

Novel Remote Monitoring Technology: Revolutionising Occupational Health Provision

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**Remote
Audiometry**

**Blood
Pressure**

Vision Testing

Novel Remote Monitoring Technology: Revolutionising Occupational Health Provision

The ever-growing applications of health technology have reached the world of occupational health. Mr Jack Latus from the Latus Group, based in the UK, endeavours to make the workplace safe, healthy, and productive. His company is one of the leading occupational health providers, paving the way for exploring new approaches to improve health in the workplace with pioneering technology to boost accessibility to occupational health services.

Importance of Occupational Health

According to the World Health Organization, the field of occupational health involves promoting and maintaining the highest degree of mental, social, and physical well-being of workers in all types of jobs. It aims to improve working conditions, ensure the work environment is safe and healthy, and maintain and promote employees' health and working capacity. The practice involves a wide range of healthcare professionals and encompasses numerous activities, from creating policies for minimising the risk of workplace injuries to carrying out health checks.

Mr Jack Latus is the CEO and Co-founder of the Latus Group, a company that offers best-in-class occupational health services. These are utilised by many major contractors and businesses all over the UK. In an effort to make occupational health services more accessible, less time-consuming to administer, and cost-effective, Mr Latus explores the use of recently developed automated health technology for remote health surveillance.

Remote Automated Health Monitoring

Mr Latus and his team conducted a study assessing the viability of virtual health monitoring for particular remote occupational health surveillance activities, comparing them to traditional methods. They evaluated reliability, efficacy, and user acceptability to determine whether their remote monitoring technology could gather accurate health data while being user-friendly.

Mr Latus highlights that remote automated health monitoring has been successful in several areas of healthcare, such as remote monitoring of chronic obstructive pulmonary disease (COPD) patients. It helped remove barriers to healthcare, so patients did not have to travel long distances to access specialist clinics, saving time and money. He adds that utilising such technology in the field of occupational health could not only enhance access to essential health surveillance screening but could have additional benefits

such as reducing staffing costs and assessment time. Currently, there are only enough qualified occupational health professionals to care for 55% of the UK workforce. Therefore, we must look to more efficient adoption of technologies to enable us to provide the level of care needed to keep our workforce fit for work.

YODHA: Remote Health Surveillance Box

The Latus Group boasts the world's first connected health platform, YODHA, the remote health surveillance box. It offers an entirely digital occupational health service, eliminating the need for many of the time-consuming processes that are usually required. Newly developed technology was integrated into the current YODHA mobile screening kit and software for the study.

During their investigation, they collected two sets of data from the same 100 employees. For the first appointment, a technician assessed the employees in person using the standard health surveillance devices. During the second appointment, the employees used the 'self-serve' YODHA remote health surveillance box to gather their own health data unassisted. The team then analysed the readings from both appointments to see if the data collected by the novel technology aligned with that obtained during the in-person appointment.

The Testing

The study participants underwent several tests. During the in-person appointment with the technician, each employee had an audiometric test to assess their hearing using the Amplivox device, the gold-standard audiometric device. Next, their lung function was evaluated by spirometry using the Microbank spirometer. Lastly, their blood pressure and pulse rate were taken using an Omron blood pressure monitor.

Remote Audiometry



Blood Pressure

Vision Testing

During the unassisted remote assessment, the participants were instructed on how to use a YODHA remote health surveillance box. To help them understand the process, the instructions were available as written guidelines with images and a short video tutorial. Mr Latus highlights how the participants then proceeded to carry out all the same tests using YODHA, gathering their own audiometric, spirometry, blood pressure, and pulse rate readings.

Promising Results

Mr Latus and his team gathered very promising data with their study. They found few differences in the blood pressure, hearing, and spirometry measurements taken between the YODHA and traditional methods at particular frequencies and metrics. All comparison results between appointment 1 and appointment 2 were within 5% of each other, a variance we would expect between two separate appointments using the same equipment. Their report highlighted that there is a need for further refinement and calibration of the new technology. However, they also noted that the reliability of the self-administered tests greatly depended on the user's ability to follow the instructions carefully.

The results from this initial research show a strong positive correlation across the various health measurements gathered. Mr Latus believes that this indicates remote health technology can be used to collect reliable data, which is vital for long-term health monitoring and enabling informed decisions regarding workplace health and safety. The team also noted that since automated remote assessments gather data comparable to that obtained during in-person appointments, such technology could help minimise human error and bias associated with a technician administering the tests.

The Future of Occupational Health Services

Mr Latus explains that using remote health monitoring technology, like the YODHA mobile screening kit, is a way to significantly boost accessibility to occupational health services, particularly for industries with remote locations or dispersed workers. It lets them carry out their own health assessments, fitting them in around work commitments and removing the need to travel to clinics or for occupational health practitioners to waste time travelling to customer sites. The technology also allows real-time and continuous monitoring of employees' health, enabling prompt detection of any health problems and improved management of occupational health risks.

Mr Latus and his colleagues at the Latus Group are leading the way in integrating technology with providing occupational health services, and they highlight avenues for future research in this area. The next steps include working to improve the user interface and developing more extensive training on how to take accurate readings for the employees. The team also note the importance of maintaining consistent conditions during any remote assessments, like the ambient noise levels, which could affect the results of the hearing tests. Exploring approaches to mitigate such environmental variables could significantly impact the accuracy of the health measurements. Tackling these challenges is essential to maximise the advantages of remote health monitoring and guarantee its successful applications across various workplace environments.



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After such a positive outcome on this robust data set, Latus now plans to move to a full market test to gather further data with the technology being used in industry, in January 2025, where it is planned for up to 40 businesses per month to get early access to use the equipment in the first quarter of 2025. Subject to a successful initial market test in Q1 2025, Latus plans to scale up the rollout to provide access to this advanced technology to all SMEs (small- and medium-sized enterprises) and large multi-site organisations throughout the rest of 2025, and market analysis estimates that by the end of 2026, approximately 25% of all health surveillance in the UK will be delivered via the YODHA technology.

MEET THE RESEARCHER



Mr Jack Latus

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Mr Jack Latus is the Co-founder and CEO of the Latus Group, a prominent occupational health services company based in the UK. A graduate of Harvard Business School, Latus is deeply committed to enhancing workplace well-being and has spent his career creating innovative solutions to boost safety, productivity, and compliance. With his leadership, the Latus Group has earned a reputation for excellence in corporate healthcare and now serves as a key advisor to global brands and governments on improving access to occupational health through innovation. The Latus Group has a large team of medical professionals, which includes Occupational Health Nurses, Physicians, Occupational Health Technicians, Counsellors, Physiotherapists, and Rehabilitators to implement well-being initiatives, conduct health assessments, and ensure employees feel safe and healthy at work.

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FURTHER READING

[YODHA Viability Research Paper \(full\)](#)



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