

xR HEAD

eXtended Reality Health Economic Acceleration and Development



Degenerative Eye Condition VR Experience

PROJECT FAST FACTS

PARTNERS: KOVR and University of Alberta Department of Ophthalmology and Visual Sciences, Faculty of Medicine and Dentistry

AWARD: \$250,000

THE PROBLEM

In Canada, 68% of patients with Type 2 Diabetes are not scheduling regular eye exams and therefore miss the opportunity for early detection, timely treatment, and prevention of blindness. This is likely related to a lack of knowledge and motivation, even with the use of traditional educational material such as pamphlets and videos.

THE SOLUTION

The creation of a Diabetic Retinopathy Module (DRM), a VR (Virtual Reality) experience that can be accessed via affordable technology that will provide a full 3D VR experience that realistically demonstrates the effect of untreated or poorly treated Diabetes on vision. This educational tool is for patients in the early stages of diabetes, or pre-diabetes, to motivate them to pursue an annual eye exam in order to detect eye disease early and help prevent blindness. In addition, care partners, medical professionals, team members, as well as learners can also benefit from learning through this experience.

To illustrate, imagine putting on VR goggles and in moments being immersed in a digitally created three-dimensional world. In these virtual everyday environments, your vision begins to blur, darkness appears on the periphery, or a spot appears in front of you. These effects, or others demonstrating a variety of visual impairments, progress rapidly. Tasked with performing challenges in this virtual world, this provides a simulation of vision loss in a visceral and realistic way that any other multimedia or print representation can't replicate.

PROJECT OBJECTIVES

- The creation of the DRM to help demonstrate the effects of Diabetes on vision.
- Ongoing research and evaluation of the module and its impacts on patients.
- Commercialization within the Alberta market and beyond.

ABOUT xR HEAD

In partnership with the Alberta Chapter of the Virtual Reality / Augmented Reality Association (VRARA), Alberta Innovates is proud to announce the eXtended Reality Health Economic Acceleration and Development (xR HEAD) program. This program will be a first-of-its-kind opportunity for stakeholders in Alberta's virtual, mixed, and augmented-reality (collectively 'xR') health innovation ecosystem to come together in a coordinated way to jointly develop xR innovations that can enhance patient care or support the training of health professionals. These opportunities will be co-identified and co-developed by health innovation stakeholders and will align to Alberta Innovates' four research and innovation priorities, the Alberta Research and Innovation Framework (ARIF), and will create economic and health system economic value.

Learn how

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