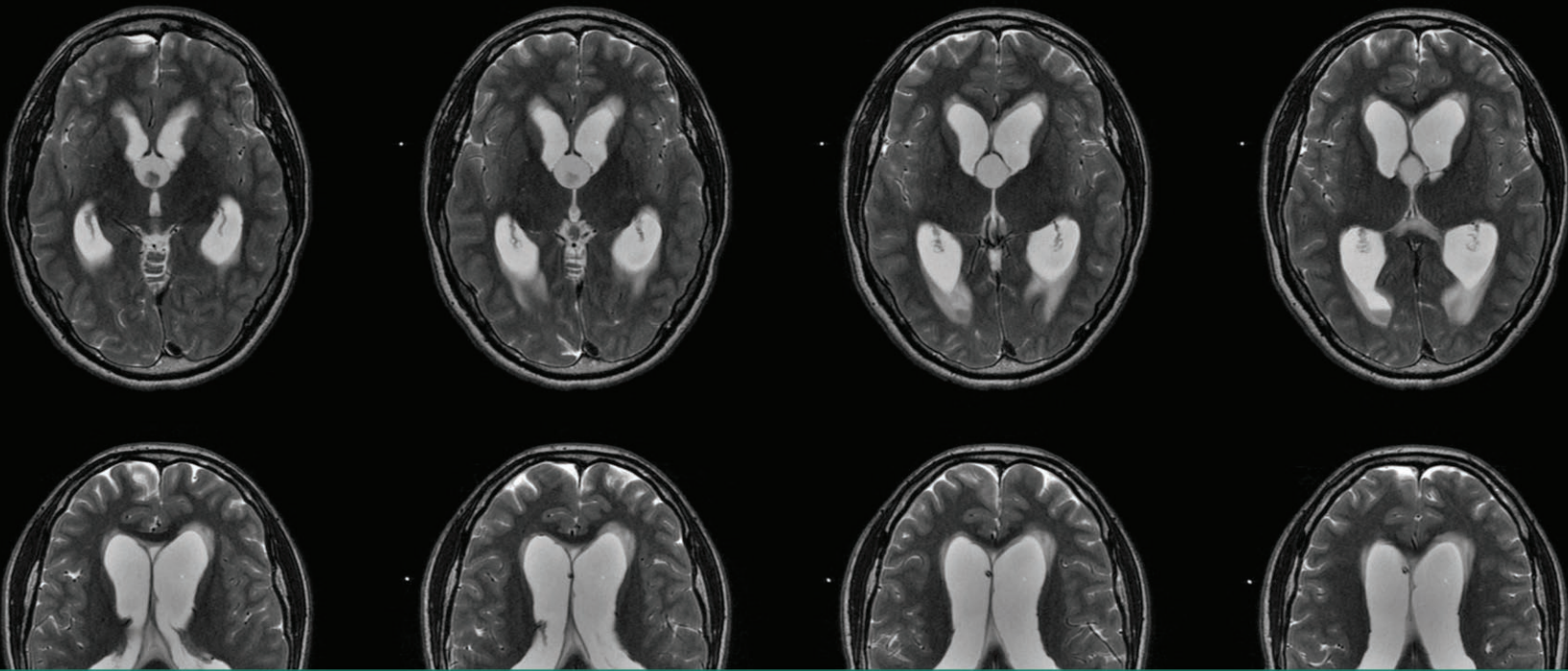


# PRIHS: Partnership for Research and Innovation in the Health System

## FUNDING AWARDS



Reducing Ventricular/Lumbar Drain and Ventricular  
Shunt Insertion Infections in the Neurosurgery, Trauma,  
and ICU Patient Population in Alberta

### PROJECT FAST FACTS

**LEAD:** Mark Hamilton

**INSTITUTION:** University of Calgary

**PRIHS AWARD:** \$940K

## THE PROBLEM

*Hydrocephalus (excess cerebrospinal fluid in the brain) is an important patient problem affecting all ages that untreated may result in death or severe loss of brain function causing dementia or the inability to walk. The only treatments for hydrocephalus are surgical which have been previously associated with a high rate of infection that can have a significant negative effect on patient outcomes, extend hospital stays, and increase healthcare expenditures.*

## THE SOLUTION

*Establish a common process across all Alberta to reduce infections currently associated with the surgical treatment of hydrocephalus.*

Cerebrospinal fluid (CSF) shunts are the most frequent type of surgical treatment for hydrocephalus which most commonly redirect some of the CSF from the brain into the abdominal cavity. External drains are sometimes required to monitor brain pressure or temporarily remove CSF. Patients undergoing a shunt or drain surgery have a significant risk for developing infection (6%-15%). Shunt and drain infections can have devastating effects on patients, risking loss of neurological function or death. In addition, the treatment of these infections results in prolonged hospital stays and significantly increase healthcare costs.

Previous pilot experience has demonstrated that infections can be significantly reduced with the adoption of protocols that establish how shunt surgery and drain insertion surgery are done to avoid this risk. The protocol for shunt infection prevention has been piloted for the Adult Hydrocephalus Program, in Calgary and resulted in a reduction in shunt infection from 6% to <1%. This project will introduce these protocols to all Alberta hospitals where adult neurosurgery is undertaken using interactive Quality Improvement methodology. We are engaging patients and families for input regarding study methods and will monitor infection rates to verify success. The reduction of infection rates will significantly benefit patients and their families and has the potential to reduce with health care costs by approximately \$10,000,000 over 3 years.

## ABOUT PRIHS

*The PRIHS program is designed to align the knowledge production efforts of researchers with the evidence needs of the health system. This is achieved by providing opportunities for researchers to propose solutions to priority health system challenges and access support from SCNs and other expertise within AHS to administer implementation studies. These implementation studies will help AHS identify and advance solutions that improve health care quality, health outcomes and value for Albertans.*

## VALUE & TERM

Combined pool of funds available: \$7 million. Individual award's period of support: up to three years.

## FOCUS AREAS

PRIHS VI provides a streamlined process for connecting Alberta's academic institutions with Strategic Clinical Networks™ (SCNs), patients, providers and leaders in AHS to:

- Translate research evidence into testable solutions that address priority health system challenges in Alberta as articulated by the SCNs; and
- Generate the evidence needed to identify and accelerate the spread and/or scale of solutions that foster more efficient and/or effective use of health care resources.

Learn how

[albertainnovates.ca](http://albertainnovates.ca)