ALBERTA INNOVATES

Accelerating Innovations into CarE – Market Access Program (AICE-MAP)

Surface EEG Evaluation of Prehospital Stroke (SEGUE-PS)

PROJECT FAST FACTS

PARTNERS: Forest Devices, Alberta Health Services, University of Calgary, Institute of Health Economics
AWARD: $300,000
AWARD DATE: August 19, 2020
PROJECT DURATION: 24 months

THE PROBLEM

Stroke is the second leading cause of death globally, accounting for approximately 4500 annual hospital admissions across Alberta, with an overall direct cost of ~$400 million per year. Most strokes are ischemic strokes with about 1/3 of those presenting as large vessel occlusions (LVOs). LVO treatment has been revolutionized by endovascular therapy (EVT), a technique pioneered in part in Alberta. However, to be effective, EVT treatment must be administered rapidly after stroke onset in one of two comprehensive stroke centres in Edmonton or Calgary. Every minute counts, but current tools for pre-hospital diagnosis of LVO stroke have low accuracy, leading to misdiagnosis and delays in receiving appropriate care.

THE SOLUTION

Alphastroke, by Forest Devices Inc., presents a pragmatic solution. This artificial intelligence-powered electroencephalography (EEG) device detects LVO stroke in patients exhibiting signs of stroke with an overall accuracy of above 80%. This is superior to currently existing clinical assessment scores which have a higher error rate. The technology is designed to be used as a triage decision-support tool by Emergency Medical Services (EMS).

PROJECT OBJECTIVES

Forest Devices and the University of Calgary are working with Alberta Health Services to conduct a feasibility study of the Alphastroke device in a real-world setting. The goals of this study are to:

1. Assess the usability and feasibility of integrating Alphastroke into EMS daily operations and assess device performance in the field.
2. Evaluate diagnostic accuracy, speed of triage & treatment, and impacts to patient & system-level outcomes.

"The SEGUE-PS study will evaluate AlphaStroke in a real-world environment. If the study is successful and shows a benefit in prehospital LVO identification, the path to every market in the world will open because the problem is universal and completely unmet." ***– Matt Kesinger, CEO, Forest Devices***

"Fast stroke treatment means better outcomes and reduced cost. But fast treatment is predicated on getting the right patient (correct diagnosis) to the right place (EVT treatment centre in Edmonton or Calgary) at the right time. AlphaStroke will help us achieve those outcomes." ***– Dr. Michael D. Hill, Professor, Department of Clinical Neuroscience and Hotchkiss Brain Institute***

ABOUT THE AICE-MARKET ACCESS PROGRAM

AICE - MAP is designed to accelerate health innovations that face evidentiary hurdles in achieving market access. The Program supports small to medium-sized enterprises and real-world testing sites in carrying out clinical trials and feasibility studies of innovative health technologies. Successful Projects are designed to generate key evidence that will facilitate commercial progression and market adoption. If you'd like to learn more, please check out our AICE website.

Learn how

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