Telemedicine vision for remote eye care

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(Medical Xpress) -- Optometrists from Flinders University will soon be able to diagnose and manage eye diseases in rural and remote communities – all from the comfort of their computer chair.

Under the plan, people with a suspected diabetes-related eye problem can visit a partnering health care clinic in remote regions of the state where a special retinal camera takes a picture of the back of the eye, sending the digital images electronically to Flinders optometrists for assessment.

Indigenous Australians are particularly susceptible to diabetes-related eye disease, a common complication of diabetes that affects the small blood vessels in the back of the retina and causes them to leak, break down or become blocked, impairing vision.

Professor Konrad Pesudovs (pictured, right), Head of Optometry and Vision Science at Flinders, said the project would be based on a similar model of "telemedicine" used by the world's best optometry school – the University of California, Berkeley.

Since launching in 2005, the Berkeley program has grown from just a few hundred eye examinations a month to more than 30,000 a year throughout California's Central Valley.

Professor Pesudovs met with his Californian counterpart, Professor Tony Adams (pictured, left), in April to discuss the program and future plans for the expansion of Optometry and Vision Science at Flinders.

“We’ve been doing it at Berkeley for a few years now and we’re quite excited that Flinders is also interested in running this kind of model of care, especially in remote areas,” Dr Adams, an Emeritus Professor of Optometry and Vision Science at the University of California, said.

“A whole bunch of people with diabetes in Alice Springs, for example, could get tested in their own town and the trained clinicians in a big city such as Adelaide can give feedback, almost instantly, on how to treat these patients,” he said.

“And from what I’ve heard about the needs in remote parts of South Australia I can’t think of a better place to bring this in.”

Professor Pesudovs said the project was now being trialled in partnership with an Aboriginal health centre in Port Pirie, with plans in place to create a wider network of clinics linked to a central Flinders “telemedicine eye centre”.

“We’re hoping the program will reach people who don’t have access to an ophthalmologist or an optometrist and we also see it as a great benefit to our students because they will be able to diagnose and manage treatment plans firsthand,” Professor Pesudovs said.

As part of his Australian visit, Professor Adams toured Flinders optometry school, describing its close proximity to the medical centre as a great benefit for students, staff and patients.

“Having a hospital, medical school and a university all on the same site is not very typical but it gets you immersed in patient care and issues much quicker,” he said.

“I’ve also had a chance to hear about some of the future developments for the discipline and I think they’re quite innovative and exciting.”

Born in Melbourne, Professor Adams studied optometry at Melbourne University before moving to the US to complete his PhD at the University of Indiana.

In 1968 he moved to Berkeley where he managed the PhD program for several years and spent a decade in the 1990s as Dean of the School of Optometry and Vision Science.

Provided by Flinders University