

Researchers say it's time to treat anemia seriously

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Up to one-third of patients undergoing surgery in Ontario have a treatable form of anemia but are not optimally treated for it.

A paper published online today in the *Canadian Journal of Anesthesia* says that hospitals that do treat patients with anemia have better outcomes, including fewer blood transfusions and infections and shorter hospital stays.

A common option for management of anemia has been [blood transfusion](#). But blood transfusions are expensive and are associated with higher death and complication rates.

Dr. Gregory Hare, an anesthesiologist at St. Michael's Hospital, reported in today's paper that hip and [knee replacement](#) patients who had blood transfusions stayed in hospital about two days longer than those who did not have transfusions. The stay was about three days longer for [coronary artery bypass graft](#) patients who had transfusions. The risk of infection more than doubled for patients who had transfusions.

Dr. Hare called anemia a "[silent killer](#)." Severe anemia can cause low [oxygen levels](#) in [vital organs](#) and may result in heart attacks, strokes and [kidney failure](#). He said early diagnosis of anemia is important to give doctors sufficient time to treat it before surgery.

For example, 10.4 per cent of knee replacement patients diagnosed with anemia less than seven days before surgery required transfusions, compared to 7.3 per cent diagnosed more than 21 days in advance. He said 41.3 per cent of coronary artery bypass grafts patients needed blood transfusions if diagnosed with anemia less than seven days before surgery, compared with 22.8 per cent diagnosed more than 21 days in advance.

"If given time to treat anemia, we can avoid unnecessary transfusions and thereby improve

quality of patient care," Dr. Hare said.

St. Michael's is developing a Centre of Excellence for Patient Blood Management, which would be one of the first of its kind in Canada and a global leader in patient care and in training, research and education for [health care professionals](#).

Under patient blood management, physicians might prescribe certain drugs or dietary supplements to raise a patient's hemoglobin level before surgery.

During surgery, doctors may use a variety of state-of-the-art technologies and techniques to minimize blood loss, such as minimally invasive surgery, electrocautery (using heat to stop vessels from bleeding), an argon beam coagulator, which coagulates or clots blood to minimize blood loss, or intravenous iron and erythropoietin, which stimulate bone marrow to produce red blood cells.

The number of patients requiring blood transfusions after undergoing knee replacement surgery in Ontario in 2011 was less than half the number in 2002.

2002 was when the provincial government set up the Ontario Transfusion Coordinators (ONTraC), a province-wide [blood management](#) program administered by St. Michael's Hospital. The goal of the program is to promote blood conservation and alternatives to transfusions for problems such as anemia, a condition where a person has a reduced number of red blood cells or hemoglobin, the part of the red blood cell that carries oxygen.

ONTraC figures published for the first time today show the number of patients requiring blood transfusions after undergoing knee surgery fell from 24.5 per cent in 2002 to 10.1 per cent in 2011. The number requiring transfusions after undergoing [coronary artery bypass](#) grafting fell from 60.2 per cent to 25.2 per cent in the same time.

Provided by St. Michael's Hospital

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