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Auditor General:

Ministry of Health

Canadian Blood Services

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Thursday 27 May 2021

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LEGISLATIVE ASSEMBLY OF ONTARIO

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

STANDING COMMITTEE ON PUBLIC ACCOUNTS

COMITÉ PERMANENT DES COMPTES PUBLICS

Thursday 27 May 2021

Jeudi 27 mai 2021

The committee met at 1430 in room 1 and by video conference, following a closed session.

2020 ANNUAL REPORT,
AUDITOR GENERAL
MINISTRY OF HEALTH
CANADIAN BLOOD SERVICES

Consideration of value-for-money audit: blood management and safety.

The Chair (Mr. Taras Natyshak): Good afternoon. Welcome again. I'd like to call the meeting of the Standing Committee on Public Accounts to order. We are here to begin consideration of the value-for-money audit on blood management and safety from the 2020 annual report of the Office of the Auditor General of Ontario.

Joining us today from the Ministry of Health and Canadian Blood Services, we have officials who I believe are all on the line. You'll have 20 minutes collectively for an opening presentation to the committee. We'll then move into the question-and-answer period, with the back-and-forth beginning with the government, then to the official opposition, and then independent members for three minutes.

Now I'll invite whoever wants to take the lead to introduce themselves and potentially their colleagues. You'll have 20 minutes to begin. You can do so now. Ms. Angus.

Ms. Helen Angus: I'll start. Thank you very much. I'm Helen Angus. I'm the Deputy Minister of Health. It's great to be back at the Standing Committee on Public Accounts today. We were here yesterday, we're going to be here next week, but today we're going to talk about the Auditor General's value-for-money report on blood management and safety.

I'm joined today by Patrick Dicerni, who is the assistant deputy minister for the drugs and devices division of the Ministry of Health. Patrick's division works very closely with hospitals and other partners in Ontario, other provinces and territories in the country and with Canadian Blood Services to make sure that we have a safe supply of blood available to help treat Ontarians in need.

I'm also delighted to be joined today by Dr. Graham Sher, who is the CEO of Canadian Blood Services. I think he also has Pauline with him, as well; I'm sure he'll introduce her. Dr. Sher has been with Canadian Blood Services since it began operations in 1998. He is a recognized expert

in transfusion medicine and science, and he's a hematologist by training.

We also have other staff here today who will be able to answer more detailed questions about specific programs or specific aspects of the committee's work.

As always, I'm going to start off by thanking the Auditor General and her team for their work on this audit. We very much appreciate their review of Ontario's blood programs, and we are committed to ensuring that the ministry responds to the audit recommendations to improve the blood system for Ontarians. I'd like to start by taking a moment to talk about the importance of our work in blood management and safety for the province, and then I'll talk briefly about the audit recommendations, and then we'll get into a back-and-forth, and I look forward to answering questions following that.

Just to be clear at the outset, the safety and surveillance of the blood system have always been a priority in Ontario. We have continuously invested in safety and surveillance activities, both within hospitals and through Canadian Blood Services at a systems level. These investments support national and local surveillance of blood and transfusion-related risks and impacts to patients.

Given the emphasis we've placed on safety and surveillance, I was very pleased with the conclusion of this audit, which was that Ontarians have a safe, reliable and secure supply of blood for many years. I think the reason for this is twofold: First, the products and services received by hospitals and patients could not be delivered if not for one major contributor to the system, which is blood donors via Canadian Blood Services. It is Canadian Blood Services that holds the direct relationship with donors and provides blood products and services to places of care for what are often life-threatening treatments for patients in need.

Ontario and other provinces and territories in the country—with the exception of Quebec, which has its own blood operator called Héma-Québec—work with and provide funding to Canadian Blood Services to make sure that the blood system operates reliably and effectively. This is quite a unique role that Canadian Blood Services plays in the national blood system, and I know Dr. Sher will be able to elaborate very much on this unique role in his remarks.

The second contributor to the security of our supply is linked to the investments that Ontario makes to support various programs in the province. Following the expertise of Ontario clinicians who have expertise in transfusion

medicine and other areas, Ontario has made investments in provincial programs that encourage the safe and appropriate use of blood, its components and the products derived from it, and we'll talk a little bit more about those. As a result, patients see improved outcomes, and hospitals, in fact, make fewer orders to Canadian Blood Services and have less wastage, as well as an opportunity for cost savings.

We've successfully, in Ontario, introduced and continue to invest in programs through what we call a Blood Utilization Strategy, and this strategy optimizes the use of blood and blood products in the province. We'll probably talk during the course of this session about two programs. One is the Ontario Regional Blood Coordinating Network and the second is the Ontario Nurse Transfusion Coordinators Program, which are based in Ontario hospitals.

These programs are really aimed at improving patient safety by promoting and implementing best practices in blood management and, as mentioned before, they also deliver cost efficiencies for the health care system. Together, these programs have helped Ontario achieve negative growth rates for red blood cell utilization and lower per capita use of O-negative red blood cells than what occurs in other Canadian provinces. Ontario also has had the lowest per capita utilization of immune globulin, Ig, among all provinces between 2017-18 and 2019-20.

Of particular note, the Ontario Nurse Transfusion Coordinators Program uses and promotes various treatment strategies in hospitals to avoid unnecessary blood transfusion for surgical patients. We estimate that the program alone has saved the province approximately \$40 million annually by reducing the resources required for and associated with transfusions. Those things would include things like increased infection rates and longer hospital stays.

I'll highlight briefly the Ontario Regional Blood Coordinating Network as well. This network engages with hospital transfusion laboratories through ongoing communication and annual joint site visits with Canadian Blood Services. The network also develops best-practice guidelines and tools for hospitals to use as they apply and adopt best practices. This work has resulted in improvements to hospital performance, both in applying and implementing best practices and improving the utilization of blood products and components in hospitals. In fact, I would argue that the network is a recognized leader in Canada for promoting and facilitating system-wide improvements.

Last year, the network, in collaboration with the Factor Concentrate Redistribution Program, which is also funded by the government, saved the health care systems about \$7.7 million by reducing wastage and moving soon-to-be-expired blood product components and products to hospitals where they could be used before expiring.

Another program worth mentioning in these introductory remarks is called the Ontario Immunglobulin Treatment Program, which is a more recent addition to our suite of programs under the Blood Utilization Strategy. This program monitors and trains patients who are living with immunodeficiency diseases on how to self administer their treatments at home. Currently, each of these patients makes between 13 and 17 visits to hospital annually to

receive treatment. The advantage of this new program is that these patients do not have to rely on treatment through a more expensive hospital-based model, and I think it's a good program that can highlight the connection that we often see between different aspects of our health care system and the services within it. We anticipate that this program will contribute to a reduction in hospital use, including hallway health care, by reducing the number of hospital visits by patients with these diseases.

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Finally, Ontario is playing a key role in the national surveillance activities for blood transfusion related to adverse events, through the Transfusion Transmitted Injuries Surveillance System and the Transfusion Error Surveillance System. One is called TTISS, and the other one is called TESS. As the largest user of blood, blood components and products in Canada, Ontario provides vast source data for the federal health agency to analyze and understand the national trend of the transfusion adverse events so that we can identify and address any emerging risks associated with the use of blood, blood components and blood products on a national level. In 2019, all 158 Ontario hospitals voluntarily reported any serious events related to transfusion into the system. These programs are notable achievements for us that we're proud of at the Ministry of Health.

While we continue to make progress and investments to enhance blood management and safety in Ontario, we recognize, of course, that there's always room for improvement and opportunities to make patient care even better. For that reason, we always benefit from the work of an audit such as this and the work of the Auditor General and her office.

Having discussed earlier the overall conclusion of the Auditor General's report, I'll turn to the broader contents of the findings and the recommendations. I'll note that the report contains 13 recommendations comprised of 30 actions to improve blood management and safety in Ontario. I'm hoping today that we'll have an opportunity to talk about some of these in greater detail, but here are a few areas that we might want to focus in on, where the government has begun and continues to address the recommendations. One of the areas of focus for the report, of course, was the anticipated shortage of immune globulin. In Ontario and in Canada, we do rely on suppliers in the US for high-demand blood products, including immune globulin, which is manufactured from plasma collected by these suppliers.

The Auditor General has recommended that Ontario should continually monitor the supply of global blood plasma in conjunction with Canadian Blood Services and other provincial partners. I think we all recognize that this is an important issue, and this is something where we're working very closely with our provincial and territorial partners in the national blood system. We continue to seek the leadership of Canadian Blood Services in monitoring the international situation and the supply and demand of Ig, particularly during the COVID pandemic and what impact that may have had on global supply. Fortunately, I

can report—I'm sure Dr. Sher can address this in more detail—that the actions taken by Canadian Blood Services, provincial and territorial partners have really helped mitigate these risks. We issued a communication to all Ontario hospitals requesting that they follow best practices for immune globulin immunization, and a similar communication was also issued nationally to all hospitals by the National Emergency Blood Management Committee.

We are also planning to participate with Canadian Blood Services and other provinces and territories in a national policy discussion this year convened by Health Canada on plasma self-sufficiency. It's through this forum that we'll be looking to achieve a consensus on the best legislative and regulatory framework across the country to support achieving our self-sufficiency goals.

A second area of focus in the report was the need to improve data, whether it's on the use of blood products, inventory or clinical use. Again, I would say this is an important priority for Ontario and I very much appreciate the Auditor General's recommendations in this area.

We've sought input from stakeholders on the Auditor General's findings and recommendations, and we've had discussions around different considerations around data. The work has already been initiated to implement an electronic immune globulin ordering system which will substantially increase the availability of high-quality data, and once implemented, the system will help to improve our understanding of factors contributing to the utilization of that important blood product in Ontario's health care system, and it will help us, I guess, make decisions on the cost-effective alternatives to plasma protein products.

I hope you can see from these introductory remarks that we've made good progress in addressing the recommendations since the release of the Auditor General's report last December. Obviously the intersection of the national blood system with provincial and territorial health systems, its governance, how it impacts the lives of people needing a blood transfusion or treatment with a blood product is a very complex relationship.

We're committed to making sure that the recommendations are reflected in our work to improve oversight, as well as operational excellence, and we will continue in this area, as in many others, to leverage information technology to enhance efforts to improve blood management and safety.

With that, I will turn the introduction to my colleague Dr. Sher, as I introduced him earlier, the chief executive officer of Canadian Blood Services.

Dr. Graham Sher: Thank you very much, Deputy Minister Angus, and good afternoon, everyone. My name is Graham Sher. I'm the CEO at Canadian Blood Services, and I'm joined here by Pauline Port, our chief financial officer and VP of corporate services.

I want to thank you, Mr. Chair and members of the committee, for the opportunity to be with you today. By way of introduction, Canadian Blood Services was established in 1998 as an independent, not-for-profit corporation. We are regulated by the federal government under Canada's Food and Drugs Act, with the responsibility for

ensuring Canadian patients have access to safe, reliable and high-quality blood, plasma, stem cells, organs and tissues.

CBS is the only national manufacturer of biological products funded by the provinces and territories. We are Canada's national blood authority, and that means that we are responsible for managing a fully integrated supply chain from end to end, including collection, testing, manufacturing and distribution of blood and blood products.

We also manage a formulary of plasma-derived and related therapies which are used to treat a variety of life-threatening conditions. CBS does all this important work on behalf of the provincial and territorial governments, as you heard from the deputy minister, with the exception of Quebec, which has its own blood system operator.

Our role as the national blood authority was established by a memorandum of understanding between the federal, provincial and territorial Ministers of Health following the Commission of Inquiry on the Blood System in Canada, led by Justice Horace Krever, which investigated Canada's contaminated blood crisis. The memorandum of understanding strategically establishes an arm's-length relationship between CBS and governments in order to protect the independence of the blood system.

We work very closely, of course, with the provincial and territorial governments. The PT Ministers of Health appoint our board of directors. They collectively approve our three-year corporate plan and, each year, our annual budget. When working closely with all the various health systems across the country, we apply our organizational expertise to deliver value really in three principal ways: (1) by improving patient outcomes, (2) by enhancing system performance and (3) by optimizing cost efficiency.

In the two decades since we began operations, we've made significant progress in ensuring the safety and security of the products and services we deliver to hospitals, while at the same time enhancing productivity in critical parts of our operations. Today, in fact, Canada's blood supply is recognized as one of the safest in the world with not a single recorded case of blood-borne infection from hepatitis C or HIV, the pathogens that harmed so many in the crisis. We also regularly open our doors to patients and others interested in our decision-making processes, as recommended by Justice Krever, and we offer Canadians an ongoing and meaningful opportunity to engage with us on how the blood system operates.

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As part of our commitment to transparency, accountability, continuous improvement and good governance, we also undergo periodic performance reviews of the organization and the national blood system. In fact, at about the same time as the Auditor General's review was taking place, CBS was finalizing a separate, comprehensive, third-party performance review in collaboration with provincial and territorial governments. This third-party performance review, which is in fact referenced in the Auditor General's report, found that we had met or exceeded virtually all of the key indicators by which we measure safety, quality, productivity and financial sustainability.

In fact, two consecutive performance reviews have recognized the tangible value that CBS has delivered, including savings to the funding governments, totalling \$132 million from 2008-09 through to 2019-20. Beyond these efficiencies, we've also ensured brand diversity, product choice and state-of-the-art effectiveness in the plasma therapies on our formulary, while negotiating budget-conscious agreements on behalf of the health systems. In fact, the cumulative benefits from these publicly tendered processes, both through savings and cost avoidance, exceed \$1.2 billion from the period 2013-24 through to 2020-21—

The Chair (Mr. Taras Natyshak): Thank you very much, Mr. Sher, and thank you very much, Ms. Angus.

We'll now move on to the first 20-minute round of questions, led off by members of the government. I will recognize MPP Hogarth. Go ahead, please.

Ms. Christine Hogarth: Thank you very much, Chair. I just want to thank everybody for being here again today. I know your schedules are extremely busy. I also want to thank Mr. Kennedy for his briefing this morning. I didn't get the opportunity to thank him for his time and sharing a presentation with us.

We were able to hear a little bit about the complex system, the process of actually managing the supply and the safety of blood and blood products in Ontario. I guess the key word here is "safety." We want to make sure first that we have a safe blood supply. I'm a first-time donor of blood, during COVID. I have to give credit to my colleague MPP Kusendova, who inspired me to donate blood during COVID. It was safe to do so, so I encourage those who can to donate their blood.

The AG mentioned in her recommendations the complex process of managing the blood system. I wonder if you could expand upon how the blood system works in Ontario. Are there any modernization plans that you're thinking of for the future?

Ms. Helen Angus: Thank you for the question. Why don't I start, and then maybe Dr. Sher will join in as well, because we both have different experiences, and maybe that speaks to that complexity.

I think Dr. Sher has already talked about the Krever commission that was established by the federal government back in 1993. Certainly, it looked into allegations that the system, the government, the private sector and non-government organizations responsible for supplying blood and blood products had allowed contaminated blood to be used, and that that resulted in the infection of people with HIV and hepatitis C in the late 1970s. I think Dr. Sher just talked about the kinds of outcomes that the new system has put into place and has been able to achieve.

I think one of the most important recommendations coming from Justice Krever and his commission was the recommendation of a single national blood system that replaced the Red Cross as the operator. I'll just go through, briefly, some of the component parts of the system. Canadian Blood Services, as Dr. Sher has described, has been there since 1998. I think he's probably in the best position to describe what the role is, but it does provide blood and

blood products to hospitals at no charge—that is paid for by the provincial-territorial Ministries of Health, with the exception, again, of Quebec—and it provides other services, such as diagnostic service, stem cells, cord blood, organ and tissue donation and transplantation registries.

There's also a role for Health Canada. Health Canada regulates, as Dr. Sher mentioned, Canadian Blood Services and hospitals for the safety of blood and blood products and the blood system. They do inspect hospital transfusion laboratories—also called "blood banks," which is, I think, the language that may have been referenced by the Auditor General in her report—and Canadian Blood Services for blood collection, the handling of collected blood for transfusion or manufacturing of blood into a drug for human use. Health Canada also provides funding to Canadian Blood Services for research and development.

Hospitals—which are in provincial jurisdiction, but are their own not-for-profit corporations governed by the Public Hospitals Act—order blood and blood products directly from Canadian Blood Services, and Canadian Blood Services ships directly to hospitals as ordered. Hospitals have an ability to report to Canadian Blood Services what happened to the products after delivery: for example, whether they were transfused, whether they were transferred to another hospital or had been discarded due to expiry. So that's what we get from hospitals.

The Ministry of Health—I'll know that a little better—pays Canadian Blood Services to provide the blood and blood products, as mentioned, to Ontario hospitals. We actively collaborate with other provinces and territorial governments to oversee the blood system. I think in my opening remarks I described a number of provincial initiatives that we have put into place to support the appropriate use of blood products; I certainly referenced in my earlier remarks the Ontario Regional Blood Coordinating Network, the Ontario Nurse Transfusion Coordinators Program and the Ontario Immunoglobulin Treatment Program, and we have a Factor Concentrate Redistribution Program, to name a few, so we've got a very active system of programs to support the appropriate use of blood in Ontario.

Then there are various forums at the national and provincial level where that collaboration with other jurisdictions happen. Provincial and territorial Ministers of Health serve as the corporate members of Canadian Blood Services, and they play different roles, but key roles in the governance of Canadian Blood Services, such as electing, for example, the board of directors, monitoring the performance of the organization and, of course, approving the Canadian Blood Services strategic plan and annual budget.

There are also blood portfolio representatives from each province and territory, and they make up the Provincial and Territorial Blood Liaison Committee. These committees are largely comprised of officials who provide advice and support to deputy ministers on issues affecting Canadian Blood Services and the blood system. There are representatives of each jurisdiction, and they meet regularly with the senior staff of the Canadian Blood Services to get updates, consider issues and monitor performance.

A lead province for the national blood portfolio chairs this Provincial and Territorial Blood Liaison Committee and acts as the primary liaison between the provincial and territorial governments and Canadian Blood Services, and there's a two-year term. In fact, Ontario began this role as the lead province on April 1, 2021, so we're new in our role and looking very much forward to discharging our responsibilities on behalf of our colleague provinces and territories. We will serve our two-year term ending March 31, 2023.

But maybe, Dr. Sher, you may want to bring your unique perspective to the system as the operator of Canadian Blood Services.

Dr. Graham Sher: Thank you, Helen. I'll be brief, just to supplement a lot of the issues you've described which show the complicated and integrated systems that make a national blood system work.

Firstly, I want to thank you, Ms. Hogarth, for your donation. I'm certainly delighted to have you join as a blood donor.

Ontario actually plays a particularly important role in the national blood system. I stress that because what Canadian Blood Services has done is we have invested in significant state-of-the-art technology to make sure that our blood processes are as safe as can possibly be and the products that we then deliver to hospitals meet the highest possible standard of care.

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Over the last many years, there have been many expensive, large-scale technologies developed, whether it's for blood collection, blood processing or blood testing, that we use to render blood products safe. And because these are large-scale and expensive technologies, what CBS has done over the years is consolidate our service delivery model to service the whole country. Ontario is by far and away the largest scope of that integrated service delivery model. In fact, we have a facility very close to the Toronto airport, in Brampton, that tests about 60% of the country's blood supply on a daily basis, and we process about 40% of the country's supply through that single facility. It is by far and away the largest one we have. It's where we have a lot of this very sophisticated technology deployed that allows us to make sure the products and services we deliver are extremely safe.

We also have a very large research and development program, with a large cohort of that centred in both Toronto and Ottawa. You heard the deputy minister refer to our cord blood stem cell banking program. That is headquartered in Ontario as well.

I would say that Ontario is the major contributor to the national blood system, from an infrastructure point of view, from a human capital point of view, from a technology point of view, and it allows us to meet not only the needs of Ontario hospitals but right across the country. Ontario also benefits from this integrated system because we're able to bring products into the province if we're not able to meet collection needs locally.

I'll probably just leave it there, but from a CBS point of view, I really want to stress the point that an integrated

service delivery model with lots of technology and infrastructure that the provinces have invested in over the years have rendered the blood system in Canada extremely safe and forward-looking, and Ontario really is the epicentre of that.

The Chair (Mr. Taras Natyshak): Ms. Hogarth?

Ms. Christine Hogarth: Thank you very much. I think a lot of what you stated actually answered a lot of my second question, but I'll still ask my second question if you have anything to add. I was interested in how Ontario optimizes the use of blood and blood products and ensures the safety of patients receiving transition services. I wonder if you can elaborate. You talked about investments that provinces made. I wonder if you could talk a little bit about what investments Ontario has made to support this.

Ms. Helen Angus: Thank you very much for the question, MPP Hogarth. You've heard a fair bit from me already. I might actually ask Patrick Dicerni, who is the ADM responsible, to dig into the programs in a little bit more detail and give you a deeper sense of the work and the seriousness with which we take the mission to optimize the use of blood products. So if we can get Patrick on, that would be great. Thank you very much.

Mr. Patrick Dicerni: Thank you very much, Deputy. Patrick Dicerni. I'm the assistant deputy minister in our OHIP and drugs and devices division, and there within is our blood services program.

MPP Hogarth, thank you very much for the question. I'm happy to chat a little bit about some of the work that we have in addition to what we've already heard from the deputy and Dr. Sher. I would say, in addition to working with CBS to provide blood and blood products and services to hospitals, Ontario introduced programs through what we call the Blood Utilization Strategy, and this was designed to optimize the use of blood and blood products, as you inquired about. The aim there is really to try to improve patient safety and deliver cost-efficient strategies for the health care system.

Following best practice in transfusion medicine is the best way to mitigate potential risks for the use of blood and blood products. Luckily for us and for the system, there's some good study and literature there. The Ministry of Health currently funds five programs. They're based at Ottawa Hospital; Unity Health here in Toronto, so St. Michael's Hospital; Sunnybrook Health Sciences Centre; and McMaster University. Some of the programs reach all hospitals in Ontario. Currently the total investment in these programs is just a little under \$6 million annually.

These programs promote, broadly speaking, three things: appropriate use of blood and blood products; to develop and implement tools for Ontario hospitals to adopt evidence-based best practice for transfusion services and medicine; and, lastly, deliver cost efficiencies within the provincial health care system.

Just to go a level deeper for you, the Ontario Regional Blood Coordinating Network, or ORBCoN, as you sometimes see it referred to, helps support safe and effective transfusion services to patients. Since 2006, the ORBCoN network has been a great source and resource for hospitals

and blood transfusion professionals to promote what those safe, evidence-based appropriate blood utilization practices are. I'm fairly certain Deputy Angus referenced this in some of her earlier remarks, but the network did save \$7.7 million in the fiscal year 2019-20 through reduced wastage of blood components by redistributing to the hospitals—it can be using those products prior to the expiry, which is fantastic.

The network also helped achieve the lowest per-capita use of O-negative blood in 2020-21, lower per-capita use of O-negative red blood cells compared to other Canadian provinces, consistently lower per-capita utilization of Ig amongst all provinces, a negative growth of red blood cell utilization—I'm sure you're seeing a bit of a theme here—really driving down, appropriately and safely, some of the utilization that we have seen in the past. The last point, and this is definitely through collaboration with Canadian Blood Services and Dr. Sher's organization, a dramatic reduction in the per-capita use of one-blood component. Ontario was one of the highest users of this component two years ago, but in 2021, Ontario became the lowest user for per-capita use, and that was absolutely a collaborative effort.

I'd say the network is recognized as a leader in Canada for promoting and facilitating system-wide improvements. That's, again, in collaboration with CBS. They perform annual site visits to Ontario hospitals. This has resulted in improvements to the hospital performance in relation to best practices and utilization of blood components. In 2021, the network received about \$1.6 million in ministry funding to support three regional coordinating offices housed in the Ottawa Hospital, Sunnybrook Health Sciences and McMaster University. That was, hopefully, a decent summary of our ORBCoN program.

Another program which was also referenced earlier in some remarks is the Ontario Nurse Transfusion Coordinators Program. That promotes blood conservation and alternatives to blood transfusion in order to optimize and reduce the use of donated blood by limiting unnecessary transfusions wherever possible. These strategies are endorsed by the WHO as evidence-based approaches aimed at optimizing the care of patients to reduce the risk of requiring blood transfusions in the first place.

A couple of data points against that: A peer-reviewed publication back in 2014 highlighted the program's contribution to broader health system savings—estimated cost savings there of \$40 million annually through reduction in infection rates and length of hospital stay and \$11 million through a reduction in the purchase of red blood cells that would have otherwise been used for transfusions.

It was established back in 2002. The program has gained national and international recognition and has been asked many times over the years to provide some advice on implementation of similar programs in other provincial hospitals, other jurisdictions, which is a credit to the integrity of the program and the effectiveness of the program.

The Chair (Mr. Taras Natyshak): Two minutes.

Mr. Patrick Dicerni: In the last fiscal year, 2020-21, the program received about \$3.5 million in ministry funding to support 28 program-dedicated full-time nurses in 23

Ontario hospitals designed to counsel patients and help surgical patients avoid transfusions as appropriate. An example of this would be treating them with various drugs that control bleeding or treat anemia.

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One of the additional programs, the third program I'd like to detail a little bit for you, is the Ontario Ig Treatment Program. That monitors and trains patients living with Ig diseases on how to self-administer treatment at home instead of relying on treatment through what are much more expensive hospital-based delivery models. It was in 2021 that the program received \$680,000 in ministry funding.

The fourth program, the Factor Concentrate Redistribution Program, also touched on in Deputy Angus's opening remarks: This program asks hospitals to report factor concentrates within six months of expiry to the program at St. Mike's hospital. That's for the purposes of redistribution to hemophilia home care patients to avoid discards due to expiry.

Blood factor concentrates are expensive fractionated blood products that are used primarily for the prevention and treatment of bleeding episodes in patients with hemophilia and other congenital or acquired blood disorders. These products are distributed to patients through the hemophilia treatment centre's self-infusion program, and they also—

The Chair (Mr. Taras Natyshak): Thank you very much, Mr. Dicerni. I have to cut you off there.

The time now will move to members of the official opposition. Madame Gélinas.

M^{me} France Gélinas: My first question has to do with the part of the report that sort of scared me a lot when I read it, and it has to do with shortages, mainly shortages of Ig-based products.

The AG explained to us that the percentage of plasma collected in Ontario and Canada has steadily declined. The numbers she had to share with us was from 22.7% to now 13.7%. The collection of plasma through the pandemic has also gone down. All of the plasma that we collect in Ontario is shipped to the States for them to do the fractionating. Then the Ig comes back to us.

Given what the pandemic has done, there is a chance that by the end of the summer, we will be facing shortages. So my first question is, how ready are we for those shortages? How will we make sure that every province gets their equitable access if there is not enough to meet the needs?

I guess I will go to our deputy first, or Dr. Sher, whoever wants to start. I have a whole bunch of follow-up questions to this, if you could leave my microphone on.

Ms. Helen Angus: That sounds great. Nice to see you again, MPP Gélinas.

What I would talk a little bit about—I'll talk about what's been done between provinces and the federal government, and then probably Dr. Sher can talk a little bit more about the two issues: One is where we are now, and then the plans, going forward, to become more self-sufficient.

M^{me} France Gélinas: I will go about self-sufficiency. Those are my next—

Ms. Helen Angus: Okay. I'm getting ahead of you; I apologize.

M^{me} France Gélinas: It really has to do with COVID, has to do with these impending shortages that will happen now, before we have time to put a new strategy in place. August will come. The States have less plasma; 87% of our plasma and plasma drugs come from the States. What are we going to do when we don't have enough?

Ms. Helen Angus: Fair enough. I would just say that what's been happening is that the provinces, the federal government and the CBS—there's a national and a provincial emergency blood management committee, and that's been meeting to address the issues related to the pandemic impacts on the blood supply and utilization within provinces and territories. This committee has been meeting weekly to look at the impacts of COVID-19 specifically on blood supply in Canada. I can say that they've been meeting weekly to make sure that any recommendations that they make around availability and utilization are communicated across Ontario's health system, and to identify any specific issues related to the use in Ontario so that there's a two-way flow of information.

I would say there has been quite a bit of work to coordinate information across the ministry and government to support the response, and we've increased our communication with Ontario hospitals, including the regional blood coordinating networks, to discuss the impact of COVID-19 on blood supply and mitigation strategies. Basically, our system of monitoring has ramped up.

Perhaps I would ask Dr. Sher to talk a little bit more about what specific measures have been put into place in order to manage through the time frame that he specifically referenced—that is, this summer.

Dr. Graham Sher: Thank you, Deputy. Thank you very much, MPP Gélinas, for that important question. I will focus on the period around the pandemic that the Auditor General spoke to and that your question focuses on. We had been raising concerns even before the pandemic around potential global shortages of immunoglobulin, because what we have been observing around the world is rising demand in pretty much all countries, including Canada and Ontario, and the concern that the amount of plasma collected globally will not meet need.

So we have been forecasting concerns around supply and urging our provincial and territorial partners to invest in Canadian Blood Services to collect more plasma. The pandemic certainly made that worse in three principal ways: Firstly, in the very early months of the pandemic, the major plasma collectors—principally the United States—started to see a decline in the amount of plasma available. In the manufacturing facilities, they started to have COVID illness and plant shutdowns, and there were concerns being raised that the US government could potentially impose an executive order that would keep any of the immunoglobulin products in the United States and not allow exports.

What Canadian Blood Services did, with the support of our funding governments, is that we dramatically increased our inventory holdings in this country in the immediate early months of the pandemic, to make sure that we

had very large holdings of immunoglobulin in Canada, within CBS's warehouses and under our control. This, of course, came with a financial impact, because we had to buy inventory, and it impacts our working capital. But because this product has a very long shelf life, we thought that that was a really important risk mitigation strategy. I can assure you and all members of the committee, as we have assured the governments, that we're actually sitting on a very, very healthy inventory in Canada at the moment, and we are not projecting any inability to meet patient needs for at least the next couple of years.

That is in part helped by what both the deputy and the assistant deputy spoke about, and that is the excellent work that Ontario and the other provinces have done to essentially reduce utilization and optimize utilization. There is this program that was spoken about, the National Emergency Blood Management Committee, that established very specific guidelines to optimize the use of Ig in the current period. I really do applaud all the governments—Ontario and the other governments—and the clinicians for coming together to make sure that the amount of product used is optimal. Between what we've done in the immediate short term to optimize inventory holdings, supported by the work to optimize use—I'm very confident that there are no imminent shortages in this country.

But the concern for the future holds, and that will get to your second set of questions: why we need to dramatically increase the amount of plasma that we collect in this country and also why we need to have domestic manufacturing capacity. Of course, we all saw this most acutely highlighted by the vaccine situation, but it's equally pertinent to the plasma manufacturing situation, because up until now, there has been no domestic fractionation—that's the term that we use—or manufacturing capacity for these plasma therapies, and we would argue that it's really important there be onshore manufacturing capacity. There is one facility being built in Canada as we speak, and I know that Ontario and other governments are also looking at this. So those are just some of the additional actions that we took, obviously supporting the work that the province has undertaken with the hospitals and the clinicians who prescribe these products.

1520

M^{me} France Gélinas: So just to make sure that I understood right, although you forecast that the amount of plasma being collected in the States and in Canada could be lower than pre-pandemic, we have stockpiled enough immunoglobulin therapies and drugs to sustain the needs of all of the Canadian provinces and territories, excluding Quebec, for many years to come, as in two or three years. Did I understand that right?

Dr. Graham Sher: I would say closer to the two-year horizon. We have stockpiled large volumes of immunoglobulin. We also have very robust contracts with our suppliers that guarantee holdings in their warehouses in Canada and guarantee deliveries to Canadian Blood Services in order to meet hospital needs across the country.

On the one hand, the urgency of Canada and all the provinces understanding the concerns around supply disruption is really important, but we have taken measures in

the short term to build up inventory holdings. The long-term solution is us collecting dramatically more plasma in this country and being able to fractionate it on domestic shores, which will eliminate a lot of the concerns around dependence on the US manufacturing supply chain, global borders and what have you, all of which we've been able to manage through up until now.

M^{me} France Gélinas: That brings me to my second-level question, which is where the deputy minister wanted to start. How come we don't have facilities that allow us to fraction plasma here in Canada? From what I understand, the one being built is in Quebec. Quebec is not part of CBS. It's in Canada—yay—but it's not part of the supply chain that my province is part of. So I'll start with the fractioning, if you could explain to me how come we're not there yet, and what will a fractioning plant in Quebec do for CBS. I guess Dr. Sher.

Dr. Graham Sher: Thank you. Helen, feel free to add after this.

Two important observations to your question: The first is that the facility being built in Montreal is actually being built by one of the largest global plasma collectors and fractionators. It's a Spanish conglomerate by the name of Grifols. Grifols also happens to be our primary fractionator today. We send our plasma to one of their facilities in North Carolina and they return the finished products to us. So we're delighted that they're building an onshore fractionation facility in this country. We think that's a really important part of a vertically integrated supply chain in Canada. And it won't only service Quebec; it will be able to service all of Canada.

We are also aware that, in Ontario, there is a small—really a start-up—company that has some leading-edge technology that we are watching very carefully because I think it could potentially, once it goes through its development stages, scale up and support domestic manufacturing capacity as well.

I will just make this comment, and then I'm sure the deputy has other insights to add: Building a fractionation facility is a very, very large and expensive undertaking. These are billion-dollar-plus capital investments. Several times, we've looked at whether Canadian Blood Services should build and operate our own fractionation facility, obviously supported by funding from the provinces and territories, and we really don't think that that is an optimal solution. It is not our area of expertise, and it's also a massive capital investment. But we are delighted to see the Grifols facility come to Canada, and are hopeful other enterprises will seek to build biologics manufacturing capacity in this country. I think the pandemic is an important launching pad, in a way, for that to happen.

Deputy Minister Angus, I'm sure you've got perspectives, too.

Ms. Helen Angus: Obviously I would defer to your expertise and understanding of your supply chain and the manufacturers. Just one step back from that, we have been working as provincial and territorial governments to support Canadian Blood Services to establish more plasma collection capacity in the country. I think that we've started that with three proof-of-concept sites, and the

launch of those sites is well under way. That is part of the road to more self-sufficiency.

Certainly I think we are all joined up as a country to support CBS. I recall you coming to us and talking about this program, with your board chair, and certainly we're delighted to be able to provide that support to you as an organization and to the country.

M^{me} France Gélinas: Thank you, Deputy. That's in line with my next question, which has to do with self-sufficiency in plasma collection. Deputy, thank you for talking about the three concept sites that have started, but there are still a lot of worries that right now 87% of the products that we get come from plasma collected in the States. The States use paid plasma collection, which is something that we don't do in Canada, and this is something that worries a lot of people. Do you really see that the road to 50% self-sufficiency could be achieved without paid plasma collection? I'll start with you, Dr. Sher.

Dr. Graham Sher: It's a really important question. As the deputy acknowledged, the provinces and territories have funded CBS to initially open three dedicated plasma collection centres, the first of which was opened in Sudbury, Ontario—so very close to your riding—the second of which was opened in Alberta, and the third in British Columbia.

We also, with the support of the provinces and the federal government, just received a new tranche of funding to allow us to open eight additional plasma centres after these three. In fact, the next two—so numbers 4 and 5—are also coming to Ontario. We have just located facilities, one in the Ottawa area and one in Brampton, Ontario, and both of those will be opening up in this fiscal year, 2021-22, followed by additional sites: one in Manitoba, and then additional sites and locations to be determined.

With the support of our funding governments, we really will have 11 dedicated plasma centres operating by 2023-24, and that will help move the sufficiency number from the current 13% up to about 25%, which is a significant improvement, but still a long ways away from the target that we believe is optimal for the country, which is 50%.

And so we're in discussions now. We're evaluating a range of options as to how we can continue to collect more plasma in this country to achieve that 50%. I am very confident that we can hit the 25% target without having to remunerate donors. That is what our proof-of-concept model has shown. It's working extremely well in Sudbury and Lethbridge, and I have every confidence that that can be replicated across the multiple other sites.

We are evaluating whether we can scale fast enough and far enough from 25% to 50% and what it would take to do in a non-remunerated model versus other models. We really don't know the answer to that yet, but I am supremely confident based on the support of the provinces and the experience shown in the Sudbury site that non-remunerated plasma collections is indeed a very feasible option in this country—

The Chair (Mr. Taras Natyshak): Two minutes.

Dr. Graham Sher:—and the Sudbury site would show that our donors are very dedicated, high-frequency and highly committed to supporting the plasma program.

M^{me} France Gélinas: Would you know how much of the plasma that is collected in the States comes from paid donations? “Paid” and “donations” looks funny, but you know what I mean.

1530

Dr. Graham Sher: North of 85%, probably.

M^{me} France Gélinas: So 85% of the plasma collected in the States is through a model of paid donations?

Dr. Graham Sher: Yes. Pretty much all the plasma centres are remunerated centres. The blood operators collect some fares, but it’s a much smaller scale.

M^{me} France Gélinas: How come the blood collections do not collect plasma anymore? I used to be a plasma donor in Sudbury, way back when Red Cross was there and you had a choice of donating blood or plasma. How come this doesn’t exist anymore?

Dr. Graham Sher: It does. In at least five of our centres, we operate both plasma collection and blood collection. In a place like Sudbury, now we’ve turned it exclusively to plasma collection. The reason we used to do some plasma collection in other locations and many, many years ago reduced that footprint is because we had not optimized the technology or the process. The plasma that we were collecting at that point in time was extremely expensive, and we weren’t facing the global challenges on plasma supply that we’ve been facing for the last few years.

That is why our commitment to the provinces has been that through the proof-of-concept model and these additional aid centres, we can collect a litre of plasma at a price that is proximate to the large-scale industry in the United States. It’s really important we do it in a cost-effective way, because otherwise it becomes exorbitant to invest in this program.

The Chair (Mr. Taras Natyshak): Thank you very much, Mr. Sher—

M^{me} France Gélinas: Are there economies of scale as they—

The Chair (Mr. Taras Natyshak): Excuse me, Madame Gélinas. The time is expired.

We have to move on now to the independent member. MPP Blais.

Mr. Stephen Blais: Thank you, everyone, for being here. I have to admit that I was very concerned to learn that many of the systems in place with the blood tracking system are technologies from the 1980s and 1990s. The very fact that blood is still ordered by fax machine is frankly quite astonishing, two decades into the 21st century.

What astonished me a little bit more, to be frank, was that in response to these challenges that the auditor revealed, the response back was that you’re working to bring this technology up to date and these systems up to date by 2024 or 2025, which is still obviously three or four years away from now and five or six years since the audit. Quite frankly, I want to know why it’s taking so long to get our systems to a more modern state.

Ms. Helen Angus: I don’t know if Patrick wants to start or Dr. Sher. I’m less familiar, obviously, with all the mechanics and the IT supports that are required to support the

blood system, but I would say in general we are fully supportive of excising the fax machines from the health care system. Thank you for the question.

Mr. Stephen Blais: And so no one can answer why it will take another three or four years?

Dr. Graham Sher: I can. Thank you very much for the question. As was observed in the Auditor General’s report, we launched a pilot study to do essentially fully online electronic ordering. We did it as a pilot study with a small number of hospitals in British Columbia. It was shown to be highly successful there. We’ve scaled it up from those four hospitals to 27 hospitals now, and we really, as is identified in the Auditor General’s report, have a plan to scale this up nationally.

The reason the timelines are of the nature that you refer to is that we essentially have to integrate our online systems with every one of the hospitals in the country, and many, many hospitals have very different IT systems in their blood banks or their laboratory systems. It’s not a uniform system across the country, so it really is a complex IT undertaking, and of course it is competing—not just in Canadian Blood Services, but in all of the hospitals—with a plethora of other technology initiatives.

This is one initiative where the provinces and CBS have been absolutely joined at the hip. As the deputy said, we see this as an essential modernization. I would share your acknowledgement it’s somewhat late to the party, and we do want to have not just an online ordering system to replace faxes, but ultimately, the vision that we have for the future is a fully integrated vendor management system where we can see the inventory in the hospitals, they can see the inventory at CBS and all orders are managed in real time, depending on a system-wide inventory—

The Chair (Mr. Taras Natyshak): Thank you very much, Mr. Sher. Sorry for cutting you off.

We have to move to the second round now, a 20-minute rotation to the government side, and I will recognize Mr. Kramp. Go ahead, Mr. Kramp.

Mr. Daryl Kramp: First of all, let me thank Dr. Sher and certainly our deputy minister for giving the COVID realities that we’ve all had to undergo—for having the foresight, first of all, to secure inventory. It’s tremendously, tremendously comforting. It’s also comforting to know that we are at least heading down the road towards self-sufficiency. All I would do is encourage everybody involved to try to step on the gas a little bit more on that. We saw what happened, of course, when we were held hostage to a vaccine supply, so the last thing we want to do is run into another calamitous circumstance down the road. So thank you very much for being on top of that.

To Dr. Sher: I’m fortunate in one way. My family have always been regular donors, and I can attest to the professional manner in which Canadian Blood Services has absolutely always handled their responsibility, and yet I noticed, as well, you stated—I think there has to be an assurance, because you state that “Canada’s blood supply is recognized as one of the safest in the world. Safety is paramount in everything we do,” and we incorporate this priority into “every step in the process.” Can you be a bit

more specific and tell this committee what processes are in place to safeguard our supply?

Dr. Graham Sher: Certainly. Thank you very much for the question. Again, thank you for your support of the blood program.

We view blood safety as a multi-tiered process. It begins with all of the steps that we go through to identify individuals who will be optimal as blood donors. So every donor, whenever they register to book an appointment and come into one of our sites, has to go through a very rigorous screening process, and they have to do it every single time, whether they've donated once or whether they've donated a thousand times to us before. It's lengthy, it's personal, it's intrusive, but it's absolutely essential as the first step to protect safety.

Once a donor passes all of those screening criteria, they then go into our collection area and are screened by one of our professionals to make sure that their health is okay, their vital systems are okay and they don't have any illnesses that day that may make them or the blood we collect from them unsafe for patients. If they pass through that, we then collect blood in a very sterile environment with closed-system blood bags and needles and highly trained professionals, and our whole collection environment is a very sterile, highly regulated process. We have to follow very careful standard operating procedures.

Blood is then shipped from a collection environment to our production environment, where it goes through a series of processes that do two things. The first one is to essentially separate the pint of blood, as we call it, into different types of components: red blood cells, platelets and plasma, and they go through purification steps. We filter out the white blood cells which are harmful, and we go through a variety of purification steps to make sure the unit of blood is rendered safe, and then, most importantly, every unit is tested every single time. Whether the donor has been in once or they've been in a hundred times, we test it for a whole variety of pathogens, about nine or 10 different viruses, bacteria and parasites, and only once we have a negative result and all the processing is completed does a unit of blood then get a label put onto it to say "suitable for use." It's then put into our inventory tracking system, and it is then awaiting an order from a hospital to match to a specific patient.

That's what we do inside our environment, and then, of course, once a hospital receives their blood—and maybe the deputy could expand on this, if she wants, or Mr. D'Amico could—there's a series of steps inside the hospital where they of course verify the suitability of the blood product. They do some of their own testing, and there are clinical steps to make sure the right unit goes to the right patient at the right time.

1540

It's a complicated process, but I think because we've put in all these measures—and I mentioned much earlier, in an earlier question, we've got all these state-of-the-art technologies in our environment—testing machines, processing machines—that make the blood extremely safe, and then we measure the residual risk in blood afterwards,

and it's how we know our blood system is exceedingly safe. We actually track units of blood to see if there's any evidence of infection transmission, and that's why we know the data that we know.

Mr. Daryl Kramp: Maybe, then, a joint question to either the ministry and/or back to you, Dr. Sher. Obviously, as I mentioned before, COVID has certainly shone a light on everything, of course, that we're doing right, as well as wrong. Certainly, COVID has demonstrated that it has had a significant impact on our blood capacities, to be able to respond to the demand.

What I would like to know is, particularly in Ontario—you've alluded to it a little bit—but, specifically, how have Ontario and the CBS responded to ensure that we have the security of supply? You mentioned securing inventory, which is phenomenally important. But are there a lot of other measures that you could have taken or should have taken, and/or are you quite comfortable with the steps that you have, and what are they?

Ms. Helen Angus: Yes, maybe I'll start and then, Graham, you're okay to finish up.

Thank you very much for your question. I think as Dr. Sher described earlier, we haven't seen any shortages during the COVID-19 pandemic. Obviously, that's a result of some of the good forward-thinking and planning that has been done by Canadian Blood Services.

I would note that since the beginning of the pandemic, there have been issued 13 advisories that were only in the green and recovery phase, so nothing has been sent out to the system that would suggest what we call amber, orange or red advisories, meaning there were no actual shortages of any blood components or products and no patient care was compromised due to the supply not meeting the demand for blood products and components during the pandemic.

I think I talked briefly before about some of the emergency blood management committees, and there are national and provincial committees. They were convened starting in March 2020. So if you think about that time, the declaration of emergency in Ontario was declared, I think it was, March 16, 2020. They were convened at the same time to address the pandemic impacts of the blood supply system and provincial-territorial utilization. You can sort of tell the story of a lot of our different program areas, including blood. We're very attentive to supply issues and had plans in place to address those.

Ontario was an active participant in the provincial and the national blood management committees. They're convened only in the event of a real or potential blood products shortage. On the national scene, the National Emergency Blood Management Committee began, as I mentioned earlier, to convene weekly to discuss the impacts of COVID-19 on blood supply planning.

And then in Ontario, we have an Ontario Emergency Blood Management Committee, which also met weekly to ensure that the recommendations that they may have made would be appropriately communicated within the health system, and again, to act as the connector between the experiences in the health care system so that we could advise the national committee as well, so that we were all

joined up from the delivery to the province to the national committee.

Certainly, there's been significant work to coordinate information across the ministry and government, to support the response to COVID-19, to increase our communication with Ontario hospitals and to encourage activities and initiatives that are consistent with the 13 advisories in the green phase that I mentioned earlier. We increased our frequency of ad hoc meetings with stakeholders to discuss the impacts of COVID-19 on the blood supply, including mitigation strategies using some of the programs, obviously, that Patrick talked about earlier.

But perhaps with that, I will hand it over to Dr. Sher to talk a little bit more about the preparations and work that CBS did.

Dr. Graham Sher: Thank you very much, Deputy. To build on that, several perspectives from Canadian Blood Services. First, we actually had a business continuity management program that had a pandemic plan built into it, which we were able to take off the shelf at the declaration of the pandemic and refresh and modernize. We've been able to leverage some of our supply chain resilience and our business continuity capabilities to make sure that wherever there were threats of disruption, we were able to manage the system.

I'll give you one example that is Ontario-specific. We have a manufacturing facility in Ottawa that has both a blood manufacturing program and a stem cell manufacturing program. A few months ago, we had a small outbreak of five employees diagnosed positive for COVID. We made the pre-emptive decision to shut that facility down, in conjunction with the local public health, while we worked through all the necessary case management. But we were able to keep the system whole, and no hospitals went without blood because we leveraged some of our national business continuity capabilities and we were able to meet hospital inventories at all times.

I also have to acknowledge Ontario and all the provinces and territories, because early on in the pandemic, I wrote to Deputy Minister Angus and her colleagues, and we identified the sorts of investments that we believed would need to be made in the blood system during the pandemic so that we would not face supply disruptions—investments in personal protective equipment, investments in redesigning our workflow because we had to put in physical distancing in all of our collections environments, physical barriers and so on and so forth. Of course, provinces were dealing with challenges on a multitude of fronts, but the deputies were very receptive to my request for financial support. We've been able to invest in all of the necessary safety measures for our staff, for our donors, for our volunteers and anyone who essentially comes through our system. In my view, it's a very positive example of Canadian Blood Services collaborating with the provinces and territories to make sure that the national blood system was not put in jeopardy through the various phases of the pandemic.

We've worked with the provinces and local public health to make sure that our staff get appropriately vaccinated in appropriate sequences, as laid out by the various

governments, obviously including Ontario—another example of where Deputy Angus and her colleagues in Ontario have been very receptive to making sure that the blood service is also recognized as part of the overall COVID response.

Then one other point I would make, Mr. Kramp, is we were asked by the federal government, through the COVID-19 Immunity Task Force, to support the national endeavour to measure immunity to COVID-19, because we collect hundreds of thousands of samples every month over a year. So with the support of the federal government and the provinces, we've been testing many, many thousands of samples every week for COVID-19. We share that information with the federal government and the provinces, and it helps them understand the emerging public health picture of immunity. CBS has been an important contributor to that and something we believe has been an important part of our contribution to the overall system.

Mr. Daryl Kramp: Might I just say, generally, in this committee, we respond to the Auditor General's report. As a rule, there are many, many deficiencies and challenges to deal with, problems to overcome and directions to change. Let me take this opportunity—to Deputy Minister Angus, all of your colleagues at the ministry, Dr. Sher, this is a refreshing level of confidence, that we have a system that is working very, very well. It's never perfect, of course; we should always be striving for that little bit more. But I certainly leave this committee meeting, with your attendance here today, feeling quite assured that you have not only the hand on the wheel but an eye on the road map for tomorrow. So I'll just close off and say thank you for your appearance here today.

Ms. Helen Angus: You're most welcome.

The Chair (Mr. Taras Natyshak): Are there any further questions from government members? MPP Anand.

1550

Mr. Deepak Anand: It's really refreshing, as MPP Kramp said, to hear what we're hearing today.

A quick question, Dr. Sher: I was just looking at—and this always bothers me. On one side, we are collecting about 13% or 14% of the blood for plasma and we are buying 87%, and the majority of it we are buying from the United States. I was reading this article on Canadian Blood Services which actually talks about how Canadian Blood Services does not and will pay donors. On the other side, we are paying for the 80%-plus that we are buying from the US—actually buying, and there it is a paid product.

So it's like an ethical dilemma. But I want to assure you that I'm on your side. I truly believe that we should not be paying for blood; it is for us to give. That's our Canadian values. But what I would suggest—I'm hoping that if I can see something on your blood services in every location—and one of them is in my riding of Mississauga–Malton. We have a blood drive every year, and because of COVID-19, we are actually doubling it up. We are going to be having one on June 19 and June 26. We will be having two blood donation drives this year, to find support as much as we can.

But what I would suggest is, if it is possible, if you can write down and let people know that every litre of blood

they donate is equal to one litre of blood that we don't buy from the States. If you are saying that we should not be paying for blood services, maybe we should be promoting it, and maybe we should be thanking people more, because every time I donate a litre of blood, I'm technically helping you not to buy.

It's an ethical dilemma. I'm not saying it is the right thing or the wrong thing to do. I mean, sometimes you have to save a life. That's our medical system. But it's just a suggestion of what I thought would be nice to let people know. Let's increase our percentage from 15% to 20% or maybe 25%. With every increase in percentage, we are actually reducing the percentage of what we pay, and that money can be utilized well in another field in another way. That's something which I suggest to you.

Now, coming to the question, I understand from the Auditor General's report that Ig is a high-demand blood product that is used for a range of conditions, such as immune disorders, neurological conditions and other medical problems. My question would be, what has Ontario done to manage the demand for Ig and to avoid potential shortages?

Ms. Helen Angus: Thank you, MPP Anand. I think what I might do is, since you've asked quite specifically and I think you want some programmatic information, I would ask ADM Dicerni to talk a little more about this and then perhaps Dr. Sher could also comment as well. But if we can get Patrick up, I think he can give you the specifics at the level of detail that might be most helpful to you.

The Chair (Mr. Taras Natyshak): Just under two minutes. Go ahead, Mr. Dicerni.

Mr. Patrick Dicerni: Thank you very much for the question, MPP Anand. You're absolutely right, and some of this I touched on in earlier comments. There are certainly some activities that have been under way within Ontario, and particularly within Ontario hospitals, to ensure that Ig products are being used in the most judicious and effective fashion possible.

I'd say there's a host of programs that we have here in Ontario that, from almost a nudge theory or a choosing wisely approach, are in place to assist prescribers and clinicians with making the most informed choices on how to safely and effectively use these products that are expensive and in high demand. I'm wanting to give you some relevant programmatic stats, if you'd just give me a moment to bring up my notes on this particular issue.

As I was saying—and this does go back to some of the programs or networks I referred to earlier, and the one in particular that I'd like to point to is the ORBCoN network, the Ontario Regional Blood Coordinating Network, and the specialized—I'd say Ontario-specific—utilization guidelines that were developed in—this was back in 2009, I believe—to inform hospitals on hygiene—

The Chair (Mr. Taras Natyshak): Thank you very much, Mr. Dicerni. I'm sorry to have to cut you off, but we now have to move to the opposition members for their 20-minute rotation. Madame Gélinas.

Mme France Gélinas: Just to finish what I was asking Dr. Sher in my first 20 minutes: From what you told us,

Dr. Sher, there are some economies of scale to be done when you collect plasma, to make it more financially cheaper. Did I understand that right?

Dr. Graham Sher: Yes. I mean, it takes time from opening a plasma centre up to achieving your operating efficiency run rate, where you have enough donors coming in with a high enough frequency on a regular enough basis to make sure your costs are optimized. We're working exceedingly hard, and our commitment to the provinces is that we will put in all the process changes and all the necessary efficiencies in our operating model to make sure that every litre of plasma we collect in our dedicated plasma centres will be favourably viewed from a cost point of view, compared to the very, very large-scale plasma industry that exists in the United States.

So it is an economy-of-scale business, but more importantly, the issue is how much plasma we can collect in this country under the auspices of the blood service to meet the needs of Canadian patients so we can always make sure there's enough immunoglobulin for them.

Mme France Gélinas: And if you were to project—I know that you've given yourself a goal of 50% by 2025. Is the goal of 100% something that you don't see as achievable in Canada?

Dr. Graham Sher: I'll be brief in my answer. The reason we're not setting a target of 100% self-sufficiency is really a risk-mitigation strategy, and some of that derives from experience in the United Kingdom about 25 years ago, when they used to collect a large amount of plasma there, and suddenly the mad cow disease epidemic hit the United Kingdom and they had to shut down their whole plasma program.

We've done a very extensive risk modelling exercise in 2016, and we are in the middle of refreshing it again now—we're right through the 2021 risk assessment—to help us determine what is the optimal sufficiency target. The way we measure it is the amount of plasma that we collect in Canada from Canadian donors, that we control the fractionation of, versus the amount of finished-product immunoglobulin that we have to buy on the global market. For us, it's an issue of risk diversification.

For the moment, we believe, based on the 2016 analysis, that 50% is the right target. We're doing a reassessment of that now, based on prevailing global factors, and it's a number that we evaluate all the time; we constantly work with the provinces to understand what the optimal target for the country should be. So 50% is our operating target now, and we'll keep evaluating that as situations change around the world.

Mme France Gélinas: Okay. Thank you. I don't know if you feel comfortable sharing with us what brought us to the shortage that we faced in Ontario—I'm guessing in all of Canada, but I'm aware of Ontario. In 2019, we faced a shortage for many weeks that turned into two or three months. What happened then?

Dr. Graham Sher: I'll take this one first, if you wish, Deputy Minister. It is a very specific issue, and it is addressed in the Auditor General's report. It is a situation where we had an advisory in place.

There are two types of immunoglobulin: one that is injected intravenously in a hospital setting and one that patients inject under their skin and can be delivered either in a hospital setting or in a home setting.

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In 2019, there was some disruption from some of the manufacturers globally in the amount of what we call subcutaneous immunoglobulin, the product that is injected under the skin, and there was a sudden increase in demand for that product across all the hospitals. We weren't able quickly enough to access some of that subcutaneous supply, so we worked with all the hospitals, with the provinces and with the clinicians to move some patients who were getting their under-the-skin injection formulation onto the intravenous formulation and we worked with the clinicians to not put any new patients onto the subcutaneous formulation until we were able to secure supply.

I do have to stress this: No patient in Canada, in Ontario or anywhere else, went without immunoglobulin therapy. Not a single patient went without therapy. What happened was some patients had to switch brands or switch from the subcutaneous formulation to the intravenous formulation.

We were able to secure additional volumes and, as I said much earlier in one of my other questions, today we have very high inventories of both the intravenous and the subcutaneous formulations. But that was a particular set of circumstances in 2019—it predated the pandemic—and we worked with the provinces. The National Emergency Blood Management Committee that ADM Dicerri has spoken about several times was very, very helpful through guiding how patients and clinicians should work with hospitals and with Canadian Blood Services to navigate through the system.

M^{me} France Gélinas: All right. I think that my next question will be to the deputy; I'm not exactly sure. The Auditor General makes reference to 27 Ontario hospitals which are participating in collaborations regarding COVID and identifying immunity within patients recovering from COVID, is what I understood, and I'm wondering if we could get an update as to where this is at.

Ms. Helen Angus: Thank you for the question. I don't have the answer to that question at my fingertips. I wonder if ADM Dicerri or Dr. Sher would have an answer to that. It sounds to me like it would be something related to the Canadian immunity task force and looking at what the prevalence might be. But I would just ask—otherwise, we will get you the answer.

Mr. Patrick Dicerri: Thanks, Deputy. Thank you for the question. I will need to take this question back. I do believe this centres around antibody and immunity identifying. Those are not data or stats that I have at my disposal—perhaps our colleague Dr. Sher does—but I'm happy to take this as an undertaking.

Dr. Graham Sher: If my memory serves me correctly, that observation in the report was around the hospitals in Ontario that were part of the convalescent plasma clinical trial which was done. Very briefly: When COVID emerged, there was some suggestion that if we collected plasma from patients who had recovered from COVID disease,

they would have enough antibodies circulating in that plasma that it could be used as a treatment for other sick patients for COVID. We participated with numerous hospitals in Ontario and quite a number of hospitals around the country in three separate clinical trials where we actually collected the plasma from these recovered COVID-19 patients and provided the plasma to the hospitals who did the clinical trials, and they evaluated the efficacy of this therapeutic convalescent plasma.

I'm going a little bit by memory there, MPP Gélinas. I think that's the reference in the Auditor General's report, but again, if I'm off base, I will work with the ministry.

M^{me} France Gélinas: No, you have it right. I was interested if anybody knew if anything good came of those clinical trials.

Dr. Graham Sher: Good came out, in that all clinical trials are important. The Canadian clinical trial, which was a very sophisticated one—it had 600 patients across the country—and a UK trial and several American trials all showed that convalescent plasma was not an effective therapy for patients admitted to hospitals with COVID-19, those either awaiting ICU admission or in the ICU. So our view is that it's important to do a clinical trial to know whether the therapy works or not. The result of the clinical trial was negative, if you want, but I think it was important to know that because people were speculating whether this was an effective therapy or not.

M^{me} France Gélinas: Okay. This is what I thought, this is what I have heard, but it's good to hear it from you also.

My next question changes again. I know that in the audit of the Auditor General, we saw that Health Canada had inspected all 14 registered blood banks that perform higher risk activities but none of the 144 other, non-registered blood banks in Ontario—basically, that's our hospitals. We have 158 hospitals, and 14 that perform high-risk activities were inspected, but the others—they all have blood banks—were not. How do we reconcile this with what you told us about, that you do the screening, then the collection site, and all of this? How come we don't inspect all blood banks in all of our hospitals in Ontario?

Ms. Helen Angus: I'll start, and then maybe Patrick can add in.

I understand that in the report it said that 144—yes, you're right—hospital blood banks are not inspected by Health Canada. What I understand is that the hospital blood banks were formerly contracted to be inspected by the Institute for Quality Management in Healthcare. They're now done by Accreditation Canada, but I'll just ask Patrick to confirm that. That's what I understand to be the case. There is a process. It just is not done directly by Health Canada.

Mr. Patrick Dicerri: Thank you very much, Deputy Angus. You are right, and just stepping back, I would say, MPP Gélinas, that under the regulations Canadian Blood Services and a few Ontario hospitals that transform blood for transfusions must apply for a licence or register with Health Canada. There are, as you said, 144 hospitals in Ontario that are not required to register with Health Canada since they do not perform activities that require

registration, but they still need to meet certain requirements and standards for labelling and storing of the blood. All hospital transfusion labs, including the 144 non-registered hospital transfusion labs are, as the deputy said, accredited by Accreditation Canada for safety of transfusion services.

The Ontario Regional Blood Coordinating Network monitors and assesses the results, if you will, to identify and share top common issues and concerns with hospitals. The deputy mentioned that it is Accreditation Canada that does this on our behalf.

M^{me} France Gélinas: Dr. Sher, then back to you: Do you figure that the accreditation that is done usually once every three or four years, if everything goes well in your hospital, is sufficient to continue to ensure safety of our blood supply through those mainly regional hospitals throughout Ontario, and is this the same process in other provinces?

Dr. Graham Sher: ADM Dicerni is correct. Health Canada regulates and inspects every one of Canadian Blood Services sites across the country because we are in the business of manufacturing and transforming blood and making changes to blood products. In Ontario, only 14 hospitals undertake a similar type of activity and that is the requirement for the federal regulator, under the Food and Drugs Act, to inspect a hospital site.

If a hospital blood bank receives blood from Canadian Blood Services, inventories it and delivers it to a patient but doesn't do any processing in between, then, as the ADM pointed out, it doesn't require a Health Canada inspection. It is accredited through Accreditation Canada. That is a common practice across the country. Health Canada will only inspect hospitals that do transformation activities, meaning modification of the blood that we send to them and they inspect every one of our sites across the country because we do a lot of blood manufacturing and processing.

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M^{me} France Gélinas: Continuing with safety, when the auditor talked about the Transfusion Transmitted Injuries Surveillance System, as well as the Transfusion Error Surveillance System, she talked about a voluntary reporting of error or injury versus mandatory reporting, and that reporting went to Health Canada rather than being reported to Public Health Ontario. My first question is, why is this reporting voluntary rather than mandatory?

Ms. Helen Angus: I'm going to ask Patrick to answer the question. I think there are reporting systems that are voluntary that are highly effective and that all providers sign on to them. I don't know whether that's been an issue in the past, but my sense is that the participation in the system of reporting has been exemplary, but Patrick, do you want to—

M^{me} France Gélinas: Before you go on, ADM Dicerni, the report shows us that on injury, 45 were reported and 220 were not, and under error, 74 were reported and 222 were not. My question is, why do we have a voluntary reporting system?

Mr. Patrick Dicerni: Thank you for the question, Madame Gélinas. With respect to your question around a

mandatory or a voluntary system, you're correct. At this point, we do have a voluntary system. The decisions as to whether to pivot, as you suggested, to a mandatory system, that would be a decision of government, but with respect to the current system it is a voluntary reporting system.

Transfusion errors, at their heart, are human errors in the blood handling and transfusion process that are a result, at times, of unexpected or unplanned deviations from SOPs or standard operating procedures. When done well and following processes and guidelines—this includes labelling and testing, storing and handling—when that is done well, we can assure ourselves that there will be minimal errors. Examples of transfusion errors do exist, of course, as pointed out by the Auditor General, and transfusion injuries are the adverse events associated with blood and blood product transfusion. Everyone plays a role in terms of guarding against and learning from these incidents when they occur. And I'd say data that is collected by the federal agency surveillance system for transfusion injuries, if you will, is used to drive learnings across our system as well and with transfusion-adverse events, the system does indeed learn from those, mandatory or not.

M^{me} France Gélinas: I guess, Dr. Sher, to you: How did we end up with a voluntary reporting system for the injury surveillance and error surveillance?

The Chair (Mr. Taras Natyshak): Two minutes.

Dr. Graham Sher: I will offer a comment, Madame Gélinas, from my experience many years ago when some of these systems were established, both the injury and the error surveillance system. I am not aware of any country that has a mandatory reporting system for hospital-based incidents such as the ADM just described. We, as the licensed manufacturer by Health Canada, have a mandatory reporting system to the regulator. If we have any serious error or accident in our manufacturing environment, we have to report that to the federal regulator. It's separate from the injury and the accidents surveillance system but we have a mandatory reporting, but only if it passes a certain threshold. If it's a minor deviation, then it's not a mandatory reporting. I think it may be a similar situation in the hospital setting; I'm not entirely sure.

But it is, as the ADM said, not uncommon to have effective and voluntary reporting systems from which large amounts of data can be gleaned to improve practice across the system, and I think that's really where Ontario and all the other jurisdictions collaborate with the injury and accidents surveillance systems.

The Chair (Mr. Taras Natyshak): Thank you very much, Dr. Sher.

M^{me} France Gélinas: Would you know if the province—

The Chair (Mr. Taras Natyshak): Pardon me, Madame Gélinas.

We are now into the lightning round; our day with each other is coming to a close. We have 24 minutes to share, so 12 minutes each, and we'll go back to the government side. I will recognize MPP Anand for 12 minutes.

Mr. Deepak Anand: Thank you so much, Chair. I am going to be rushing now.

I just want to ask Dr. Sher about the conversation on—as you know, Bill 204 in Alberta has passed. I think it has

passed third reading itself. Again, going on about the ethical dilemma: Any comments, Dr. Sher, on that? I truly believe that it should be unpaid and I truly believe that we should make sure that more and more people should go and donate. Any comments or any suggestions which you would propose?

Dr. Graham Sher: Thank you, MPP Anand. I will be brief in my answer. Canadian Blood Services has been very clear: It is not our role to tell any government how to legislate and how to pass legislation in its jurisdictions. We've been very proud partners with Ontario from the earliest days; they were the first province to pass all-party legislation, which exists in the province of Ontario today, that does not permit remuneration for blood or plasma donors. Ontario is the lead province to do that, followed by British Columbia and Alberta, and then, much more recently, Alberta has repealed the legislation. It is our view, as I have said repeatedly both in this committee and in many other fora, that our objective in Canada and the Canadian Blood Services' auspices is to collect plasma without paying our donors.

It is true, as you have said yourself, we buy product on the global market that comes from paid donors. We don't buy the plasma; we buy the finished product, the immunoglobulin, but that does come from the paid plasma system, and if we did not have access to that product, there simply wouldn't be enough immunoglobulin in the world to meet patient needs. But it is our view at Canadian Blood Services that we do not pay our donors, and as I said to Madame Gélinas earlier, we're confident we can certainly get to our 25% target quite easily without paying donors, and would like to see it go beyond there as well.

Mr. Deepak Anand: Chair, that would be it for me. I know MPP Cuzzetto would like to ask.

The Chair (Mr. Taras Natyshak): Are there any further questions from government members?

Mr. Rudy Cuzzetto: Chair?

The Chair (Mr. Taras Natyshak): Oh, MPP Cuzzetto. Sorry, I couldn't see you.

Mr. Rudy Cuzzetto: Being a heart patient myself—I had a valve replaced about 10 years ago and have a mechanical valve—I know a little bit about blood. I know my INR has to be between 2.5 and 3.5 and I'm on seven milligrams of Coumadin daily. The only thing is, I don't know if I could even donate blood because I'm on Coumadin.

But my questions are: What are the different types of blood and blood products used for, and what are some of the common conditions they are used to treat?

Ms. Helen Angus: It sounds like you need a physician who has spent his lifetime in the service of the blood supply to answer that, so I will happily hand it over to Dr. Sher, and you can have an excellent consult with him. There you go.

Dr. Graham Sher: Thank you, Deputy Minister Angus. Very briefly, Mr. Cuzzetto: It is an important question. "Blood" is a general term that we use when somebody comes into one of our donation events and donates what we call a pint of blood, but we then break that up into

different components. The main ones are red blood cells, which are principally used for trauma patients; surgery patients, heart surgery being a very large user; cancer patients; bone marrow transplant patients and so on.

We make platelets from the same unit of blood. Platelets are typically used in bleeding patients, heart surgery patients, chemotherapy patients and other patients who are bleeding as a result of some medical intervention. Then we also take plasma from the unit, and that plasma is used either to transfuse directly into patients for burn conditions, severe injuries, post-motor vehicle accidents, or the plasma can be used, as we talked about earlier today, to make into these highly specialized proteins through fractionation. So that's blood: red blood cells, platelets, plasma.

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We then also have different types of blood products, and the Auditor General's report tried to distinguish blood from blood products. The terminology can get confusing. Blood products is an envelope term that speaks to all these highly specialized proteins that we have talked about. Immunoglobulin is the most important by volume in the country; it's the most widely used. That's used for patients with immune diseases, either inherited immune disorders or secondary acquired immune disorders. Factor concentrates: You heard ADM Dicerni talk about factor concentrates. This is used for hemophilia diseases and other bleeding diseases, and is also made from human plasma or synthetically engineered to be equivalent to human plasma.

So blood products is a category of diseases—that are these highly specialized proteins, all of which are made from plasma or synthetically engineered to mimic the proteins inside plasma. Those are the main categories of blood and blood products and the main categories of diseases for which they're used.

The last point I would make is—it's true in Ontario hospitals, but it's true right across the country—a blood transfusion, whether of red blood cells, platelets, plasma or one of these specialized blood products, is one of the commonest therapeutic interventions delivered inside our hospitals. About 600,000 patients a year will receive some form of blood product for some form of underlying condition, and that's why Canadian Blood Services is so integral to supporting the health systems across the country, because it is such a widely used therapeutic intervention.

Mr. Rudy Cuzzetto: I just wanted to know something else as well. What is Canadian Blood Services' footprint in Ontario?

Dr. Graham Sher: Deputy, would you like me to respond?

Ms. Helen Angus: I think that would be great. You know your business well.

Dr. Graham Sher: Ontario is so central to the success of Canadian Blood Services. Not only is it our largest funder on a proportional basis—it funds about 50 cents on the dollar of Canadian Blood Services' total revenue—but almost 60% of our entire footprint is in Ontario. The majority of our infrastructure is based in Ontario; a very big testing laboratory, multiple production facilities, our

stem cell laboratory and a large part of our research facilities exist in Ontario.

Our collections network is distributed across the province. We have 17 permanent collection sites spread across the province, and we run about 1,500 what we call mobile collection events in Ontario, where we go out to churches and school halls and universities—well, typically, pre-COVID, when people are gathered in these places—to collect blood. So we have a large permanent physical presence, and we do a lot of our mobile collections in Ontario. Our head office is headquartered in Ontario, and so about 56% or 57% of the whole workforce of Canadian Blood Services is based in Ontario. Ontario really is, to a very large extent, the epicentre of the blood system, and that's central to us to make sure that we can meet not only the needs of Ontario patients, of course, but patients across the country as well. Ontario is a very large contributor to that.

Mr. Rudy Cuzzetto: Can I just ask a quick question? I asked about—can I donate blood? Because I take Coumadin. I never got an answer on that.

Dr. Graham Sher: Unfortunately, not while you're actively on Coumadin, no, because it could be harmful to you. It's a very large bore needle. It's not safe for the recipient either.

Mr. Rudy Cuzzetto: Thank you. I think Robin Martin would like to ask a question.

The Chair (Mr. Taras Natyshak): MPP Martin, go ahead.

Mrs. Robin Martin: Just a quick question, Dr. Sher: I'm just wondering what happened with the plasma study that CBS was doing, I believe, during COVID and if we have any results from that yet. How is that progressing?

Dr. Graham Sher: Thank you, MPP Martin. It's what I answered earlier to Madame Gélinas. This is what we call the convalescent plasma study. We participated in a clinical trial. It was a clinical trial run by the hospitals, and I think Sunnybrook was the principal hospital for the country, but several other Ontario hospitals participated as well. Our role was to provide the plasma that we collected from these patients who had recovered from COVID-19, and then the plasma was given to the sick patients being treated inside the hospitals. And as I mentioned earlier, the clinical trial was terminated early by the safety monitoring board, because it was shown that the convalescent plasma was not having an effective benefit compared to the standard of care that was being given to patients in the control arm. That was similarly seen in studies in the UK, the US, the Netherlands and elsewhere. The Canadian trials showed the same sort of outcome.

The Chair (Mr. Taras Natyshak): Two minutes. Any further questions? MPP Martin.

Mrs. Robin Martin: One of the things that we were looking at in the report was the optimization of cost efficiencies for Ontario's health care system. I'm just wondering if Dr. Sher would like to answer about how our Canadian Blood Services has managed to optimize those kinds of cost efficiencies on behalf of Ontario's health care system. Maybe the deputy wants to opine as well.

Ms. Helen Angus: I think we have a shared interest in making sure that every dollar that is spent in the health

care system, whether it's in blood or elsewhere, is used wisely and managed effectively. I think maybe you want to ask Dr. Sher about this as an area of joint effort and as our collective accountability. I think that it's something that we have certainly spent a lot of time with the provincial programs—and I've gone through that. But maybe, Dr. Sher, if you just want to hit some high points for MPP Martin, that would be great.

Dr. Graham Sher: Thank you, Deputy Angus.

Thank you, MPP Martin. There are two ways in which we have continued to fulfill our commitment to Ontario and the other provinces on a productivity and efficiency basis. Pauline Port, our CFO, is the executive sponsor of this program, so she can certainly add any additional commentary. But briefly, in our blood operations program—the part of the program that the province funds us to collect, manufacture and test blood and distribute it to hospitals—we made a commitment to the jurisdictions going back to 2012 to—

The Chair (Mr. Taras Natyshak): I'm sorry, Dr. Sher. We have run out of time for that answer. I appreciate it.

Now, we'll just move to the last round of 12 minutes. Back to the official opposition: Madame Gélinas.

M^{me} France Gélinas: I have two parts of the report that I would like comments on. The first one has to do with the Ontario Regional Blood Coordinating Network. Both the deputy and the assistant deputy talked about it. The auditor told us that only 14% of hospitals basically follow the guideline of using just one transfusion rather than two, and the bar has been set for 80% of the time. She also told us that many hospitals do not adopt the best practices that the network promotes. I guess I would start with the deputy and the assistant deputy. It seems that the network comes up with some good best practices. How is it that so many hospitals are not adopting them?

Ms. Helen Angus: Thank you for the question. I'll just comment generally that the translation of best practices into implementation in the health sector is a constant effort, as you probably well know. Dr. Sher's other assignment is he's the board chair of the Canadian Partnership Against Cancer. Trying to get to standardization and sometimes bridging the knowledge-to-implementation gap requires a lot of effort and levers to get there. I think, if I can recall from the work that I did when I was at Cancer Care Ontario, that it was often a period of years between the identification of a best practice and its systematic implementation across the health care system, even in the best-organized systems.

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I just think it's a reason why we have to have permanent structures and clinical leadership and performance measurement and all the things that one would need in order to ensure that the best practices are being implemented systematically. Of course, as the best practices change, you need to have an implementation capacity to make sure that it gets to the point of care.

Patrick, you may want to comment specifically about this, but I think this is one of the things that we've spent a lot of time working on, both in the cancer system and

clearly in the blood system. I worked on that in the renal system. It really is through the production of those best practices, the clinical leadership and the measurement that we get to a place where we've got it implemented with fidelity across a complex system such as we have in Ontario.

Patrick?

Mr. Patrick Dicerni: Thank you for your question, MPP Gélinas, related to, broadly speaking, the adoption, voluntary or mandatory, against these best practices. I'd say stepping off of some of Deputy Angus's comments with respect to how we encourage and promote change in the health care system and best practice adoption, it is very much a continuous effort.

Your question actually reminds me of one of the last things that I recall doing pre-pandemic that was nothing to do with the COVID response. It was actually a series of meetings that I was beginning to have with some of the, I'd say, main blood- and blood-product-utilizing hospitals here in Ontario around what were some of the, as I said earlier, best practice adoption techniques and nudge theories that we could be jointly deploying with, I'd say, the host of partners here, not only ORBCoN that you referenced in your question but organizations like Choosing Wisely.

If you could indulge me one anecdote, a physician colleague friend of mine reached out to me and spoke recently about this fantastic ad campaign that they have literally next to their blood bank, which is—it's a picture of a hot dog, actually, and the hot dog has mustard all over the hot dog. It is designed to help prescribers and physicians stop and pause as to whether the volume and the type of products that they're ordering is sufficient or "overkill." He sent me a picture of it and I thought it was quite impactful. I just use that as an example.

We absolutely have a good sense of where we have levels of participation and compliance from hospitals, but it is a continuous effort to try to drive the adoptions of those best practices, and it's not just going to be achieved through the good work of ORBCoN; it's also going to be achieved through, I'd say, clinical leadership and the support of the ministry to drive those adoptions of best practices. It's certainly something I'm looking forward to getting back to when we all have a little bit more time in our day.

M^{me} France Gélinas: Yes, back to normal life. I'm with you.

My next question has to do with the other program that you talked about, the nurse coordinators program. Again, the Auditor General tells us that the ministry does not have information to compare the transfusion rates of hospitals that have this program with those of hospitals that do not, and that the government does not have a way to measure the effectiveness of this program. She talks about that not all nurses in the nurse coordinators program follow program guidelines on what constitutes a counselling session, and a number of other issues. Could you comment on that?

Mr. Patrick Dicerni: I'm happy to. Thank you very much. As a program grows and scales, there are always

consistency and fidelity challenges, I'd say, that are raised. With the 28 or so new resources and nurses put into that program, as that scales and spreads, the adherence to the fidelity and guardrails of the program are equally as important, and it is something that the ministry acknowledges.

Thanks to the Auditor General's office and the Auditor General for the recommendation and observation in that respect. I would say this is one of the many reasons why audits are an absolutely beneficial part of our program processes and reviews. It's these types of adherences to the program that we thank the auditor for, and we'll be continuing to drive the uptake and consistency of the program.

M^{me} France Gélinas: Is the goal of Ontario to have one of those nurse coordinating programs in all large community hospitals?

Mr. Patrick Dicerni: I would say that there are obviously some hospitals that are in greater need, given they are, to your point, large community hospitals, and given the degree to which these are hospitals that engage in these types of services. We do have good coverage already. More in this respect could always be better, but there would be no expansions currently planned for that, MPP Gélinas.

M^{me} France Gélinas: All right. The auditor—I'm all over the map, because this is my last 12 minutes—also told us that Ontario is responsible for making blood alternatives available, to reduce the need for transfusions, but that this responsibility has not been formalized between us and CBS. What part of the responsibility does Ontario take for identifying blood alternatives?

Mr. Patrick Dicerni: Thank you very much for the question, MPP Gélinas. I'm doing my best to follow you around the map.

With respect to your question, you're absolutely right: Where clinically appropriate and approved for use in Canada and having gone through a health technology assessment, there are cases where a pharmaceutical product can be a good and safe alternative to blood and a blood product. In fact, there is a recent example that comes to mind, and if it wasn't such a complicated pharmaceutical name, I'm sure I would be able to pull it out—lanadelumab? Dr. Sher is smiling; it's something along those lines. I would be happy to report back to the committee the name of the drug. But it is exactly that: a pharmaceutical product that—

The Chair (Mr. Taras Natyshak): Two minutes.

Mr. Patrick Dicerni: —replaces or supplants a blood product, and that was a cost-effective decision, and a safe one, for the province. In my role as executive officer of the Ontario Public Drug Programs, it's my remit to list drugs on our provincial formulary for access through our provincial drug programs.

I thank the auditor for the observation with respect to better coordination and alignment between ourselves and Canadian Blood Services. I'd say that that's a continuous effort that we can always improve on. I know the relationship we have with Graham and his organization makes that

an easy process. Dr. Sher, would you like to comment, or—

M^{me} France Gélinas: No, that's a good enough answer. I have one more question that I'd like to get in. At the north side of the map is the payments that we do to Canadian Blood Services. The auditor tells us that there's a 5% discrepancy between what is ordered, what is delivered and what is paid for. She recommends more oversight so that we pay for what we receive, not pay for what we ordered. Any comments on that, whoever wants to comment?

Mr. Patrick Dicerni: I'm happy to address this. Again, I thank the auditor for the observation in that respect. It does point us towards the manner in which we organize and, fund hospitals and how hospitals "charge back" to us for the administration of those products. We are looking at some of that 5% discrepancy that was determined, to make

sure that, from a prudent use of taxpayer dollars, as you said, MPP Gélinas, we are paying for what has been used.

I would be happy to take that back and provide yourself and the committee with a more fulsome answer with respect to what our ongoing activities are in this respect—

The Chair (Mr. Taras Natyshak): Thank you very much, Mr. Dicerni. I'm sorry to have to interrupt you. That concludes the time that we have for this afternoon's questions.

I want to thank you all for not only appearing here before us today but, in some cases, yesterday as well. Thanks for your service to the province and to this committee. We appreciate it. You are now all dismissed. Have a wonderful day.

We'll now pause briefly to go into closed session so that the committee may proceed to report writing.

The committee continued in closed session at 1641.

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