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Australia designs smart glasses to improve diagnosis and treatment of foot wounds

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Diabetes-related foot disease caused an estimated 1700 deaths and more than 5000 lower limb amputations in Australia in 2019/2020 alone



Mixed-reality smart glasses with holographic features are set to revolutionise the treatment of leg and foot wounds for people with diabetes and vascular disease in regional and remote areas in the future.

Australia's University of Adelaide researchers are leading the development of new software for a mixed-reality headset that will allow practitioners working in the city to “see through the eyes” of rural health workers in real time as they assess and treat patients’ leg and foot ulcers.

Chronic ulcers on the lower limbs are a common problem and cause significant illness and diminished quality of life. The new software will allow health professionals in different locations to work more closely together, potentially preventing leg and foot amputations and saving lives.

Current telehealth technology relies on videoconferencing and mobile phone images. This new software will allow the remote health worker to have their hands free for performing necessary procedures such as treating wounds and changing dressings under the direction of a specialist, who will be able to see a live video stream from the remote health worker’s point of view.

The project team has recently received $2.27 million over four years from the Medical Research Future Fund’s National Critical Research Infrastructure Scheme.

It is expected that the smart glasses will be rolled out within the next five years, with early versions of the technology to be tested at selected locations across South Australia from 2024, including clinics in the Riverland, Murray Bridge, and other regional SA sites.