Issued by JPAC: 22 June 2021	**Implementation:** To be determined by each Service

Change Notification UK National Blood Services No. 15 - 2021

These changes apply to the Whole Blood and Components Donor Selection Guidelines

The Department of Health and Social Care has asked the UK Blood Services to start collecting plasma for the manufacture of medicines. The Standing Advisory Committee on the Care and Selection of Donors, has made the following changes to the WBDSG to provide updated guidance on the collection of Plasma by apheresis.

15.1. Donor Weight

Please amend the following sections in this entry:

Definitions: EBV – Estimated Blood Volume. This is calculated using the Nadler formula (Ref: Chapter 3.7 Guidelines for the Blood Transfusion Services in the UK).

ECV – Extra Corporeal Volume. This is the total volume outside the donor's circulation at any time during a donation procedure. It includes all blood, plasma and components in the collection packs, the machine harness and testing samples.

Discretionary: a) If male and over 50kg of weight (7 stone 12 pounds), accept.
b) If female, 20 years of age or older and over 50kg of weight (7 stone 12 pounds), accept.
c) If female, less than 20 years of age with an EBV ~~estimated blood volume~~ of 3500ml or greater (as per ~~chart~~ ~~a~~Appendix 1), accept.
d) Treatment with anti-obesity drugs, accept.

Component Donation: During any planned component donation procedure, the donor's ECV must not exceed 16% of their EBV at any point in the procedure.

Careful consideration should be taken when calculating the EBV for transgender donors to ensure the most appropriate chart is selected.

See if relevant: Appendix 1 - Estimated Blood Volume for Female donors (after Nadler) by height and weight
Appendix 3 – Maximum permitted ECV for component donation
Sleep Apnoea

\Continued

Joint UKBTS Professional Advisory Committee (JPAC)
JPAC Office
Email: caroline.smith@nhsbt.nhs.uk **Mobile:** +44 (0) 771 144 7302

Additional Information

~~No donor should lose more than 15% of their estimated blood volume (EBV) during any donation procedure. During apheresis procedures the extra corporal volume should not exceed 15% EBV (excluding anticoagulant).~~

~~This is~~ Limits on donation volume are in place to protect the donor from adverse effects such as fainting. ~~and becoming anaemic. The ECV is the total volume of blood and plasma removed from the donor at any time. It includes all blood and plasma in collection packs and contained within the machine harness. This is to protect the donor from adverse effects such as fainting and becoming anaemic.~~

There is a minimum legal donor weight of 50kg at which a donation can be accepted. In young women there is a significant risk of fainting if their donation exceeds 15% of their EBV thus a minimum EBV of 3500ml is needed.

For individuals with a body mass index greater than 40, there is a risk that the formula used to calculate blood volume may result in an overestimation of EBV.

The 50kg lower weight limit is not appropriate for double red cell donations because of the increased volume~~,~~ and iron that is being taken from the donor.

Reason for change:

~~The addition of restrictions to reduce the faint rate in younger female donors in line with recent research and Council of Europe guidance.~~

Increase in the permitted ECV to 16% for component donors. Additional information on donors with a BMI greater than 40. A new table of maximum permitted ECV has been added as an appendix.

15.2. Frequency of Donation

Please amend the following sections in this entry:

~~*Includes:*~~ ~~Apheresis, blood, component, lymphocyte, platelet, stem cell donation and mobilised granulocytes.~~

Discretionary:

1. **Whole Blood:**
   A minimum interval of 12 weeks between donations should normally be observed. Donors who regularly attend at intervals of less than 16 weeks should be informed that they are at increased risk of iron deficiency. They should be advised to reduce their frequency of donation to an average of 16 weeks or more.

   Donors with genetic haemochromatosis may donate at intervals of less than 12 weeks.

   ~~Whole blood donors changing to platelet donation should wait a minimum of four weeks~~

\Continued

Joint UKBTS Professional Advisory Committee (JPAC)
JPAC Office
Email: caroline.smith@nhsbt.nhs.uk Mobile: +44 (0) 771 144 7302

2. **Components:**

a) Double Red Cells:

A minimum interval of 26 weeks between donations should normally be observed. Donors who attend at intervals of less than 32 weeks should be informed that they are at increased risk of iron deficiency. They should be advised to reduce their frequency of donation to an average of 32 weeks or more.

Donors with genetic haemochromatosis may donate at intervals of less than 26 weeks.

b) Apheresis Platelets and/or Plasma:

A minimum interval of two weeks between donations should normally be observed.~~, with a maximum of 24 donations per year~~. The combined total of platelet and plasma donations in any 12-month period should not be more than 26.

Donors of convalescent plasma can donate at weekly intervals, provided they meet all other requirements for plasma donation. They should not donate more than 26 donations in any 12-month period.

Donors who attend at intervals of less than four weeks may be at increased risk of iron deficiency.

~~Donors who attend at intervals of less than four weeks should be informed that they are at increased risk of iron deficiency. They should be advised to reduce their frequency of donation to an average of four weeks or more.~~

~~Apheresis Platelet donors returning to whole blood donation from platelet donation should wait a minimum of four weeks.~~

~~c) Apheresis Leucocytes including Mobilised Granulocytes:~~

~~These are usually directed donations.~~

~~There should be a minimum of 48 hours between procedures and a donor should not undergo more than two procedures within a seven day period.~~

~~An apheresis granulocyte donor returning to whole blood donation should wait a minimum of eight weeks.~~

~~d)~~**c) Stem Cell Donors:**

A donor should not give any routine donations for 12 months following bone marrow harvest, for six months following peripheral blood stem cell harvest and for three months following lymphocyte donation.

d) Donors who change donation type

Care must be taken to ensure that limits on the frequency of donation are maintained for donors who move between donation types. The following deferral periods should be applied:

- Donors moving from whole blood to component donation (except double red cells): 4 weeks
- Donors moving from platelet or plasma component donation to whole blood: 4 weeks since last component donation (and at least 12 weeks since the most recent whole blood donation)
- Donors moving from whole blood to double red cell donation: 12 weeks
- Donors moving from double red cell donation to other component donation: 8 weeks.

\Continued

~~Information~~ ~~This guidance is consistent with the Council of Europe publication 'Guide to the preparation, use and quality assurance of blood components - 14th edition'.~~

Reason for change: ~~A minimum period of time has been added for donors returning to whole blood donation following Apheresis Granulocyte donation~~
The permissible donation frequency for platelet and plasma donors, including convalescent plasma, has been increased. Further guidance on donation intervals for donors changing donation type has been added. Guidance regarding apheresis granulocyte collection has been removed.

15.3. Haemoglobin estimation

Please amend the following sections in this entry:

Discretionary: a) Potential donors whose haemoglobin concentration is estimated to be below the acceptable level may be asked to give a further sample of blood for testing by alternative means. If the haemoglobin concentration is not less than the levels shown above, accept.

b) If the haemoglobin concentration for males is greater than 180 g/l and for females is greater than 165 g/l ~~and Polycythaemia Rubra Vera has been excluded accept~~ refer to the Polycythaemia and Raised Haemoglobin entry.

See if relevant: Polycythaemia and Raised Haemoglobin

Reason for change: ~~A discretion to accept a non clonal disorder has been added.~~
The guidance for donors with a high haemoglobin has been moved to the revised Polycythaemia and Raised Haemoglobin entry.

15.4. Polycythaemia and Raised Haemoglobin

Please amend the following sections in this entry:

Discretionary: If ~~following~~ specialist investigation has excluded ~~a polycythaemia is not diagnosed as~~ Polycythaemia Rubra Vera, or another myeloproliferative neoplasm, and no treatment or further investigation is planned, ~~accept~~. the donor can be accepted for whole blood donation or for double red cell donation. Donors with a haemoglobin above the normal range should not usually be accepted for plasma or platelet donation.

Reason for change: ~~A discretion to accept a non clonal disorder has been added.~~
Clarification of the suitable donation types for donors with a haemoglobin above the normal range has been added.

\Continued

A-Z index changes

1. Retitle the 'Polycythaemia' entry in the index as 'Polycythaemia and High Haemoglobin'.

2. Add the following entries to the A-Z entry as links to this entry:
   Haemoglobin, high
   High haemoglobin

15.5 Appendices to the Whole Blood and Components Donor Selection Guidelines

Please add a new Appendix:

Appendix 3 Maximum permitted Extra Corporeal Volume for component donors

Female donors

	Weight (kg)											
Height (cm)	50	55	60	65	70	75	80	85	90	95	100	Height
150	486	513	539	566	592	619	645	672	698	724	751	4'11"
153	498	524	551	577	604	630	657	683	710	736	763	5'
155	506	533	559	586	612	638	665	691	718	744	771	5'1"
158	519	545	572	598	625	651	677	704	730	757	783	5'2"
160	527	554	580	607	633	660	686	713	739	766	792	5'3"
163	541	567	594	620	647	673	700	726	752	779	805	5'4"
165	550	576	603	629	656	682	709	735	762	788	815	5'5"
168	564	591	617	644	670	696	723	749	776	802	829	5'6"
170	574	600	627	653	680	706	733	759	786	812	839	5'7"
173	589	615	642	668	695	721	748	774	801	827	854	5'8"
175	599	626	652	679	705	732	758	785	811	837	864	5'9"
178	615	642	668	695	721	748	774	801	827	853	880	5'10"
180	626	653	679	706	732	759	785	812	838	864	891	5'11"
183	643	670	696	723	749	775	802	828	855	881	908	6'
	7.9st	8.7st	9.5st	10.2st	11st	11.8st	12.6st	13.4st	14.2st	15st	15.7st	

\Continued

Male donors

	Weight (kg)											
Height (cm)	50	55	60	65	70	75	80	85	90	95	100	Height
150	552	578	604	630	655	681	707	733	758	784	810	4'11"
153	564	590	616	642	667	693	719	745	770	796	822	5'
155	573	599	624	650	676	702	727	753	779	805	830	5'1"
158	586	611	637	663	689	714	740	766	792	817	843	5'2"
160	595	620	646	672	698	723	749	775	801	826	852	5'3"
163	608	634	660	686	711	737	763	789	814	840	866	5'4"
165	618	644	669	695	721	747	772	798	824	850	875	5'5"
168	633	658	684	710	736	761	787	813	839	864	890	5'6"
170	643	668	694	720	746	771	797	823	849	874	900	5'7"
173	658	684	710	735	761	787	813	838	864	890	916	5'8"
175	669	695	720	746	772	798	823	849	875	901	926	5'9"
178	685	711	737	763	788	814	840	866	891	917	943	5'10"
180	697	722	748	774	800	825	851	877	903	928	954	5'11"
183	714	740	765	791	817	843	868	894	920	946	971	6'
	7.9st	8.7st	9.5st	10.2st	11st	11.8st	12.6st	13.4st	14.2st	15st	15.7st	

Dr Sheila MacLennan
Professional Director - Joint UKBTS Professional Advisory Committee
☎ Direct Dial : (0113) 820 8638 ✉ sheila.maclennan@nhsbt.nhs.uk