



## Blood Management and Safety

### 2020 Value-for-Money Audit

#### Why We Did This Audit

- The Ministry of Health (Ministry) in 2019/20 paid about \$562 million to Canadian Blood Services, Canada's national blood authority that is responsible for providing a safe, secure and affordable supply of blood.
- Ontario hospitals receive blood from Canadian Blood Services and transfuse it to treat patients with a range of conditions such as trauma and immune disorders.
- According to data from the Canadian Institute for Health Information, about 128,000 patient transfusions occurred in Ontario in 2019/20.

#### Why It Matters

- Responsibility for planning and managing Ontario's demand and supply, and safety of blood is shared among Canadian Blood Services, the Ministry and Ontario hospitals. Blood used in hospitals includes critical blood components such as red blood cells and platelets, and products derived from blood such as immunoglobulins (Ig).
- Canadian Blood Services collects blood components from donors in Canada but mainly relies on purchases of blood products from foreign pharmaceutical manufacturers, primarily in the United States, using plasma, most of which is from paid American donors.

#### What We Found

- The portion of plasma collected domestically needed to produce the high demand blood product, immunoglobulins (Ig), has been declining steadily, from 22.7% in 2013/14 to 13.7% in 2019/20. The resulting reliance on blood product manufacturers in the United States for the supply of blood plasma is concerning because the Canadian demand for Ig has increased from 4 million grams in 2013/14 to 6.5 million grams in 2019/20. In 2019, new patients were unable to begin using a more convenient treatment approach of Ig when a shortage of this blood product lasted for 79 days.
- Ontario hospitals use their own unique systems to record how blood is used and do not consistently report this information to either the Ministry or Canadian Blood Services. Immunoglobulins (Ig), which is a blood product of critical importance, is in high demand as evidenced by the increased shipments to Ontario hospitals in the last 10 years. Almost one-quarter of what the Ministry paid Canadian Blood Services in 2019/20 is for Ig, but neither the Ministry nor Canadian Blood Services has the information needed to help inform whether Ig was used appropriately according to provincial guidelines; such information is also needed to help forecast demand for this blood product. This is especially important given possible supply disruptions from the COVID-19 pandemic, including possible presidential orders halting supply from crossing the border due to increasing shortages.
- Ontario hospitals do not always follow best practice guidelines on blood use and are not required to do so. The Ministry-funded Ontario Regional Blood Coordinating Network's mandate includes improving hospital practices around blood transfusion, but it cannot require hospitals to adopt best practice recommendations. For example, based on hospitals' self-reporting, the Network in 2020 found that only 14% of responding hospitals were meeting the best practice of transfusing a single unit of blood more than 80% of the time. Others transfused just a single unit of blood less than 80% of the time, not meeting this best practice.
- The Ministry has funded the Ontario Nurse Transfusion Coordinators program for 18 years but the Ministry's assessments of the program are limited by the lack of comparison of the performance in reducing blood transfusions in hospitals with program nurses versus those without these staffed positions.
- The Ministry does not use data on transfusion injuries and errors, which are reported by Ontario hospitals to databases maintained by the federal government, to help ensure Ontarians are experiencing better outcomes from blood transfusions.
- The Ministry does not obtain and review the data from Health Canada's inspection of hospital blood banks to confirm that Ontario hospitals comply with federal regulations on such activities as blood storage and handling.

## **Conclusions**

- Ontarians have had a safe and largely reliable and secure supply of blood for many years. While sufficient safeguards are in place to ensure that blood remains safe, the Ministry of Health should monitor hospital blood bank inspection results conducted by Health Canada to be aware of these results.
- The impact of the COVID-19 pandemic has led to growing concerns about the risk to a sufficient supply of domestically sourced blood plasma—the main component required to manufacture one high-demand blood product—immunoglobulins—that many Ontarians rely on for sometimes life-saving treatments. Continual monitoring of the situation is warranted.

Read the report at [www.auditor.on.ca](http://www.auditor.on.ca)