

1- Why did you decide to set up the plasma clinics?

The World Health Organization (WHO) defines essential medicines as those that satisfy the priority health-care needs of the population. The WHO's list of essential medicines includes plasma protein products.

Canada is one of the largest users of plasma protein products, per capita. We currently require about 1,200,000 liters of plasma to satisfy the needs of our patients for plasma protein products, specifically immune globulins. That is about 5% of the global demand. Canadian Blood Services (CBS) and Héma-Québec (HQ) combined send around 250,000 liters of plasma for fractionation to the USA and Europe. In addition, CBS and HQ do not have plans to become, at best, more than 30% self-sufficient in plasma for immune globulin (Ig) supply from Canadian unpaid donors. To bridge the gap between the supply and demand we rely on paid plasma donors in the United States. More than 70% of plasma used for manufacturing of immune globulins used in Canada is already coming from paid donors in the USA!

Given the enormous need, decreasing plasma self-sufficiency in Canada, and total dependence on foreign plasma protein products; and given that Health Canada has no prohibition on remuneration of donors and published regulations for source plasma collection (new version was published in 2006), we decided to set up the plasma collection centres in Ontario with the vision that we will have the capability to produce plasma derived therapeutics locally by 2020. We feel that there is an immediate need and significant value in increasing the Canadian plasma supply. After consultation with Health Canada and the key stakeholders in 2009 we decided to proceed with setting up plasma collection centres as the first step for the creation of plasma industry in Canada.

2- When do you expect to get approval?

We submitted our application for an establishment licence to Health Canada on November 22, 2012. We have not received a specific approval date from Health Canada. Typically it takes 250-300 days to obtain the licence.

3- How much Plasma do you hope to collect annually?

Our current application includes the two collection centres in Toronto. We anticipate submitting the application for our third centre in Hamilton later this year. It takes time to recruit and qualify potential donors. We plan to collect about 100,000 L of plasma annually by the end of 2015 from the three centres combined.

4- What are the benefits of having paid plasma clinics?

The national blood organizations in Canada collect blood to supply fresh blood products including fresh frozen plasma to hospitals. The excess plasma from their activity is sent for production of plasma protein products. However the demand is far greater and as Dr. Sher, the CEO of CBS, has pointed out it is not viable operationally, economically nor practically for our national blood organizations to close this gap. Having private plasma collection centers where donors are compensated for their time is not choosing between collection of plasma from paid or unpaid donors; it is a choice between having a plasma industry in Canada or continued and increasing dependence on the USA for supplying plasma protein products to Canadians.

The benefits of having a local plasma industry in Canada can be summarized as follows:

- a) We create another source for plasma production which increases the security of supply for Canadian patients. This is essential as patient safety is dependent on the availability of these life-saving therapies.
- b) Decreased reliance on USA plasma industry means if for a variety of reasons export of the USA plasma to Canada would be limited or restricted then Canadian patients can rely on an alternative local plasma industry.
- c) With the expansion of plasma collection facilities in Canada we could reach a plasma production rate of 400,000 liters/year by 2020. That is enough raw material to supply an economically feasible plasma fractionation plant. Canada currently is the only G8 country which does not have capability for production of immune globulins, human albumin or clotting factors.
- d) Just to meet local demand today the manufacturing output of the Canadian plasma industry would be about \$600,000,000. Keep in mind that Ig use has been going up between 5%-10% each year. This can create about 2000-3000 jobs directly in the manufacturing sector and another roughly 25,000 jobs indirectly.

5- What do you think of the opposition to these clinics? Is it justified? Why Not?

We understand that this is an extremely sensitive and emotional issue for many Canadians, especially the victims of the tainted blood scandal of the 80s and their families.

The concerns that have been raised are not taken lightly. We believe understanding the nature of the plasma protein products industry, the needs for these medicines, and the regulations governing plasma collection will address these issues. The lives of tens of thousands of Canadians depend on plasma protein products.

The Dublin Consensus Report, which was agreed upon by CBS as well as the International Patients Organisation for Primary Immunodeficiency (IPOPI), the World Federation of Hemophilia (WFH), Idiopathic Thrombocytopenic Purpura Support Organisation (ITP), Hereditary Angiodema International (HAEI) and Guillain Barre Syndrome Foundation International (GBS/CIDP), states that plasma products made from both non-remunerated and remunerated donations are currently essential to meet global health needs.

We hope this message and the correct information gets to our fellow Canadians and they recognize the need for a Canadian plasma industry.

We have found that the concerns fall into one of the five categories below.

a) Safety:

- Donors paid or unpaid, undergo the same stringent donor screening check as per Health Canada regulations. Every donor undergoes thorough health examination, comprehensive questionnaire completion and transmissible disease marker testing on each and every visit.
- Based on industry wide standards (IQPP) only plasma from qualified donors will be released for manufacturing. *Donors are considered qualified only after two consecutive test results demonstrate absence of transmissible disease markers within 16 weeks.* Our qualified donors will be donating a minimum of seven times every year. Statistically there is a smaller chance of transmitting disease through repeat donors versus first time donors.
- The product is on an inventory hold during the donor qualification period and will also be held at the manufacturing facility for another 60 days before being used for production. At any time if the donor tests positive or if we obtain post donation information pertaining to risk of disease transmission, a look back procedure will be initiated and all plasma units from that specific donor will be discarded.
- There has been development of sensitive screening tests called NAT (Nucleic Acid Test) tests that detect the virus before the seroconversion period. Therefore NAT test reduces the window period and makes them detectable sooner in asymptomatic but infected donors. We use NAT test for HIV-1, HIV-2, Hepatitis A,B,C and Parvo B-19 virus.
- Source plasma is not intended for use in transfusions. Source plasma undergoes further manufacturing at a fractionation plant and goes through many validated virus inactivation and filtration steps.
- The effectiveness of the safeguards mentioned above is reflected in the 25 year safety record of plasma protein products. *There has not been a single case of HIV or Hepatitis transmission in patients using plasma protein products.*

b) Ethics:

- Paid donors are still volunteers; they can ask to abort the procedure at any time and even after the donation they are free to contact us and self-exclude their donated plasma without providing any explanation. Donors are compensated for their time and commitment. A typical plasma donation is three times longer than a blood donation. To be a qualified donor, repeat donations have to be made (at least two every 16 weeks).
- The plasma donated is typically regenerated in the donor within 48 hours. Plasma is the cell-free component of blood and is not a tissue. Plasma donation based on strict guidelines does not affect the health of the donors negatively. The volume of plasma collected on each occasion and the frequency of donations are regulated by Health Canada. The donor's total protein and protein composition is

measured every time and monitored by the physician. A donor will be removed from the program if their protein level is outside specified healthy limits.

- The absolute focus of the health care system should be the patient. Depriving Canadian patients or for that matter any patient the therapies they require for ideological or political reasons is unethical.
- We give our donors an option to gift their compensation to a charitable organization and obtain a tax receipt.
- Currently we are relying heavily on paid US donors for our needs and we should be thankful to them. It is hypocritical to say paying donors is unethical in Canada but it is fine as long as it is done outside of our borders!

c) *Privatization of the Canadian health care:*

- Canadian Plasma Resources is a pharmaceutical company. Our plasma collection facilities are established solely for the purpose of producing source plasma; the raw material for the production of plasma protein products. Due to strict regulatory and industry wide standards, source plasma production is very expensive and represents about 50% of the total cost of the final plasma protein products.
- CBS and HQ buy and distribute plasma protein products from pharmaceutical companies. They are not the manufacturer of these products. Currently Cangene is the only Canadian supplier on their list, furthermore all suppliers including Cangene are private for-profit companies and we are no exception.
- We will not be collecting blood and we are not set up to compete with CBS. We are also not a health care provider and do not perform diagnosis, prophylaxis or treatment of patients.

d) *Impact on whole blood collection from unpaid donors:*

- The successful coexistence of the blood organizations and the source plasma sector in countries which already have a mature plasma industry suggest that the creation of plasma centres has negligible effect on the unpaid whole blood donor population. The industry will not draw donors from the blood donor population but creates a new population of plasma donors who would not otherwise donate.
- The blood donation rate from unpaid volunteer donors in the United States, Germany, Austria and Czech Republic where a plasma collection industry also exists is among the highest globally and appreciably higher than Canada.
- Canadian example: CBS reports that blood collections from volunteer donors in Winnipeg is not affected by the operations of Cangene plasma resources where the plasma donors are being compensated.
- Studies show there is only a 6% overlap between paid and unpaid donor populations in the USA where the two sectors exist side by side.

e) *Location of our centers:*

See the answer to question number 6.

6- It has been reported that one of your clinics is located near a homeless shelter and as a result may attract high risk donors? What is your response to that statement?

Site selection was made based on several factors including but not limited to the following:.

- a) Presence of a healthy population that would be open to spend up to 2 hours per week for plasma donation.
- b) Accessibility and ease of transportation for both donors and staff for their convenience.
- c) Proximity to hospitals and EMS for donor safety.
- d) Cost and affordability of the premises.
- e) Ability to meet regulatory compliance for the premises.
- f) Safe Biohazard waste removal capability.
- g) Infrastructure that includes power, water and communication facilities
- h) Availability of skilled and qualified staff

Both centers are in close proximity to subway stations, major hospitals and areas where healthy potential donors live, work or study. The Adelaide location is minutes away from St. Michael's Hospital, the Eaton centre and many Universities and colleges such as Ryerson University and George Brown College (Saint James Campus). The Spadina location is minutes away from the hospital alley (Toronto General Hospital, Mt. Sinai and Princess Margaret Hospital), across the University of Toronto (St. Geroge Campus) and a few minutes walk from OCAD.

Given the spread of homeless shelters around the downtown core it is no surprise that some fall in very close proximity to our centers. The donor screening and selection is not a random process. It has many layers of safeguards in place and is designed to screen the high risk population out of the qualified donor pool. Only qualified repeat donors, people who have been screened and tested negative for all transmissible disease markers on two separate occasions within a sixteen week period, will be compensated for their time. This practice discourages the high risk populations from attempting to donate knowing that they will not qualify. Proximity of our centres to the homeless shelters might increase the number of high risk donor applicants but unqualified individuals will not make it past our rigorous donor selection and qualification processes mandated by Health Canada.

7- Is plasma collected from paid donors as safe as plasma collected from volunteers? Why?

Yes. I would first correct you and emphasize that plasma donors are all volunteers however they are compensated for their time. I would rephrase the question: Is plasma collected from paid volunteer donors as safe as plasma collected from unpaid volunteers? Why?

Numerous scientific studies show plasma derived products made from paid donors are as safe as those from unpaid donors. Additionally, the plasma industry has developed risk mitigation strategies which are not applicable to fresh blood products. As a result plasma protein products from paid plasma donors have proven safer than fresh blood components from non-paid donors, mainly due to the viral inactivation and filtration steps applied to plasma products.

All plasma collection centres whether remunerating donors or not undergo the same review process for licensing by Health Canada and must abide by all applicable regulations in order to be operational.

Stricter regulations such as thorough donor eligibility criteria and testing requirements were made effective to address the compromised blood system in Canada in response to the Krever Commission. Furthermore technological advancements such as viral DNA and RNA testing or NAT testing minimize the viral window period allowing earlier detection of reactive donors. Advancements in manufacturing technology such as validated viral inactivation and filtration steps make the plasma protein products one of the safest and effective treatment modalities.

As a result there has not been a single case of HIV, Hepatitis B and Hepatitis C transmission in patients receiving plasma protein products since the last 25 years, despite the fact that most of the plasma donors were paid.

Here we would reiterate that the compensation awarded to donors is only for their time and potential travel expenses, only qualified repeat donors (people who have been screened and tested negative for all transmissible disease markers on two separate occasions within a sixteen week period) will be compensated.

8- What do you want the Canadian public to know about paid plasma clinics?

Our message to the Canadian public is:

- a) The Canadian blood system has been successfully led by CBS and HQ. Canada is self-sufficient in blood and plasma for transfusion through generous donations of unpaid donors as per WHO recommendations and this will not change.
- b) However, to meet the needs of Canadian patients for plasma derived therapies we need a source plasma industry working in conjunction with the national blood organizations. Currently we are dependent on the USA to meet the needs of Canadian patients. With the exception of the coagulation factors, there are no alternative recombinant therapies for plasma derived products.
- c) Establishing source plasma collection facilities in Canada increases the security of supply for Canadian patients. This is essential as patient safety is dependent on the availability of these life-saving therapies.
- d) Numerous scientific studies show plasma derived products made from paid donors are as safe as those from unpaid donors. Additionally, the plasma industry has developed risk mitigation strategies which are not applicable to fresh blood products. As a result plasma protein products from paid plasma donors have proven safer than fresh blood components from non-paid donors, mainly due to the viral inactivation and filtration steps applied to plasma products.
- e) With advancements in new technologies such as Nucleic Acid Testing (NAT), virus inactivation, and filtration during the fractionation process, together with strict regulations and industry wide standards (IQPP), the source plasma industry has reached a perfect record for patient safety. In the past 25 years no cases of HIV, HBV or HCV transmission through plasma protein therapies were noted.

- f) Canada is the largest per capita user of immune globulins (Ig) worldwide. Almost 80% of Ig used in Canada is produced from source plasma collected from paid donors in the USA. Plasma protein products account for 50% of CBS and HQ 2012 budgets (\$631M). Establishment of source plasma industry will assist Canada in achieving self-sufficiency in plasma protein products.
- g) With huge local demand, progressive regulations and access to the latest technologies in combination with a highly skilled and educated work force, Canada has the potential to become a major global player in today's knowledge based economy. This potential plasma industry will generate over half a Billion dollars in annual revenue. It could create up to 3,000 direct and about 25,000 indirect jobs in Ontario and around Canada by 2020. The total potential economic impact is \$2.5B.
- h) Any establishment collecting human plasma in Canada whether remunerating donors or not is regulated by Health Canada. It is a common practice in the source plasma industry to compensate qualified donors for their time, due to the large commitment involved in regular plasma donations. At CPR our donors have the option to gift their compensation to participating charitable organizations and receive a tax receipt.
- i) The successful coexistence of the blood organizations and the source plasma sector in countries which already have a mature plasma industry suggest that the creation of plasma centres has a negligible effect on the unpaid donor population and creates a new population of plasma donors.
- j) Based on evaluation of the above facts, Canadian Plasma Resources would like to take a step in the direction of making Canada self-sufficient by establishing safe and compliant plasma collection centres.