

Paying for Plasma: Commodification, Exploitation, and Canada's Plasma Shortage

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Article abstract

A private, for-profit company has recently opened a pair of plasma donation centres in Canada, at which donors can be compensated up to \$50 for their plasma. This has sparked a nation-wide debate around the ethics of paying plasma donors. Our aim in this paper is to shift the terms of the current debate away from the question of whether plasma donors should be paid and toward the question of who should be paying them. We consider arguments against paying plasma donors grounded in concerns about exploitation, commodification, and the introduction of a profit motive. We find them all to be normatively inconclusive, but also overbroad in light of Canada's persistent reliance on plasma from paid donors in the United States. While we believe that there are good reasons to oppose allowing a private company to profit from Canada's blood supply, these concerns can be addressed if payment is dispensed instead by a public, not-for-profit agency. In short, we reject profiting from plasma while we endorse paying for plasma; we therefore conclude in favour of a new Canadian regime of public sector plasma collection and compensation.



ARTICLE (ÉVALUÉ PAR LES PAIRS / PEER-REVIEWED)

Paying for Plasma: Commodification, Exploitation, and Canada's Plasma Shortage

Vida Panitch¹, Lendell Chad Horne²

Résumé

Une entreprise privée à but lucratif a récemment ouvert deux centres de don de plasma au Canada. Les donneurs peuvent y recevoir jusqu'à 50 \$ pour un don de leur plasma. Cela a suscité un débat national sur l'éthique de la compensation des donneurs de plasma. Dans cet article, notre objectif est de réorienter le débat actuel, c'est-à-dire de déterminer qui devrait compenser les donneurs de plasma plutôt que de déterminer s'ils devraient être compensés. Pour examiner les arguments contre la compensation des donneurs de plasma, nous tenons compte des préoccupations liées à l'exploitation, à la marchandisation et à la logique lucrative. Ils nous paraissent tous non concluants d'un point de vue normatif, mais aussi trop généraux compte tenu de la dépendance persistante du Canada à l'égard du plasma provenant de donneurs rémunérés aux États-Unis. Nous croyons qu'il y a de bonnes raisons de s'opposer à ce qu'une entreprise privée tire profit de l'approvisionnement en plasma du Canada, mais ces préoccupations peuvent être dissipées si le paiement est effectué par un organisme public sans but lucratif. Bref, nous rejetons l'idée de tirer profit du don de plasma alors que nous appuyons la compensation d'un don de plasma; nous sommes donc partisans d'un nouveau régime canadien public de collecte de plasma et de sa compensation.

Mots-clés

marchandisation, exploitation, plasma, don de sang, profit

Abstract

A private, for-profit company has recently opened a pair of plasma donation centres in Canada, at which donors can be compensated up to \$50 for their plasma. This has sparked a nation-wide debate around the ethics of paying plasma donors. Our aim in this paper is to shift the terms of the current debate away from the question of whether plasma donors should be paid and toward the question of who should be paying them. We consider arguments against paying plasma donors grounded in concerns about exploitation, commodification, and the introduction of a profit motive. We find them all to be normatively inconclusive, but also overbroad in light of Canada's persistent reliance on plasma from paid donors in the United States. While we believe that there are good reasons to oppose allowing a private company to profit from Canada's blood supply, these concerns can be addressed if payment is dispensed instead by a public, not-for-profit agency. In short, we reject profiting from plasma while we endorse paying for plasma; we therefore conclude in favour of a new Canadian regime of public sector plasma collection and compensation.

Keywords

commodification, exploitation, plasma, blood donation, profit

Introduction

Blood plasma is the straw-coloured fluid in which blood cells and platelets travel. It is a valuable medical resource used to treat a range of immunological, hematological, and respiratory conditions. A direct transfusion of plasma is used to treat certain kinds of bleeding disorders, such as hemophilia, but plasma is also a raw material used in a variety of plasma-derived medicinal products (PDMPs). In Canada, the highest demand among these PMDPs is for immune globulins, which are used to treat immune disorders [1].¹

Since its founding in 1998, Canadian Blood Services (CBS) has been tasked with managing Canada's blood supply, including its plasma supply, outside of Quebec. CBS was created as a publicly-funded, not-for-profit organization to take over management of Canada's blood system from the Canadian Red Cross, after the Krever commission found the Canadian Red Cross to be negligent for its role in the Canadian blood scandal of the 1980's. CBS, like the Red Cross before it, relies exclusively on unpaid donations [2].

Canada currently suffers a shortage of domestically produced blood plasma. While voluntary, unpaid donations yield enough plasma to meet Canada's needs for direct transfusions, Canada falls far short of self-sufficiency when it comes to the plasma needed to produce PDMPs. Canada currently meets only 17% of its need for immune globulins, the highest-demand PDMP, through domestic donations. The rest of the plasma needed to produce these products is collected in the US from paid donors [1,3].

Recently, the private, for-profit corporation Canadian Plasma Resources (CPR) has entered the picture. CPR gained national notoriety for its controversial practice of offering plasma donors a gift card worth up to \$50 in exchange for their donation. (Donors also have the option to gift their payment to a charitable organization.) CPR opened their first clinic in Saskatoon in February of 2016 [4]. They opened a second clinic in Moncton the following year, and they have expressed plans to open as many as 8 more clinics across Canada [5,6]. The opening of these two CPR clinics has sparked a nationwide debate around the ethics of paying for blood plasma. While paying donors is seen as acceptable by groups like the Nuffield Council on Bioethics and could bolster domestic supply, it also raises concerns around safety, commodification, and exploitation [7-9]. Citing precisely these issues, British Columbia recently joined Alberta, Ontario, and Quebec in banning payment for blood and blood plasma [10]. Advocates are pushing for a similar ban in Nova Scotia [11]. At the federal level, Senator Pamela Wallin has introduced a bill that would ban such payments all across Canada [12].

Our view is that the terms of the current debate are unproductive, and our aim in this paper is to shift the debate in a more helpful direction. We worry that too much attention has been devoted to the question of *whether* Canada should pay plasma donors, and too little to the question of *who* should be paying them. As such, our project here is two-fold: first, to show that we

¹ We will sometimes use the word "blood" to refer generically to whole blood or blood plasma. When the distinction is important – for example, when discussing specific studies – we will say specifically "whole blood" or "blood plasma."

needn't worry so much, morally speaking, about whether to pay donors and second, that we should worry quite a bit more about who should be paying them. Given the urgency of Canada's need for PDMPs and our persistent reliance on paid plasma donors abroad, it is senseless to hold that Canada should not pay for plasma; we already do, and there has been no suggestion that we should stop. While there are many legitimate ethical concerns around paying plasma donors, we believe these ethical concerns can be adequately addressed if donors are paid by a public, not-for-profit entity like CBS instead of a private, for-profit entity like CPR.

Our argument proceeds in four sections. In Section I, we defend the claim that a secure domestic supply of blood plasma is a morally important goal, and we show that paying patients for plasma can reasonably be expected to promote this goal. In the next three sections, we show that standard arguments against paying plasma donors fail. We begin in Section II with arguments around the exploitation of donors. We show that exploitation is actually worse in a regime where donors are expected to provide a valuable resource for free compared to one where donors are paid. We turn in Section III to various arguments against treating blood and blood products as a commodity. We claim that these arguments are not only normatively inconclusive but also overbroad, given that Canada already relies on plasma protein products manufactured from paid donations from the United States. Finally, in Section IV, we turn to the controversial issue of profit. Although there are good reasons to refuse to allow private corporations to profit from Canada's blood supply, these reasons have nothing to do with the morality of compensating donors. We argue that a system where donors are paid by a public, not-for-profit agency is preferable for many reasons, most notably because it would help bolster Canada's domestic plasma security in ways that for-profit payment would not.

I. Sufficiency, Security, and Safety

The memory of the blood scandal of the 1980's shapes many Canadians attitudes toward their blood system. In the first half of that decade, roughly 1,000 people were infected with HIV and another 30,000 with Hepatitis C due to tainted blood products, making it arguably the largest public health disaster in Canadian history. Significantly, many of those infections occurred after tests for HIV and Hep-C were available, and indeed even after many peer countries had implemented testing regimes to screen blood for these pathogens [13].

In 1997, Justice Horace Krever's Commission tabled the results of its years-long investigation into the blood scandal. They recommended more than 50 changes to Canada's blood system, guided by these five core principles:

1. Blood is a public resource.
2. Donors of blood and plasma should not be paid for their donations, except in rare circumstances.
3. Whole blood, plasma, and platelets must be collected in sufficient quantities in Canada to meet domestic needs for blood components and blood products.
4. Canadians should have free and universal access to blood components and blood products.
5. Safety of the blood supply system is paramount [14, p.1047].

The report's third principle champions self-sufficiency in blood components and blood products. Self-sufficiency is desirable for several reasons. Blood and blood products are important for preserving the health and indeed the lives of thousands of Canadians. At the same time, demand for these products is growing worldwide, both as we discover new treatments and as demand from developing countries for existing treatments grows. The fact that Canada is currently able to import enough plasma to meet its needs is no guarantee that it will be able to do so in the future; sudden outbreaks of disease or shutdowns of particular fractionation facilities have been known to cause supply interruptions in the recent past [3]. This is why, twenty years after the Krever report, Canadian Blood Services continues to emphasize the importance of blood and plasma self-sufficiency [1]. In addition, the Canadian Government's Expert Panel on Immune Globulin Product Supply and Related Impacts in Canada has issued a recent report emphasizing its importance [3].

The goal of plasma self-sufficiency, however, would appear to conflict with the Krever report's second principle, according to which donors should not normally be paid. It is true that Canada has achieved self-sufficiency in whole blood and in plasma for direct transfusions through unpaid donations. But self-sufficiency in the plasma needed to produce PDMPs is another story. Canada relies heavily on paid foreign sources for the plasma needed to produce these products; indeed, unpaid Canadian donors provide only 17% of the plasma necessary to produce such products, with the rest coming from paid donors in the United States [1,3]. The shortfall in domestic supply is so large that CBS does not even pretend to have a plan to meet it; their current goal is to find a way to source just *half* of the plasma needed for PDMPs domestically through significant new outlays in facilities and outreach [15].

Canada is hardly unusual in being unable to source adequate quantities of plasma from voluntary, unpaid donations. A 2013 study estimated that, in a world where access to immune globulins was determined by clinical demand rather than supply restrictions, a country would need to produce approximately 30 liters of plasma per 1,000 population each year to ensure an adequate supply of those products. On that basis, the study observed that *no country in the world* came close to producing enough plasma to achieve self-sufficiency by relying exclusively on voluntary, unpaid donations. The four countries that did cross the 30 liters per 1000 population threshold – the US, Austria, the Czech Republic, and Germany – all relied on a mix of paid and unpaid donations [16].

There is good evidence that introducing payments or other material incentives for donation would significantly increase supply. There is, first, the intuitive support coming from the just-mentioned fact that the countries that allow payment for plasma are exactly the countries with the largest supply [16]. In addition, a variety of observational and experimental studies have found significant benefits from incentives [17,18]. A 2013 review essay in *Science* reported that incentives had been shown to increase whole blood donation rates in specific interventions by as little as 5 or as much as 40 percent, depending largely on the size of the incentive [17].² Moreover, offering such incentives appeared to be quite cost-effective. For example, one study in the US case found that a mere \$10 USD payment led to an increase of nearly 7 extra units of whole blood per 100 individuals contacted to donate, at a net cost of \$34.40 USD per additional unit of blood [19]. On any plausible estimate of the social benefits of an extra unit of whole blood, it is far in excess of \$34.40.³

Of course, one might worry that a system of paid donation might yield an adequate *quantity* of plasma at the expense of plasma of adequate *quality*, thus undercutting not only Krever's second principle but also his fifth – that the safety of the blood supply is paramount. These kinds of concerns are often grounded in Richard Titmuss's landmark study of paid versus unpaid whole blood donation, which found a tendency for paid donations to be of lower quality and hence to be less safe [20]. It is worth noting that, to some extent, Titmuss's study has been yet another victim of the broader replication crisis in the social sciences; a 2013 meta-analysis found no evidence that paying donors reduces the quality of donations [21].

But concerns about the safety of paid donations are ultimately extraneous to the current debate in Canada, for two reasons. First, Canada's choice is not between relying on paid versus unpaid donations, but between relying on paid *American* donations versus relying on paid *Canadian* donations. The option of relying entirely on unpaid donations is not on the table now nor in the foreseeable future, unless we are prepared to let thousands of Canadians go untreated. And second, because of the extensive processing that PDMPs undergo, the risks to the blood system from plasma *products* – as compared to the risks from whole blood or direct plasma transfusion – is extremely low. The production of PDMPs involves purification techniques that all but eliminate risks to the blood system caused by unsafe donations [1]. Indeed, there has not been a single confirmed case of a disease transmitted through PDMP's in over 20 years [3].⁴

Contemporary arguments against paying for plasma sometimes insinuate that paying Canadians for plasma means ignoring the lessons of the tainted blood scandal [23]. But while the scandal had many causes, paying Canadians for their blood was not one of them; the Canadian Red Cross never paid donors. In fact, the system we currently have, where we rely on blood components purchased from questionable sources abroad, has more in common with the system that produced the tainted blood scandal compared to one that relies on federal oversight of a paid domestic donor system.

The security of the blood supply is an important goal, and the considerations in this section suggest that this goal can perhaps be promoted by paying donors for their plasma. This does not by itself entail that it is incumbent upon us to pay donors; there may be other, countervailing moral reasons that speak against it. We turn to a consideration of some of those reasons in the sections that follow.

II. Exploitation

Advocacy groups like *Blood Watch*, *Canadian Doctors for Medicare*, and *The Registered Nurses Union* have argued against paying plasma donors on the grounds that it not only supposedly threatens public safety, but just as troublingly, that it exploits the poor [24]. Exploitation is a concept with a great deal of rhetorical force. The term is often used as a bludgeon in public debate, to decry any sort of practice its opponents find problematic, without it being given much content or analysis. Nonetheless, the intuition that underlies common appeals to this term is the worry that vulnerable persons are somehow being manipulated or treated unfairly. This intuition captures something about the concept: for a relationship, transaction, or practice to be exploitative, there has to be someone who is taken *wrongful advantage of* by another. Even if both parties walk away better off than they were before, a relationship may still be exploitative if one party coerced, lied to, or deprived the other of what she is truly owed.

In order for a transaction to qualify as exploitative, what therefore has to be shown is that one party acts in contravention to one of two criteria. Either they mislead or coerce the other party, thus undermining the extent to which the other party can meaningfully be said to give consent to the arrangement – call this the *consent* criterion. Or they deny the other party something they are truly owed, a fair share of the benefits of the exchange – call this the *fairness* criterion [25]. For it to be held that a private system of paid donation is exploitative, what therefore has to be shown is that the party who pays donors – CPR in this case – acts in contravention of either (or both) of the consent or the fairness criterion.

Let us take the consent requirement first. Is it true that paid donors in Canada are lied to? CPR informs its donors of the minimal risks of the procedure, its duration, invasiveness, and payment schedule. As such, it cannot be reasonably claimed that donors are exploited because they are misinformed, and in that sense taken wrongful advantage of by CPR. The more

² Of the 19 incentive items studied in [17], only one – the offer of a free cholesterol test – was shown to have no effect in increasing the number of donations. To be fair, a more recent review in *Transfusion* found more mixed results, with some incentives delivering significant increases in turnout and retention of donors and others producing a negligible increase or no increase; however, no incentives were shown to have negative effects [18].

³ We assume here that if payment is effective in promoting whole blood donation, it would also be effective in promoting plasma donation.

⁴ When it comes to paying for plasma, there may be legitimate worries about the safety not of *donations* but of *donors*. Little is known about the health impact of regular weekly or even twice-weekly plasma donations, but anecdotal evidence suggests it may be significant. If so, this would be a reason to limit the frequency of donations, but it does not in our view speak to the morality of payment *per se* [22].

interesting question with respect to the consent criterion is whether paid donors are manipulated or coerced by CPR. Of course, the question is not whether CPR literally coerces a person into donation – say, by putting a gun to her head and issuing the ultimatum, “your plasma or your life.” The question, rather, is whether the offer of payment is so tempting to those who are truly desperate that it amounts to an offer they cannot refuse – and thus an offer to which they cannot give meaningful consent.

Understood in this way, the question is whether the offer of \$25-50 to a needy person acts in much the same way as the gun would, effectively coercing her into selling her plasma. The argument that this is indeed coercive goes like this: “the fewer alternatives a person has to obtain the financial means offered through blood donation, the higher the coercive influence or pressure exerted through the offer of payment...offering someone in extreme material need and without alternative opportunities for income money for blood instead of other, more meaningful options...[is] an unacceptable way of compromising this person’s autonomy” [26, p.330].

This type of argument might have some plausibility when applied to the question of organ sales in developing countries, for example, where potential vendors are profoundly desperate, and where the payment offered typically exceeds what that individual might otherwise earn over many years [27]. But the argument is unpersuasive when it comes to plasma donation in Canada. While in some social contexts the offer of \$25-50 can be the difference between life and death, and thus constitute an offer someone cannot reasonably refuse, this is unlikely to be so in Canada against the backdrop of a social safety net that provides needed social services and income support. However inadequate we might take these provisions to be, they are certainly robust enough to provide an alternative to selling one’s plasma for \$25-50.

Of course, a \$25-50 payment represents a single donation. With plasma, unlike with whole blood, you can donate once a week (or in the US, twice a week, something that may eventually become the case here as well). This means paid donors can make up to \$200 a month. That is a more compelling sum. But it is a sum that may look attractive to a good number of less vulnerable Canadians as well. The more compelling the offer becomes, the less badly-off someone has to be to accept it. And the less it therefore makes sense to say that the party who extends the offer takes unfair advantage of the most vulnerable. But even if it were true that the offer of this much money were coercive of the worst off, this would not necessarily be an argument against payment; it might instead be an argument for a means-tested system in which only those donors determined to have alternative options for earning this much money would be eligible for payment [28].

A further point is worth making about coercion as it pertains to exploitation. There is a moral distinction that needs to be drawn between coercion and incentivization. The gunman ultimatum works by removing options until the victim’s best course of action is the one the gunman prefers. In other words, the gunman restricts the victim’s options until his choice becomes the victim’s most attractive option. By contrast, offering an incentive *adds* to a person’s range of options, and the incentive succeeds only if it is preferred to any option the person had before. A coercive offer thus restricts a person’s options, whereas an incentive adds to them. From this perspective, what CPR offers is clearly incentivizing, not coercive. Preventing CPR from making such an offer does not improve the situation of vulnerable people; it merely takes away from them what they currently regard as their best option, rather like the gunman does [29].

The other criterion that can substantiate an exploitation claim is that, while both parties might benefit from their interaction, one party benefits disproportionately, thus depriving the other of what she is fairly owed. According to the fairness criterion, what we would need to establish is that CPR denies their donors something they are rightfully due qua donors. On the most obvious interpretation of this, we should presumably worry about whether CPR profits by paying their donors too little. In fact, CPR pays its donors the equivalent of about 30% of what their plasma is worth when it is sold [9, sec.7.4]. We need not puzzle over whether this percentage is too large or too small in an era in which wages are steadily falling and profits rising relative to GDP. Instead, all we need to note is that, according to the fairness criterion, removing the payment would actually make the transaction even *more* exploitative. Whether 30% represents a fair share of the benefits of the exchange, it is clearly a lot fairer than 0%.

From that point of view, given that wages are earned and profits are made from plasma, there is good reason to think that it is unpaid donors who are being taken wrongful advantage of. And this advantage-taking is arguably made worse by the anti-commodification rhetoric used to justify non-payment: when donors are told that their plasma is too valuable to have a price – and told this by the very agency that later assigns it a price – the unfairness of nonpayment is compounded by outright deception. It is thus not a paid system but rather our current volunteer regime that flouts both fairness and consent considerations.⁵

III. Commodification

Arguments against paying plasma donors that are grounded in concerns about safety or exploitation have at least this much in common: they claim that paying plasma donors would cause concrete harms or wrongs to identifiable individuals, in the

⁵ It might even be said that the current volunteer system is exploitative to the extent that it takes unfair advantage of the beneficent. When it comes to living organ donation, for example, the majority of donors are female, and the recipients primarily male [30]. Given the social expectation of gendered altruism, this is not altogether surprising, and some evidence suggests that this also has an effect on gender demographics in blood donation [31]. Women are far more likely to cite altruism as their reason for giving; women in their 20s give blood at a much higher rate than men in this age group, and while, as they age, women tend to give less, this is often due to higher rates of adverse reactions and associated restrictions placed on the number of donations women are permitted to make in a year as compared to men [32].

form of either greater risks for plasma recipients or exploitation of plasma donors. However, such claims are quite difficult to substantiate, or so we have argued in the first two sections of this paper. Another set of arguments against paying for plasma appeals to more abstract harms against societal norms or moral values, and we turn to these arguments here and in the next section. We begin, here, by considering arguments to the effect that blood or its components should not be treated as a commodity. On this line of thinking, we must avoid paying donors because doing so invites the intrusion of market forces into the blood system, and these market forces tend to corrupt or crowd out important social values. In the next section, we consider arguments to the effect that we must not pay donors because it is wrong to allow individuals or corporations to profit from human blood.

There is a long tradition of anti-commodification arguments purporting to show that certain important goods must be protected from the distorting influence of the market, and which therefore should not be bought or sold. Broadly speaking, we can distinguish two lines of critique. The first focuses on the effects of the market on the good being exchanged, while the second focuses on the effects of the market on the motivations of the parties to the exchange. According to the first line of argument, which we will call the *corruption* argument, assigning a price or a market value to a morally significant good corrupts its true worth, turning it into a mere commodity. According to the second, which we will call the *crowding out* argument, buying and selling morally significant goods introduces self-interest into a domain that should be governed by altruism or public-spiritedness; and self-interest, once unleashed, crowds out these more valuable motivations.

The *corruption* argument suggests that the problem with paying plasma donors is that it involves putting a price on plasma, thereby turning it into a mere commodity or market resource. In that way, we fail to value it properly as the kind of good that it truly is. As Michael Sandel argues, “putting a price on the good things in life can corrupt them...because markets don’t only allocate goods; they also express and promote certain attitudes toward the good being exchanged” [33, p.9]. Elizabeth Anderson shares this worry, noting that assigning something a market price expresses the idea that it can and should be valued solely in terms of the instrumental use to which it may be put [34]. On her account, the body is not the kind of the thing that should be valued in such terms.⁶

We do not question the central insight here, which is that even in a market economy certain goods should remain exempt from market valuation. Nonetheless, there are a number of things wrong with this line of thinking as applied to plasma specifically. First of all, our current ‘unpaid’ plasma regime in Canada already relies heavily on paid donors. The claim that it is wrong to assign price values to blood seems to be mere rhetoric in light of the fact that 80% of our plasma for PDMPs comes from clinics in the US, where donors are paid. How can we claim that blood is too valuable to have a price, unless we are prepared to say that Canadian donors (or their plasma) have greater moral worth than their American counterparts? Second, while we may not pay Canadian donors themselves, this doesn’t mean that their plasma is never assigned a price; it simply acquires its price tag a little further down the supply chain [31]. In the case of PDMPs, Canadians’ raw plasma must be screened and shipped to fractionation facilities in the US for manufacture. It is then sent back to Canadian hospitals for use as treatment. All of this costs money. Moreover, the highly trained professionals who carry out these processes earn wages, as we think they should, despite the fact that this clearly introduces financial incentives into the blood donor system. Once all of these costs are accounted for, CBS bills provincial insurers for the calculated costs of the treatments used by hospitals in their jurisdiction [36].

At a minimum, these considerations suggest that as a case against paying donors, the corruption argument would have to be applied in an arbitrarily narrow way. If assigning a price to blood and blood products corrupts their true worth, this has implications that go far beyond the non-payment of donors. Canada’s blood system already assigns a price to plasma – not only to the raw plasma of American donors, who are paid, but also to PDMPs at all phases of production *except* for the acquisition of plasma from Canadian donors. It is therefore rather arbitrary to insist that this is the *one* element of the blood system that must never be assigned a price.

According to the second version of the anti-commodification argument, the *crowding out* argument, blood and blood plasma are the kinds of resources that should be offered from a motive of altruism or public-spiritedness.⁷ The introduction of payment inspires self-interest, and thereby supplants or *crowds out* these nobler motives. According to the Krever Report, blood should be “given altruistically by persons in Canada for the benefit of other persons in this country” [14, p.1047]. In defense of her proposed bill banning payment for plasma donation, Senator Wallin echoes this view, stating that “Canada’s blood collection system must remain one that is driven by the human instinct to help one another, not by personal gain” [12]. These concerns echo Titmuss’s view that introducing payment into the blood system “represses the expression of altruism, and erodes the sense of community” [20, p.314].

We agree that altruism is desirable. Certainly, a community in which acts are performed for altruistic reasons is preferable to one in which they are not. Not all social relations should be mediated by market mechanisms, nor should all human interactions be driven by self-interest rather than regard for the needs of others. But granting the desirability of this goal, it’s not altogether clear that it is best promoted, or even promoted at all, by restricting payment to plasma donors, for several reasons.

⁶ Immanuel Kant initially raised such concerns when he avowed that “what has a price can be replaced by something else as its equivalence; what on the other hand is raised above all price and therefore admits of no equivalent has a dignity” [35, 4:434].

⁷ Of course, crowding out also is often used to refer to the predicted effect that, when the option of payment is made available, fewer people will be inclined to donate for free. This is simply the practical side of the moral problem we are addressing here: that when pecuniary incentives are introduced, this has an effect on (diminishes the number of actions taken from) altruism. We discuss this briefly below, and in more detail in the following section, where we show that this concern is not supported by the available evidence.

To begin with, the provision of literally any good provides an opportunity for the expression of altruism. Thus, it bears asking why a more altruistic society must be promoted through the donation of plasma specifically, rather than some other good. We could instead promote altruism by encouraging citizens to contribute to food drives or clothing drives rather than blood drives. It seems arbitrary to isolate the donation of plasma (or even bodily goods more generally) as the one area where our efforts to promote altruism should be focused.

Second, even assuming that the promotion of altruism in society should be focused on the provision of plasma, it is not necessary to restrict payment for plasma in order to promote charitable giving. This is a bit like holding that the state should encourage contributions to soup kitchens by closing down grocery stores. Just as food markets can coexist with food drives, a system of paid plasma donation can exist right alongside a parallel system of unpaid donation. The US demonstrates just this, by paying plasma donors while nonetheless maintaining a per capita rate of voluntary, unpaid whole blood donation that is approximately 50% higher than Canada's [9]. Likewise, Germany, Austria, and the Czech Republic, where plasma donors can be paid if they choose, all have higher per capita rates of unpaid whole blood donation than Canada [37].

Third, and relatedly, there is no reason to assume that the introduction of payment necessarily supplants altruistic motivation. People's motivations are complex. Those who are financially compensated can be motivated simultaneously – perhaps even primarily – by altruistic impulses. This is true of many actors in the healthcare system, such as doctors and nurses. Indeed, most of us take pride in the aspects of our work that allow us to help others, while also believing we should earn a fair wage for doing so. Why then should we think that a paid plasma donor must be primarily or exclusively motivated by personal financial gain?

Titmuss held that as soon as money enters the picture, it distorts a person's incentive structure. He based his conclusions partly on the results of surveys conducted among unpaid whole blood donors in the UK and paid whole blood donors in the US. Survey respondents in the UK cited altruistic motives for donating, inspired not infrequently by having lost someone in the Second World War whose life might have been saved by a transfusion. American respondents, by contrast, mostly cited the need for money [20]. But the American donors were not asked *why* they needed the money, leaving open the very real possibility that they were looking to help support their children, partner, or parents. Surely theirs would not have been selfish motives in such cases, despite the fact that money influenced their choice. This suggests that the offer of money does not necessarily supplant but can clearly coexist with – and maybe even enable – altruism.

Finally, it is arguable that maintaining the view that unpaid donors are noble while paid donors are selfish contributes to the unjustified stigmatization of those who are paid, marking them as non-cooperative social actors, despite the fact that they are very much helping to save lives. This kind of social stigma not only prevents agents from acting in accordance with their genuine preferences but can threaten the security of the plasma supply to which paid donation otherwise contributes [38].

IV. Profits and Payments

One of the most commonly expressed and intuitively powerful objections to a system of paid plasma donation invokes the first principle of the Krever Report, according to which blood is a public resource. The opposite of a public resource is of course a private resource, one controlled by individuals or corporations for their own profit. If blood is a public resource, then it should not become part of a profit-making initiative, nor should Canadians become pawns of profit-seeking corporations. In elaborating on his first principle, Krever writes that "profit should not be made from the blood that is donated in Canada. The operator of the blood supply system must act as a trustee of this public resource for the benefit of all persons in Canada" [11, p.1047]. Wallin again echoes Krever in defense of her proposed bill, saying "Canadian donors are not meant to be a revenue stream for private companies looking to make a profit" [12].

The term "profit" is itself ambiguous and deserves some unpacking. Colloquially, it can mean any kind of gain, especially a financial one. However, if those who oppose profiting from Canada's blood supply mean to say that no one should derive any financial gain from the blood system whatsoever, then clearly they ask for something impossible; the only way to satisfy such a demand would be by turning the entire healthcare system into an all-volunteer enterprise. More plausibly, they mean profit in the narrow sense of return to equity: the residual claim held by ownership, typically stockholders, to whatever value is left after all other obligations of the enterprise are settled. In this sense, the difference between a for-profit and not-for-profit enterprise is just that with the latter, any residual is re-invested in the enterprise rather than being returned to ownership.

While it may be philosophically and politically controversial, it is common sense in the business world that managers in for-profit companies work *for* stockholders and are obliged to put their financial interests ahead of the interests of all other stakeholders [39]. Without questioning whether such an attitude is appropriate in business, it is clearly out of place in medicine, where it is understood that physicians' and nurses' first obligation is to their patients rather than to their own or their employers' bottom line. Such an attitude seems no less out of place in the blood supply system. There, the interests of those who depend on blood and blood products (or who may one day so depend, i.e., the public at large), as well as the interests of those who generously supply such products, should come before the interests of those who merely seek a return on their investment.

Understood in this way, concerns about the profit motive are just the demand-side analogue to the concerns we encountered in the previous section regarding the self-interested motives of suppliers. Just as one might worry about the nefarious effects of payment on the motivations and behaviours of those who *donate* blood, one might also worry about the effects of profit on the motivations and behaviours of those who *collect* it. We agree that these worries offer legitimate grounds to resist allowing Canada's blood and plasma supply to be controlled by for-profit corporations, and we will turn to substantiating those grounds momentarily. But we must first point out that concerns about the profit motive are quite separate from the question of whether plasma donors should be paid.

Profit-seeking and paying donors are two distinct issues. Whether an agency is organized as a for-profit venture has nothing to do with whether they pay (or should pay) their suppliers, and vice versa. For instance, Canada's provincial health insurance programs are properly public, not-for-profit agencies; the fact that these programs dispense payments to almost everyone involved in the provision of medical care in Canada has never been thought to threaten these insurers' not-for-profit status. Conversely, a for-profit agency should be inclined toward non-payment wherever they can get away with it, as a way of cutting costs and thus increasing profits.

The question of *payment* therefore has nothing to do with the question of *profit*. To say that private companies should not profit from the blood system may be effective as an argument against allowing a private company like CPR to operate, but it has no bearing on the general question of whether plasma donors should be paid. We point this out, not to discredit anti-profit arguments as such, but only anti-profit arguments against paying for plasma. And to show that there is conceptual space available for a novel position: one that endorses paying *for* plasma while rejecting profiting *from* plasma.

The first three sections of this paper were intended to show that there are strong reasons in support of paying for plasma, and few good reasons against it. In particular, paying for plasma can be expected to lead to a more secure domestic supply without compromising safety or exploiting the vulnerable. But if there are legitimate concerns about the distorting effects of the profit motive – and we believe there are, as we will argue momentarily – it is possible to address those concerns by simply taking the controversial issue of profit off the table. Payment may instead be dispensed by a not-for-profit agency.

In the interests of profit, we should expect a private company like CPR to sell the blood it collects from Canadian donors to the highest bidder, and the highest bidder may not be in Canada. In other words, CPR can be expected to sell Canadian blood abroad if doing so proves more lucrative than selling it domestically. As such, the licensing of for-profit clinics might not, in the end, address the very security of supply worries which (we argued in Section I) speak in favour of a paid system. Since one of the primary reasons (if not *the* primary reason) to support a paid system is to increase Canada's supply and to ensure the ongoing security thereof, then to the extent that the profit motive threatens this goal, this is grounds for serious concern with a for-profit system of plasma acquisition.

As difficult as it may be to imagine a for-profit company like CPR putting Canada's domestic supply needs ahead of its own bottom line, it is equally difficult to imagine a not-for-profit, like CBS say, selling Canadians' plasma abroad on the open market. This is because CBS's mandate is to protect the security of Canada's plasma supply, and also because it is accountable not just to shareholders but to government, advocacy groups, donors, and citizens. This suggests that, in light of the compelling reasons to pay plasma donors, there are considerable reasons to prefer that such payment come from a public, not-for-profit agency like CBS rather than a private, for-profit agency like CPR.

There is a helpful parallel to be drawn here to the ethical analysis of clinical research trials involving human subjects. The benefits of trial participation are not enjoyed by subjects in the form of medical treatment as such, since they may be randomized to a placebo group, and/or because the experimental treatment may prove ineffective. Instead, the benefits of participation are generally twofold: in the short term, there is payment, and in the longer term, there are the benefits of living in a society with safe, new, and effective treatment protocols, which can only be achieved in most cases through research on human subjects. It is broadly regarded as ethical to perform research on human subjects if the latter of these two benefits can be reasonably assured, that is, if the research will very likely have ongoing social value in which the participants will share [40,41].

In the context of plasma donation, we have similar reason to think that donors are owed the opportunity to live in a society with a more secure and plentiful plasma supply in the long term, as well as payment for their contribution to this social good in the short term. As with medical research, the greatest good that comes out of a system of plasma acquisition is increased access to treatment in the future. Thus, it seems reasonable to suppose that donors should be entitled to share in this good. And on our view, this speaks in favour of securing our supply by pursuing a publicly accountable payment scheme. When the private sector gets involved in the acquisition of plasma and sells the plasma they acquire in Canada to the highest bidder abroad, Canadian donors can reasonably worry they might be deprived of access to the social good to which they contribute. This is why, on our view, we need a publicly controlled system of plasma acquisition. But we would emphasize again that, although the opportunity of donors to live in a society with a more secure plasma supply is an important long-term benefit of plasma donation, this long-term benefit is not at all inconsistent with short term financial payment to donors for their time and trouble.

Continuing with the parallels to research ethics, some bioethicists argue that while living in a society with new medical interventions is the primary benefit of clinical research involving human subjects, this cannot always be reasonably guaranteed

to trial participants for any number of reasons.⁸ As such, ethical research requires that some more direct form of benefit-sharing is owed to participants [42]. We are making a similar case: the primary benefit of plasma donation should be living in a society with an adequate supply (which we secure through public control), but donors who may never access this supply themselves are owed some more direct benefit (which we assure through payment). In sum, a not-for-profit agency that collects plasma through paid donation would best ensure that the plasma collected in Canada would in fact serve to secure the Canadian plasma supply, which in our view is the principle rationale for payment. Payment would enhance domestic supply, while the public mandate of a not-for-profit would help to ensure that the supply is managed for the benefit of all Canadians rather than for the benefit of the shareholders of a firm. A publicly governed payment scheme would realize the benefits of increasing supply through incentivization, without the risk that Canada's plasma supply would go to whomever was willing to pay the highest price for it.

There are additional reasons to favour payment coming from a not-for-profit rather than a for-profit agency. One common complaint against CPR is that they have chosen particularly disadvantaged parts of Saskatoon and Moncton as sites for their first two clinics. We argued in a previous section that worries around exploiting vulnerable individuals seem somewhat overblown; it is difficult to see the offer of a \$25 or \$50 payment as one that poor people are incapable of resisting, not least of all because many poor Canadians do indeed refuse it. Nonetheless, we agree there is something troubling about the fact that CPR has opened its clinics in Saskatoon and Moncton in underprivileged parts of town. This does seem to suggest that they know their clients will come mainly from among the worst off. This is a problem of inequality, on our view, not one of exploitation. It looks as though CPR is taking advantage, not of vulnerable individuals, but rather of the fact of income inequality in Canada itself. Were income and wealth more equitably distributed, particular neighbourhoods, and thereby particular segments of the populace, would not become the targets of for-profit agencies. That disadvantaged neighbourhoods exist to become the target of for-profit agencies is a serious problem of social justice, and not simply of plasma acquisition. Nonetheless, our reason for raising this issue is to point out an additional advantage of vesting the responsibility for paid plasma acquisition in the hands of a not-for-profit public agency like CBS. The advantage is that CBS could pay for plasma from their vast network of existing donation sites, and thus would not rely so heavily on any one particular segment of the population. Indeed, CBS could proceed with opening its new proposed donation sites in diverse neighbourhoods across Canada and pay donors from those sites.

Of course, not-for-profit status is not a panacea. Not-for-profits are perfectly capable of short-sighted and self-interested behaviour of their own, as the history of the Canadian blood scandal attests. But to the extent that the profit motive is seen to be particularly distorting of agents' incentives and thus their behaviour, we can expect some improvement by simply taking that motive off the table. This can be expected to have a couple of concrete benefits, as we have already argued. But additionally, because a public agency like CBS is accountable to a broader range of stakeholders for their decisions, if we want the blood system to be managed for the good of all Canadians rather than for the interests of a private company's shareholders, such broader accountability is preferable.

In closing this section, we acknowledge that our proposal raises a number of legitimate practical concerns. If CBS were to begin paying Canadians for their plasma, what would be the impact on Canada's whole blood supply? What would be the budgetary implications for CBS? Would paying donors really increase supply, and security of supply, as much as we suggest? We acknowledge that these are legitimate concerns, and certainly any attempt to implement a proposal like this should investigate them carefully before proceeding. Here we would just emphasize that our aim in this paper is more modest. Our aim is to offer arguments that purport to show that paying plasma donors does not raise serious *moral* concerns, where such payment is dispensed by an accountable public agency. Whether there are practical obstacles to its implementation is an area for further research.

Nonetheless, despite the fact that our intervention in this paper is meant to be moral and conceptual rather than empirical, there are a few practical points it behooves us to make before concluding. First, on the question of CBS's finances, while our proposal may lead to some net increase in costs, we think a more secure domestic supply of plasma is worth paying for. Indeed, CBS itself has recently requested just shy of \$100 million over six years in order to build and staff new plasma donation centres, in the hopes of increasing domestic supply to meet about half of Canada's demand for PDMPs. They have also requested \$800,000 for a public relations campaign designed to bolster domestic donations [43]. We see no good reason why these funds should not be devoted in part to paying donors, and many good reasons why they should. Second, while some may worry about the impact of paying for plasma on CBS's ongoing efforts to source adequate quantities of whole blood, in general there is no evidence of a "crowding out" effect here. When the Government's Expert Panel on Immune Globulin Product Supply and Related Impacts in Canada examined the literature, they found no evidence that expanding paid plasma collection negatively affected the whole blood supply [3]. And indeed, as we have already said, many countries that allow for paid plasma donation *also* maintain higher rates of uncompensated blood donation than Canada [31].⁹

⁸ In the context of medical research, this may be because some participants die before the intervention becomes widely available, or because the cost of some new intervention may make it inaccessible to certain participants, particularly those in poorer regions, or nations with inadequate drug subsidies or healthcare provisions. With respect to plasma in Canada, the first of these is more relevant, as is the likelihood that healthy donors will themselves never require medical interventions involving the use of plasma.

⁹ Of course, under our proposal, the very same organization (CBS) could be responsible for collecting both unpaid blood donations and paid plasma donations, and this might give rise to crowding-out problems that do not obtain when different agencies are doing the collecting. Clearly more research is called for here, but such problems could potentially be mitigated by, for example, having blood and plasma collection performed at separate sites or under distinct "brands."

We have argued in this section that while there are legitimate reasons to be worried about the effects of the profit motive on Canada's blood system, these worries have nothing to do with the question of paying donors. Indeed, many of the concerns people have about CPR could be assuaged by allowing CBS or another not-for-profit entity to pay plasma donors.¹⁰ Evidence suggests that a large majority of Canadians support paying for plasma provided that it does in fact increase the Canadian plasma supply [45]. Our proposal shows that it is possible to accommodate the aversion many Canadians have toward profit-oriented initiatives, while still realizing the increased supply that payment makes possible.

Conclusion

We have argued that the current debate around payment for plasma in Canada avoids the central issue, which is not about whether donors should be paid, but about who should be paying them. There are many good reasons to favour paying plasma donors, and few good reasons against. Paying for plasma would increase domestic supply, making Canada's blood system more self-sufficient and secure in an increasingly uncertain world. To object to payment on the grounds that blood should not be commodified belies the fact that Canada already depends on paid donors in the US for plasma. To say that paying Canadian donors would be exploitative ignores the fact that not paying them exploits them more, in virtue of assigning them an even smaller share of the benefits of cooperation.

The introduction of the profit motive is a legitimate cause for concern, and a good reason to worry about licensing private plasma acquisition clinics. But fortunately, it is not a legitimate reason to refuse to pay plasma donors. The question of payment is separate from the question of profit; a not-for-profit can pay donors as easily as can a for-profit. And in fact, if we are going to pay donors, there are good reasons to favour such payment coming from a not-for-profit source. A not-for-profit can be expected to keep domestic plasma donations in Canada for the benefit of Canadians, rather than selling them to the highest bidder abroad. In this way, not-for-profit payment would contribute to the security of the plasma supply in a way that for-profit payment would not. With this in mind, we have advocated for a new Canadian regime of public sector plasma collection and payment.

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References

1. Canadian Blood Services (CBS). [Our commitment to increasing plasma sufficiency in Canada](#). Ottawa: CBS, 2018.
2. CBC. [Canada's blood supply: 10 years after Krever, is it safe?](#). CBC News. 2007 Apr 27.
3. Expert Panel on Immune Globulin Product Supply and Related Impacts in Canada. [Protecting access to immune globulins for Canadians](#). Ottawa: Government of Canada, 2018.

¹⁰ Senator Wallin's proposed Bill-S252 against paid plasma donation makes an exemption for CBS, but not for non-profit agencies in general. That means, should the Bill pass, that CBS and CBS alone would retain the right to pay plasma donors [44].

4. CBC. [Canadian plasma clinic that pays donors \\$25 per visit opens in Saskatoon](#). CBC News. 2016 Feb 18.
5. Chandler O. [Controversial for-profit plasma clinic now operational in Moncton](#). CBC News. 2017 Jul 25.
6. Kingston A. [A bloody mess: the story behind paid plasma in Canada](#). MacLean's. 2017 Nov 22.
7. Nuffield Council on Bioethics. [Human bodies: donation for medicine and research](#). London: Nuffield Council on Bioethics, 2011.
8. O'Mahoney B. [The Dublin Consensus Statement 2012 on optimized supply of plasma-derived medicinal products](#). Blood Transfus. 2013;11(4):623-626.
9. Donation Ethics. [Ethicists express concerns about a Senator's proposal to ban compensation for blood plasma donations in Canada](#). Ottawa and Washington, D.C.: Donation Ethics, 2018.
10. Bains C. [B.C. joins other provinces in banning payment for plasma](#). CTV News. 2018 Apr 26.
11. Global News. [Advocacy group presses N.S. government to ban private plasma companies](#). Global News. 2018 Apr 10.
12. Wallin P. [Time to end for-profit plasma donations](#). Regina Leader-Post. 2018 Jun 11.
13. Wilson K. [The Krever Commission – 10 years later](#). CMAJ. 2007;177(11):1387-1389.
14. Krever H. [Commission of Inquiry on the Blood System in Canada. Final report](#). Ottawa: Commission of Inquiry on the Blood System in Canada, 1997.
15. Canadian Blood Services (CBS). [Canadian Blood Services proposes ambitious plan to insure a secure supply of Canadian plasma for immune globulin](#). Ottawa: CBS, 2017.
16. Farrugia A, Cassar J. [Is self-sufficiency in haemotherapies a practical or necessary goal?](#) Blood Transfus. 2013;11(2):183-192.
17. Lacetera N, Macis M, Slonim R. [Economic rewards to motivate blood donations](#). Science. 2013;340(6135):927-928.
18. Chell K, Davidson TE, Masser B, Jensen K. [A systematic review of incentives in blood donation](#). Transfusion. 2018;58(1):242-254.
19. Lacetara N, Macis M, Slonim R. [Rewarding volunteers: a field experiment](#). Manag Sci. 2014;60(5):1107-1129.
20. Titmuss RM. The Gift Relationship: From Human Blood to Social Policy. Ann Oakley and John Ashton, eds. New York: New Press, 1997.
21. Niza C, Tung B, Marteau TM. [Incentivizing blood donation: systematic review and meta-analysis to test Titmuss' hypotheses](#). Health Psychol. 2013;32(9):941-949.
22. Shaeffer HL, Ochoa A. [How blood-plasma companies target the poorest Americans](#). The Atlantic. 2018 Mar 15.
23. Picard A. [Have we forgotten the lessons of the tainted blood scandal?](#) Globe and Mail. 2017 Nov 28.
24. Clement D. [It's time to legalize paid plasma donations in Ontario](#). Toronto Star. 2018 Jan 16.
25. Wertheimer A. Exploitation. Princeton: Princeton University Press, 1999.
26. Buyx A. [Blood donation, payment, and non-cash incentives: Classical questions drawing renewed interest](#). Transfus Med Hemother. 2009;36(5):329-339.
27. Hughes PM. [Constraint, consent, and well-being in human kidney sales](#). J Med Philos. 2009;34(6):606-631.
28. Weimer S. ['I can't eat if I don't pass': impoverished plasma donors, alternatives and autonomy](#). HEC Forum. 2015;27(4):361-385.
29. Radcliffe-Richards J. [Nephriarious goings on: kidney sales and moral arguments](#). J. Med Philos. 1996;21(4):375-416.
30. Liberto H. [Noxious markets versus noxious gift relationships](#). Soc Theory Pract. 2013;39(2):265-87.
31. Duffner A. [Blood products and the commodification debate: the blurry concept of altruism and the 'implicit price' of readily available body parts](#). HEC Forum. 2015;27(4):347-59.
32. Bani M, Giussani B. [Gender differences in giving blood: a review of the literature](#). Blood Transfus. 2010;8(4):278-287.
33. Sandel MJ. What Money Can't Buy: The Moral Limits of Markets. New York: Farrar, Strauss and Giroux, 2012.
34. Anderson E. [Ethical limitations of the market](#). Econ Philos. 1990;6(2):179-205.
35. Kant I. Groundwork of the Metaphysics of Morals. In MJ Gregor, ed. Kant's Practical Philosophy. Cambridge: Cambridge University Press, 1999. 37-108.
36. Canadian Blood Services (CBS). [Annual Report](#). Ottawa: CBS, 2009.
37. Government of Canada. [Background paper – Plasma donations in Canada](#). Ottawa: Government of Canada, 2013.
38. White L. [Does remuneration for plasma compromise autonomy?](#) HEC Forum. 2015;27(4):387-400.
39. Friedman M. [The social responsibility of business is to increase its profits](#). New York Times Magazine. 1970;13:32-33,122-124.
40. [The Nuremberg Code](#). Trials of War Criminals before the Nuremberg Military Tribunals under Control Council Law. Washington, D.C.: US Government Printing Office. 1949;10(2):181-182.
41. Council for International Organizations of Medical Sciences (CIOMS). [International ethical guidelines for biomedical research involving human subjects](#). Geneva: CIOMS, 2002.
42. El Sethouhy M et al. [Moral standards for research in developing countries: from "reasonable availability" to "fair benefits."](#) Hastings Cent Rep. 2004;34(4):17-27.
43. Grant K. [Canadian Blood Services calls for funding to boost plasma donation](#). Globe and Mail. 2017 Jan 24.
44. Senate Public Bill S-252: [Voluntary Blood Donations Act \(An Act to amend the Blood Regulations\)](#). 42nd Parliament of Canada, Second Reading, 2018 Nov 25.
45. Lacetera N and Macis M. [Moral NIMBY-ism? Understanding societal support for monetary compensation to plasma donors in Canada](#). Law and Contemporary Problems. 2018;81(3):83-105.