Accelerating Innovations into CarE – Validate Program (AICE-Validate)

Using Virtual Reality and Algorithms to Improve Routine Eye Exams

PROJECT FAST FACTS

RECIPIENT: RetinaLogik Inc.

AWARD: $270,000

AWARD DATE: August 1, 2024

PROJECT DURATION: 12 months

THE PROBLEM

Eye care clinics have significant capital and operational costs, often investing over CAD $300,000 in specialized equipment that requires replacement every few years. Traditional eye exams require patients to be closely monitored by a technician or nurse for up to 45 minutes, significantly increasing staffing costs. Examination equipment requires dedicated space with specific conditions which limit the clinic's ability to conduct multiple exams or expand services. Patients also face three main challenges from the use of traditional examination equipment"

- Physical discomfort especially by those with mobility issues or other pain.
- Wheelchair patients face barriers to equipment made for fully mobile patients.
- Eye examinations rely on a patient's ability to understand the technician's instructions, a challenge for patients communicating in different language.

THE SOLUTION

RetinaLogik uses virtual reality (VR) technology to perform one of the most common eye tests—visual field exams—in a more user-friendly, convenient and cost-effective manner. In addition, RetinaLogik has developed advanced algorithms and software to enhance the management and interpretation of exam results for clinicians.

To achieve these advancements, RetinaLogik created a VR application compatible with a range of head-mounted devices, complemented by a patient management system. To further improve the results of individual exams, RetinaLogik built a suite of tools to analyze patient responses, offering clinicians highly accurate results. These tools include statistical models, artificial intelligence-driven analytics and sophisticated algorithms, ensuring exams performed using this platform are at least equivalent to or improvements to the existing standard of care.

PROJECT OBJECTIVES

Achieve regulatory approval for current and new exam to support their growth.

ABOUT THE AICE-VALIDATE PROGRAM

AICE-Validate is an opportunity for Alberta's health-tech innovators to accelerate commercialization of digital and data-enabled health technologies through the early validation phase. If you'd like to learn more, please check out AICE Validate on the Alberta Innovates website.

Learn how

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