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# Vox Sanguinis International Forum on Donor Incentives: Summary

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## Introduction

To ensure an adequate supply of blood and blood products, it is critical to be able to attract citizens to donate. Strategies by which blood donors are recruited vary. Blood and blood component donation are strictly voluntary without material incentives in some jurisdictions, while in others, donors receive rewards, compensation, remuneration and/or payment. Some countries view blood as an altruistic, voluntary gift that one can choose to make freely, while other countries recognize blood as a raw material that should be given material or monetary value in exchange [1,2]. The debate surrounding donor compensation is long-standing and ongoing. Donor motivation through altruism alone may not meet demand; donor incentives may be required to enhance recruitment and retain adequate numbers of donors [3]. Literature suggests that altruistic behaviour can be variable and complex; thus, different forms of incentivization may be effective in encouraging blood donation [4].

The Nuffield Council on Bioethics identified three main forms of payment: (1) Purchase – of a thing; (2) Reward – remuneration to the person donating; and (3) Recompense of donor for losses incurred – financial reimbursement or non-financial compensation [5]. Many factors contribute to if, when, how and how much donors are compensated for provision of blood, blood components, tissues and organs. Driving factors might include ethical, legal, economic, operational and safety considerations.

A survey completed by donors in the United States in 1995 demonstrated the biggest net benefit from incentives would be from ‘blood credits’ (a credit for the donor or a family member in the event blood transfusion is required) and medical testing [6]. A 2017 randomized trial of blood donors found no significant difference between 3 interventions on the proportion of donors registered to give blood: (1) Control arm with usual ‘Thank you’, (2) ‘Action Plan’ where the donor was given a post-it confirming the next

donation date and time, and (3) Reward of minimal monetary value [7]. A recent systematic review on incentives and blood donation found there was no incentive that met universal approval of donor and non-donor groups from perspectives of motivation and safety [8]. Some incentives were deemed more palatable than others, for example discounts, tickets, gifts and paid time off work [8].

The aim of this International Forum is to explore the diverse practices of donor reward, incentive and recognition across different jurisdictions.

Definitions and examples of types of donor rewards are adapted from Chell *et al* [8]. and presented in Table 1.

## Participants

An invitation to participate in this International Forum was sent to 21 countries; we received responses from 17. Response was notably absent from blood suppliers in the United States where donor incentivization is variable.

Table 2 provides participant demographics including population size and Human Development Index (HDI).

**Table 1** Definitions and examples of types of donor rewards adapted from Chell *et al* [8].

Term	Definition/Example
Donor Reward	Gift offered after an action (donation) has been completed
Donor Incentive	Strategy used to motivate an action
Monetary	Cash payment, travel compensation, charity donation, vouchers/gift cards, discounts and tax relief/receipt
Non-monetary	Gifts, tickets, health check-up, time off work and reciprocity
Donor Recognition/Appreciation	Certificate, badge, plaque

**Table 2** Participant characteristics and blood collection volumes

Country	Total population <sup>a</sup>	Total population donor centre serves (if different from total population)	Percentage of the total eligible population that donates blood and/or blood components (%)	Human Development Index (HDI) (value) <sup>b</sup>	HDI rank <sup>c</sup>	Whole blood (WB)	Apheresis	WB collected per 1000 people
Australia	25 203 000	-	2.4	0.939	3	687 022 <sup>m</sup>	576 797 <sup>m</sup>	27.3
Brazil	211 050 000	46 957 <sup>p</sup>	1.6	0.759	79	3 400 000 <sup>k</sup> (10 000) <sup>l</sup>	(2 400) <sup>l</sup>	16.1 (213.0) <sup>t</sup>
Canada	37 411 000	29 246 639 <sup>o</sup>	4	0.926	12	796 345 <sup>g</sup>	53 020 <sup>g,h</sup>	27.2 <sup>s</sup>
Czech Republic	10 689 000	-	3.07	0.888	27	412 200 <sup>f</sup>	742 700 <sup>f, j</sup>	38.6
France	65 130 000	-	3.7	0.901	24	2 498 489 <sup>f</sup>	485 096 <sup>f</sup>	38.4
Guyana	783 000	-	1.34	0.654	125	10 000 <sup>d</sup>	25 <sup>c</sup>	12.8
Japan	126 860 000	-	5.46	0.909	19	4 828 017 <sup>i</sup>	-	38.1
Kazakhstan	18 551 000	-	1.6	0.800	58	210 000	-	11.3
Malaysia	31 950 000	-	2.2	0.802	57	800 000 <sup>g</sup>	10 000 <sup>g</sup>	25.0
Peru	32 510 000	-	1.2	0.750	89	330 000	-	10.2
Russia	145 872 000	-	2	0.816	49	2 199 635 <sup>f</sup>	-	15.1
Saudi Arabia	34 269 000	-	1.8	0.853	39	416 000	-	12.1
Sri Lanka	21 324 000	-	3.4	0.770	76	425 000	2000	19.9
The Netherlands	17 097 000	-	2.86	0.931	10	417 796 <sup>i</sup>	304 209 <sup>i</sup>	24.4
Turkey	83 430 000	-	3.99	0.791	64	2 391 571	33 951	28.7
Uganda	44 270 000	-	<1	0.516	162	260 000	-	5.9
Ukraine	43 994 000	1 240 482 <sup>q</sup>	0.93	0.751	88	581 080 <sup>f</sup> (9 928) <sup>r</sup>	-	13.2 <sup>n</sup> (8.0) <sup>u</sup>

<sup>a</sup>Based on 2019 estimates by the *United Nations World Population Prospects 2019* [9].

<sup>b</sup>The Human Development Index (HDI) incorporates measures from three different areas of human development: a long and healthy life, being knowledgeable and a decent standard of living [10]. These statistics are reported based on 2018 data.

<sup>c</sup>Comparison of each country's Human Development Index. A low numeric HDI rank value represents a high HDI rank/score [10].

<sup>d</sup>Averaged over the past six years.

<sup>e</sup>25 Apheresis collections completed since start date of 2015.

<sup>f</sup>Donations collected in 2017.

<sup>g</sup>Donations collected in 2018.

<sup>h</sup>Apheresis platelets and apheresis plasma units.

<sup>i</sup>Averaged over 2015, 2016, 2017 and 2018.

<sup>j</sup>218 000 apheresis donations collected by blood transfusion service (hospital-based) and 523 800 plasmapheresis collected by commercial plasma-collection centres.

<sup>k</sup>It is estimated that Brazil collects 3.4 million donations of whole blood a year.

<sup>l</sup>Estimates from a single general hospital-based blood bank at a Brazilian tertiary care facility.

<sup>m</sup>Averaged over 2013–14, 2014–15, 2015–16, 2016–17 and 2017–18.

<sup>n</sup>Calculated based off whole blood and apheresis value for all of Ukraine.

<sup>o</sup>Population of Canada, excluding the province of Québec. Québec operates their own blood supply organization, Héma-Québec. [11]

<sup>p</sup>Population of Morumbi, São Paulo, the location of the Brazilian tertiary care facility with this specific general hospital-based blood bank. [12]

<sup>q</sup>Population of Zhytomyr, the location of Zhytomyr Regional Blood Centre. [13]

<sup>r</sup>Whole blood collected at Zhytomyr Regional Blood Centre.

<sup>s</sup>Whole blood collected per 1000 people in Canada, excluding Québec.

<sup>t</sup>Whole blood collected per 1000 people at a Brazilian tertiary care facility, located in Morumbi, São Paulo.

<sup>u</sup>Whole blood collected per 1000 people in Zhytomyr, Ukraine.

The population listed for each participating country was based on 2019 estimates by the *United Nations World Population Prospects* [9]. The HDI is a measure that considers three different areas of human development: a long and healthy life, being knowledgeable and a decent

standard of living. [10] These statistics are reported based on 2018 data. The HDI rank is a comparison of each country's HDI (a lower HDI rank, e.g. 125, represents a lower HDI rank/score when compared to a higher HDI rank of 11).

**Table 3** National policy or regional legislation on blood donation regarding donor reward, incentive and recognition

Country	National Policy/Regional Legislation	Description of Policy/Legislation
Australia	Yes	Australia has committed to the World Health Assembly Resolution on voluntary non-remunerated blood donation (VNRBD) philosophy of blood donation, in which people donate blood, plasma or cellular components of their own free will and without remuneration of any kind. The principle of VNRBD is incorporated within Australian State and Territory legislation. The Blood Service has national policies in accordance with the principle of VNRBD relating to donor recognition and donor incentives. The Blood Service does not provide any incentives to donors or prospective donors to donate blood. Token gifts of appreciation may be given.
Brazil	Yes	All national blood banks must follow Brazilian Health Ministry Regulatory Rules. Monetary incentives are not allowed for blood donations in the country. Any given incentive must not be readily convertible to cash. These rules include whole blood, platelet and plasma donations. Blood donors are allowed time off work, once a year, on the day they donate blood.
Canada	Yes	Some provinces (Ontario, Quebec, Alberta) have passed legislation prohibiting payment of donors for blood or plasma donations. Canadian Blood Services and Héma-Québec have both implemented similar donor recognition programmes. Canadian Blood Services recognizes donors through: milestone pins, donor milestone cards, thank-you communications, certificates, etc.
Czech Republic	Yes	Whole blood and plasma donations are non-remunerated and not financially compensated. Two-thirds of platelet donors, who are 'on-call for platelet apheresis', ask for direct financial compensation (35 EUR/donation). The legislation covers equally 'blood transfusion service' and 'commercial plasma-collection centres' providing compensation for travel and time, or tax deduction if no monetary compensation provided. Time off work for donation and travel provided. Commercial plasma-collection centre system was established in 2008.
France	Yes	The 1952 law revised in 1993 and put into the health legislation (art CSP 1211-4): no payment allowed in any kind for blood donation in France. Small travel compensation of maximum 7 Euros may be provided if it is an apheresis donation and the doctor has requested it. Small gifts like goodies and flowers are given to donors.
Guyana	Under development	In the process of drafting policy with intention to draft legislation
Japan	Not explicitly stated	Blood donation in Japan is voluntary and non-remunerated so there are no incentives or rewards for blood donors. There is a donor recognition/appreciation system. Simple novelty goods or light snacks are provided to the donors.
Kazakhstan	Yes	Government regulation. Donors may donate on a fee basis or free of charge. Free-of-charge donors are provided with free food or its monetary equivalent. Payments to donors who donate on a fee basis have been made for more than 20 years. This was introduced to attract donors after the cessation of the existence of the USSR when the number of unpaid donors declined. Currently, Kazakhstan is trying to reduce the number of paid donations.
Malaysia	Yes	Donors are given non-monetary compensation, health check-up and certificates of appreciation during the World Blood Donor Day celebration.
Peru	Yes	Law No 26454 states remuneration is not allowed. The Law of Promotion of Blood Donation and Organs No 27282 (2000) from the DIGDOT (National Regulatory Office of Blood Banks, Organs, Cells and Transplants) provides workers with the right to take hours off of work for donating blood; however, employers can request the time be made up.
Russia	Yes	Donors are compensated for whole blood and its components. Donor is provided with free meals on the day of donation or it can be replaced with monetary compensation. Employee is released from work on the day of their donation or given another day of rest if they went to work or the donation fell during the period of annual paid vacation, on a weekend or non-working holiday. The employee is given an additional paid day to rest after the day they donated blood. Regional authorities can set the price for blood on their own that is to be paid to donors. Donors have always been paid, but this order was established in 1993 to help with blood shortage.
Saudi Arabia	Yes	There is a strict national policy from the Royal Decree that the donors will not be encouraged by any form of payment. These guidelines were framed and monitored by the government-appointed authorities. There is no compensation policy for any type of blood donation. Voluntary donors will be encouraged in different forms such as awards and recognition.

Table 3 (Continued)

Country	National Policy/Regional Legislation	Description of Policy/Legislation
Sri Lanka	Yes	Monetary incentives are banned in Sri Lanka for donating whole blood or platelets (no plasma donors in Sri Lanka). As a policy, the NBTS discourages non-monetary donor incentives also. There are no barriers to donor appreciations. The most common form of recognition is a certificate, given by volunteers. This practice has been in use for 20 years.
The Netherlands	Yes	Sanquin Blood Supply is by law the only institution in the Netherlands that is allowed to collect blood. The national law blood donation does not allow whole blood and apheresis donors to have financial gain from donating blood and encourages voluntary non-remunerated donation. Donors are compensated for their travel costs and given small gifts (towels, USB sticks, etc.).
Turkey	Yes	Unified national policy for blood donation recognition. There is no compensation for donors. Donor recognition has been performed by Turkish Red Crescent since 1982.
Uganda	Yes	Donors are recognized after a number of donations. Donors are not compensated for donation of whole blood, platelets or plasma.
Ukraine	Yes	A unified national policy includes the Law of Ukraine 'On Donation of Blood and Blood Components', 1995, The Decree of the President of Ukraine 'On Honorary Titles', 2001, The Decree of the President of Ukraine 'On the Procedure for Presenting to the Award and Awarding with State Awards of Ukraine', 2000, The Law of Ukraine 'On pensions for special contributions to Ukraine', 2000. Moreover, in 2019 the Cabinet of Ministers of Ukraine approved/adopted the Development Strategy for the National Blood Service. Monetary compensation was established in 2006 by the Decree of the Cabinet of Ministers of Ukraine granting that monetary compensation may be received by donors of blood, plasma and platelets.

### Question 1

Number of donations (whole blood, apheresis) collected in your country/jurisdiction per year and **Question 4** What percentage of the total eligible population donates blood and/or blood components?

There was wide variation in responses from 17 participating countries representing a broad spectrum of population size and of Human Development Index (HDI). Results are presented in Table 2. In general, countries with a higher HDI rank such as Australia, Canada, Japan and the Netherlands had higher percentage of total eligible population donating blood (2.4% or higher), while countries with a lower HDI rank such as Guyana, Peru and Uganda had lower percentages of total eligible population donating (less than 2%). Turkey is an exception with an HDI rank of 64 and percentage of total eligible population donation of 3.99%. Likewise, countries with higher HDI ranks collected more blood products over all than those with lower HDI ranks (Table 2).

### Question 2

Is there a unified national policy or regional legislation on blood donation regarding donor reward, incentive and recognition?

- (a) If yes, please describe the following using the definitions provided above:
- (i) Are donors compensated for donation of whole blood? Platelets? Plasma?

(ii) What type of compensation? Value? How long ago was this instituted? Why?

- (b) If no, please describe as above for the policy that you follow and how this differs from other blood operators in your jurisdiction.

All but two countries stated there are explicit national policies or regional legislation that govern blood/blood component donor rewards, incentives and/or recognition (Table 3); Guyana is in the process of developing such policies; and Japan states by principle blood donation is voluntary and non-remunerative with the highest percentage of eligible population donating at 5.46%.

The majority of countries (11/17) implement non-monetary donor incentives most commonly in the form of small gifts; six of the participating countries offer monetary compensation, most commonly in the form of cash payment.

In countries where monetary compensation is used, there is a range of percentage of eligible population who donates. Czech Republic provides cash payment and has a relatively high percentage of eligible population donating (3.07%); however, other countries that use cash payment (Russia, Kazakhstan and Ukraine) have relatively low percentages (2.0%, 1.6% and 0.93%, respectively) indicating that cash payments alone may not be enough of an incentive to encourage blood donation. Czech Republic offers several monetary donor incentives compared to the

**Table 4** Donor incentives and recognitions endorsed by participating countries

Donor Incentives		Donor Recognition	
Monetary		Certificate	A, C, K, M, SA, SL, Ug
Cash payment	CR, K, R, Uk	Badge	A, C, R, SA
Travel compensation	CR, F (apheresis only), N	Pins	C, P
Vouchers/gift cards	R	Donor cards	C
Tax relief/receipt	CR	Thank-you communications	C, P
Pension supplement	Uk	Public events	A, B, C, F, SL, Ug
Non-Monetary		Plaque	B, SA, SL, T, Ug
Gifts	A, B, F, J, M, N, Ug	Diploma	F
Health check-up	M, P, R	Breastplate	K
Time off work	B, CR, P, R	Medal	T
Refreshments	J, K	Honorary Title	Uk
Transport to collection site	CR		

A, Australia; B, Brazil; C, Canada; CR, Czech Republic; F, France; G, Guyana; J, Japan; K, Kazakhstan; M, Malaysia; N, The Netherlands; P, Peru; R, Russia; SA, Saudi Arabia; SL, Sri Lanka; T, Turkey; Ug, Uganda; Uk, Ukraine.

other countries, including cash payment, travel compensation and tax relief/receipts. This combination of monetary incentives may be more effective to engage donors than cash payment alone; however, no conclusive associations can be made from the data collected.

### Question 3

Is there a recognition system for the number of donations? Is it private or public recognition? Please describe your recognition program.

Table 4 describes the different types of donor incentives and recognition systems endorsed by participating countries. Donor recognition is prevalent amongst countries with certificates as the most common method of donor recognition implemented. Public events, plaques and gifts are also common methods of donor recognition. Provision of donor gifts is not associated with higher percentages of eligible population donating.

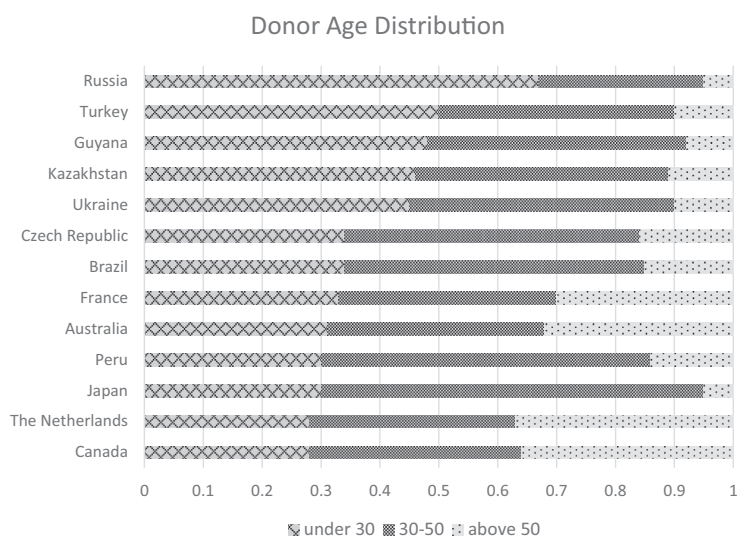
### Question 5

What is the age distribution of your population of donors?

Figure 1 illustrates age distribution of 13/17 participating countries. The countries with the highest proportion of young donors were found predominantly in countries with lower HDI ranks and in countries with cash incentives (Russia, Kazakhstan, Ukraine and Czech Republic). Countries with the highest HDI ranks (with the exception of Japan) had the highest proportion of donors over the age of 50 (Australia, Canada, France and the Netherlands), and apart from travel compensation in the Netherlands, provide no monetary incentives for whole blood donation. Japan has a large proportion of donors in the 30- to 50-year-old age group.

### Question 6

Are there private plasma collectors/manufacturers in your jurisdiction? If known, what is their model of compensation?



**Fig. 1** Age distribution of the population of donors in each participating country. Note: Due to limited data, Saudi Arabia, Sri Lanka, Uganda and Malaysia were not included in this figure.

**Table 5** Private plasma collectors/manufacturers in participating countries with compensation model

Country	Model of compensation
Australia	Compensated in accordance with a supply contract between the plasma manufacturer and the National Blood Authority
Canada	Prepaid credit cards
Czech Republic	Cash

Three of the participating countries report the presence of private plasma collectors/manufacturers and each hold relatively high HDI scores (Australia at 3, Canada at 12 and Czech Republic at 27). Cash or prepaid credit cards are listed as the two types of compensation provided (Table 5). The remainder of the countries report no private plasma collectors/manufacturers.

## Summary

In conclusion, countries with higher HDI ranks collect in general more whole blood per population, offer predominantly non-monetary donor incentives and are supported by an older donor population when compared to countries with lower HDI ranks. Turkey is an exception with an HDI rank of 64, one of the highest percentage eligible donor rates per population (3.99%) and number of whole blood units per population, no monetary incentives (medals and plaques are given to recognize milestone donations) and a comparatively young donor base. Czech Republic collects the most whole blood units per population (38.6 units/1000 population) and provides a variety of monetary donor incentives including cash, while Japan has the highest percentage of eligible donor rates per population (5.86%), a similar number of whole blood units per population (38.1 units/1000 population), and provides no donor incentives beyond post-donation refreshment. Use of cash incentive may be a means of recruiting a younger donor base in countries with lower HDI ranks; however, further studies are needed to draw more convincing conclusions.

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