

## xR HEAD

# eXtended Reality Health Economic Acceleration and Development



## Prolonged Exposure Therapy (Emergency Medical Services)

### PROJECT FAST FACTS

**PARTNERS:** Dynacor Communications Inc. and Alberta Health Services – Emergency Medical Services (EMS)

**AWARD:** \$174,000

## THE PROBLEM

*Recreating the individual circumstances necessary to expose paramedics to the events that led to their traumatic stress can be a challenge both logistically and geographically. Historically, psychologists who practice exposure therapy when treating paramedics were limited to their patient's own visualization of an event while in an office setting. An additional challenge for the reintegration of staff is the ability to access paramedics in remote locations, or to expose those paramedics to high-fidelity simulations of EMS events in a community where infrastructure is limited.*

## THE SOLUTION

*The development of a virtual reality solution that will include six real life scenarios that immerse the user in the critical stress points of a call. Each scenario will reflect a different type of call representative of what a paramedic would encounter in the field. Different types of stressors will be designed into the scenarios. By exposing individuals to high stress simulations, the brain is trained to stay within its pre-frontal cortex executive functioning where reason, empathy, creativity and communication is located.*

Prolonged Exposure Therapy and the 'inoculation' effect of exposing individuals to high-stress situations is a well-known and practiced technique for 'hardening' individuals to the rigors of real-world circumstances. Training individuals to react to an emergency with a set of automatic responses is one way to ensure the pressures of an emergency are handled correctly.

Aviation uses simulation to great effect in this regard; emergency procedure preparedness. However, responding appropriately to a high-stress situation may require more nuance than a set of prescribed procedures to follow. Responding with a cool head to an emergency is a product of exposure to that circumstance over and over to the point where a natural stress reaction is no longer elicited.

## PROJECT OBJECTIVES

- Creation of a Virtual Reality-based solution with real-life scenarios to facilitate the return of paramedics to work.
- Deployment of the solution within Alberta Health Services Emergency Medical Services.
- 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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