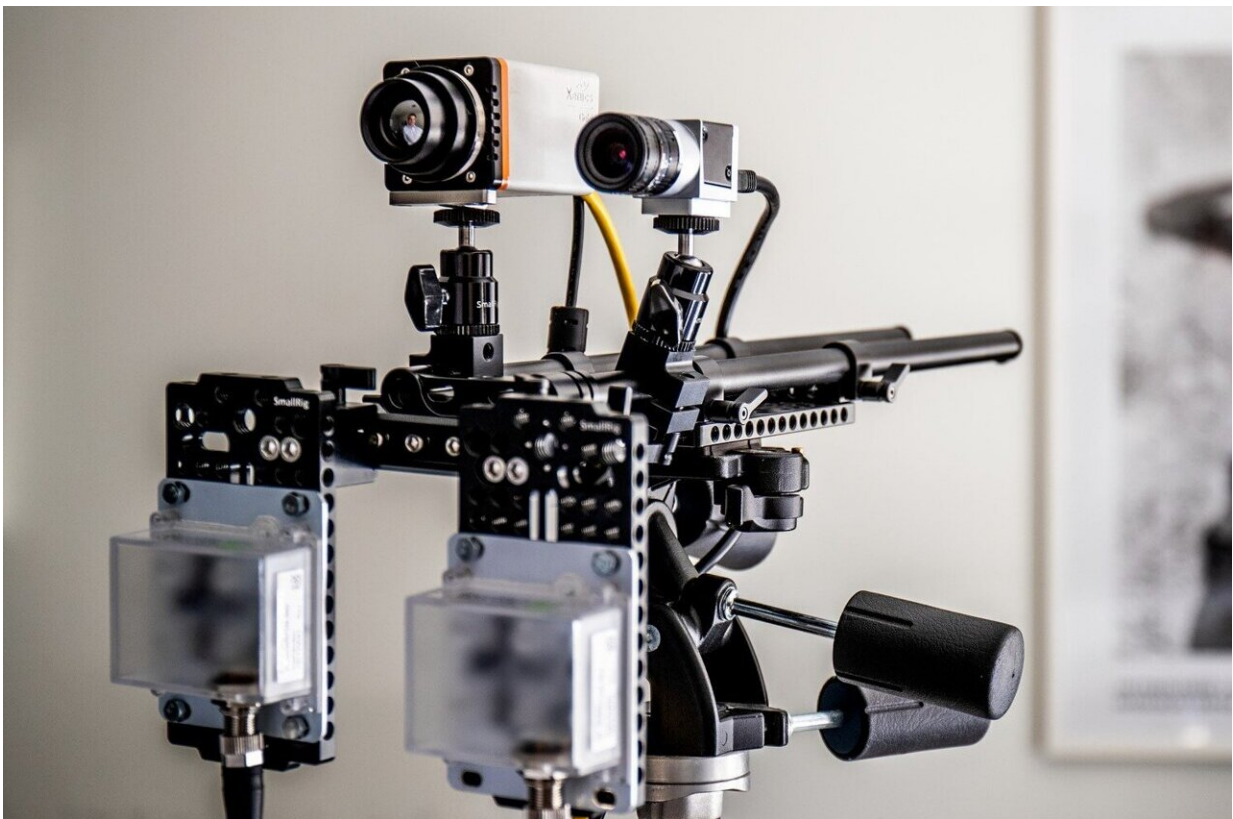


AI camera could help doctors identify serious infections

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Camera technology. Credit: Lisa Thanner

It might soon be possible to measure a patient's pulse, breathing, and blood pressure simply by scanning their face. This technology could offer a future tool for quickly assessing the severity of acute infection and other conditions, according to a [thesis](#) from the University of Gothenburg.

The severity of an [infection](#) is assessed on the basis of [vital signs](#), in other words, the main signs of an individual's physical condition. These vital signs are currently measured using several different instruments.

However, a newly developed method that combines [camera technology](#), software, and AI has the potential to produce equivalent results by scanning the patient's face for 30 seconds. The camera-based method was clinically tested on more than 200 patients with suspected COVID-19, and was shown to improve both severity assessment and diagnosis.

Taking a pulse with AI technology

The technology provided data on patients' heart rate, oxygen saturation, respiratory rate, and blood pressure. The results have been described as promising, but need further validation, including in terms of measurement accuracy.

The author of the thesis is Stefan Malmberg, who has defended his [doctoral thesis](#) at the School of Public Health and Community Medicine at the University of Gothenburg's Sahlgrenska Academy, and is a specialist physician in general medicine at the HälsoBrunnen health care center in Ulricehamn.

"The new AI method means that measurements are faster, more

convenient for the patient, easier for the health care provider, and involve less risk of infections being spread via measuring equipment," he says. "This type of research is crucial for the development of new health care technologies."

Sore throat can be life-threatening

Those who visit health care centers in connection with sore throats, coughs, and fever make up a large group of patients. In many cases, these infections are self-healing and harmless, but there are also serious and potentially life-threatening conditions that can start with similar symptoms, such as pneumonia, COVID-19, and Lemierre's syndrome.

It is therefore important to assess the severity quickly and offer effective treatment if required, but not prescribe antibiotics unnecessarily. Overusing antibiotics promotes resistant strains of bacteria, making drugs less effective or even ineffective.

"Finding the needle in the haystack is important when it comes to [infectious diseases](#)," continues Stefan. "Most people don't benefit from antibiotics, but in the case of serious infections, timely and appropriate treatment can save lives."

More information: Assessment and management of respiratory tract infections in primary care, hdl.handle.net/2077/72071

Provided by University of Gothenburg

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