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<http://news.umanitoba.ca/preventing-post-traumatic-stress-in-icu-survivors-and-helping-concussed-students/>

April 14, 2014 —

The [Manitoba Medical Service Foundation](#) has been awarding Research Grants to researchers and students since 1971, and over \$19 million has been donated to furthering this cause. This year, 16 of the 17 recipients are University of Manitoba researchers.

We highlight two of the projects here.

## A Pilot Randomized Controlled Trial of ICU Diaries

Patients who have been in the intensive care unit (ICU) often experience psychological problems, with approximately 20% experiencing symptoms of Post Traumatic Stress Disorder (PTSD). It is thought that PTSD occurs because people do not have a structured memory of the traumatic event.

Researchers in Europe attempted to treat PTSD in ICU survivors through a diary that outlines the patient's ICU stay, helping them create a whole memory of the traumatic experience. However, this treatment was not compared to other psychological treatments for PTSD. A new pilot study by Marcus Blouw [BSc./01; MD/06], assistant professor of internal medicine (respirology and critical care) and the Director of Internal Medicine Procedure Service at the U of M, aims to address this gap by testing ICU diaries, and comparing them to an alternate treatment.



Blouw's research group will recruit 40 ICU patients who are predicted to be in the ICU for 72 hours or more, with 24 hours or more on mechanical ventilation. Ten patients will receive the diary intervention, 10 an information brochure as the alternate treatment, 10 both, and 10 nothing. The patients in the ICU diary condition will have a journal at their bedside that family and ICU staff can write in at any time.

Staff will be able to take pictures to include in the diary. When patients in the diary and/or information group are discharged, they will be given their documents.

One week after discharge, a research nurse will call patients and ask them about their memories of the hospital using a standardized questionnaire. At 30 and 90 days, patients will receive another call but the questions will be from questionnaires used to measure PTSD, depression, anxiety, general health and social support. We expect that patients who received the ICU diaries and the information brochure will have the lowest PTSD rates 90 days after discharge, followed by those who received the diaries only. We expect those who receive the information brochure only to have lower rates of PTSD than those who received no intervention, but higher rates than those who received the diaries. This study will provide important information about how we can prevent PTSD in this population, thus improving follow-up ICU care and mental health outcomes.

The [Manitoba Medical Service Foundation](#) has awarded this project \$25,000.

## **The Relationship Between Concussion and Academic Performance Among Manitoba Students in Grades 9 to 12**

Concussions, or mild traumatic brain injuries, are common injuries in youth. Between 2005 and 2010, approximately 23,000 Manitobans were diagnosed with a concussion with 30% occurring among 14 to 18 year olds. Physical and mental rest are cornerstone in the treatment of concussions and youth often take longer to recover than adults because their brain is still developing. Cognitive rest refers to resting the brain by limiting reading, television, video games, computer use, texting, or performing activities that require mental concentration. The school environment does not encourage cognitive rest and symptoms can get worse in students who return to the classroom before they are free of symptoms.



Kelly Russell, assistant professor of pediatrics and child health at the U of M and a research scientist at the [Manitoba Institute of Child Health](#), will lead this study.

The study's objective is to examine the effects of a concussion during the academic year on students' end of year, teacher-assigned grades compared with those from the previous year. The study will include all Manitoba students in Grades 9 to 12 who had a concussion diagnosed by a doctor between 2005 and 2011. For each student with a concussion, five who were enrolled at the same schools but not diagnosed with a concussion will be randomly included. This will allow Russell and her team to control for any changes in teacher-assigned grades that may naturally occur as students' progress through high school.

A grade point average will be calculated from their percentage grades in math, sciences, language arts, social studies, and foreign languages. A change will be calculated by subtracting the pre-concussion average from the post-concussion average. If the change in grade point average is negative, the student's average will be lower after their concussion. Grades will also be studied to see if they change from the year before to the year after the concussion.

This evidence will help inform parents, teachers, school administrators, and physicians on what to expect when students return to the classroom. It will also help guide the development of Return-to-Learn guidelines that will explain how to best reintegrate students back into the classroom and create a learning environment to support students who have recently had a concussion injury.

The [Manitoba Medical Service Foundation](#) awarded \$11,000 and the [Winnipeg Foundation](#) awarded \$10,000 to this project.