Mothers, Babies and No Blood

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Seminar for Midwives
Oake Manor, Taunton
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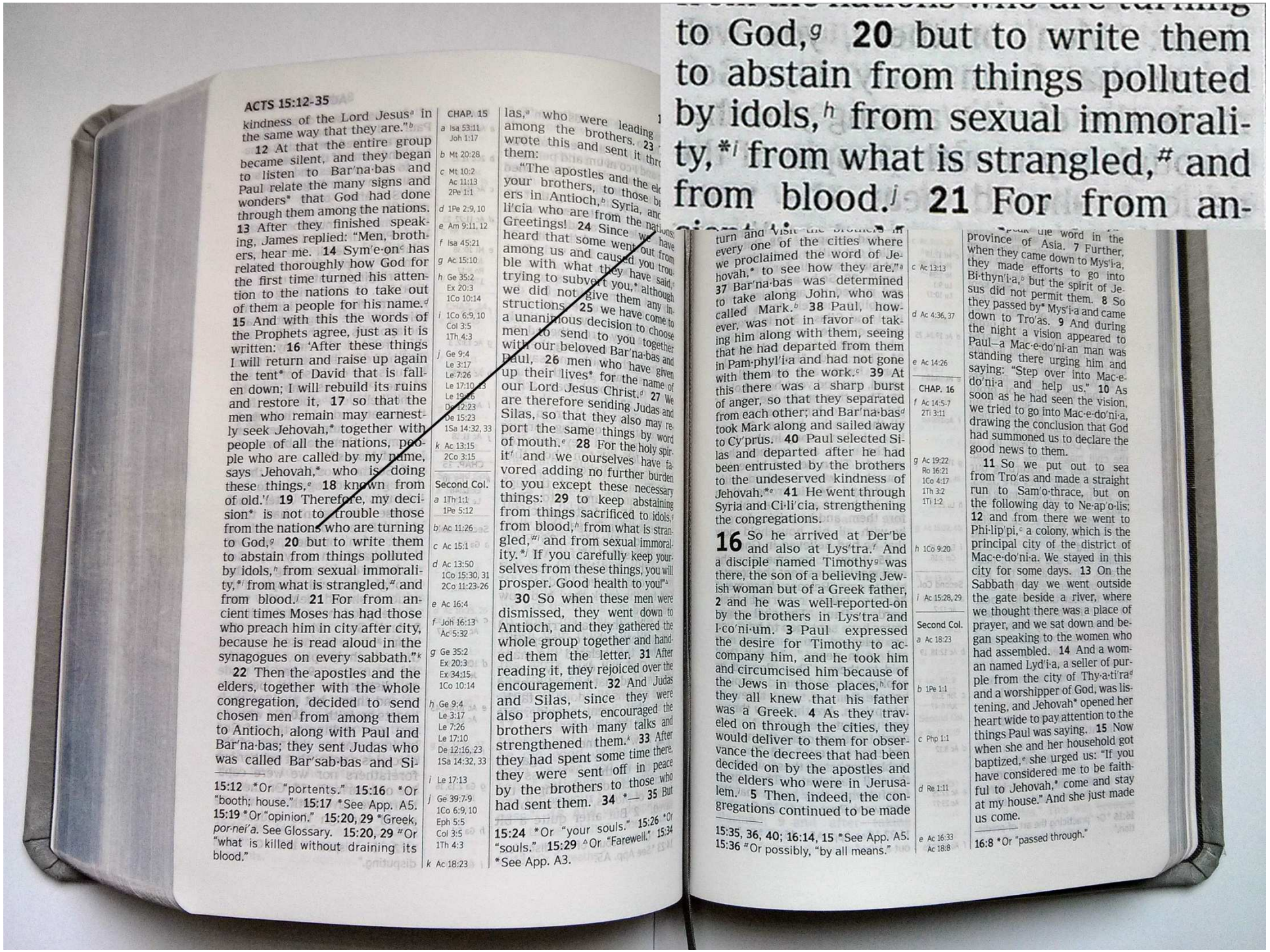
Bible-based reason for refusing blood transfusions

1512 BCE, Moses, at Leviticus 7:26-27: "You must not eat any blood in any places where you dwell, whether that of fowl or that of beast. Any soul who eats any blood, that soul must be cut off from his people."



ACTS 15:12-35

kindness of the Lord Jesus[a] in the same way that they are."[b]

12 At that the entire group became silent, and they began to listen to Bar'na·bas and Paul relate the many signs and wonders* that God had done through them among the nations. 13 After they finished speaking, James replied: "Men, brothers, hear me. 14 Sym'e·on[c] has related thoroughly how God for the first time turned his attention to the nations to take out of them a people for his name.[d] 15 And with this the words of the Prophets agree, just as it is written: 16 'After these things I will return and raise up again the tent* of David that is fallen down; I will rebuild its ruins and restore it, 17 so that the men who remain may earnestly seek Jehovah,* together with people of all the nations, people who are called by my name, says Jehovah,* who is doing these things,[e] 18 known from of old.'[f] 19 Therefore, my decision* is not to trouble those from the nations who are turning to God,[g] 20 but to write them to abstain from things polluted by idols,[h] from sexual immorality,*[i] from what is strangled,#[i] and from blood.[i] 21 For from ancient times Moses has had those who preach him in city after city, because he is read aloud in the synagogues on every sabbath."[k]

22 Then the apostles and the elders, together with the whole congregation, decided to send chosen men from among them to Antioch, along with Paul and Bar'na·bas; they sent Judas who was called Bar'sab·bas and Si-

15:12 *Or "portents." 15:16 *Or "booth; house." 15:17 *See App. A5. 15:19 *Or "opinion." 15:20, 29 *Greek, *por·nei'a*. See Glossary. 15:20, 29 #Or "what is killed without draining its blood."

CHAP. 15

a Isa 53:11 Joh 1:17
b Mt 20:28
c Mt 10:2 Ac 11:13 2Pe 1:1
d 1Pe 2:9, 10
e Am 9:11, 12
f Isa 45:21
g Ac 15:10
h Ge 35:2 Ex 20:3 1Co 10:14
i 1Co 6:9, 10 Col 3:5 1Th 4:3
j Ge 9:4 Le 3:17 Le 7:26 Le 17:10, 13 Le 19:26 De 12:23 De 15:23 1Sa 14:32, 33
k Ac 13:15 2Co 3:15

Second Col.

a 1Th 1:1 1Pe 5:12
b Ac 11:26
c Ac 15:1
d Ac 13:50 1Co 15:30, 31 2Co 11:23-26
e Ac 16:4
f Joh 16:13 Ac 5:32
g Ge 35:2 Ex 20:3 Ex 34:15 1Co 10:14
h Ge 9:4 Le 3:17 Le 7:26 Le 17:10 De 12:16, 23 1Sa 14:32, 33
i Le 17:13
j Ge 39:7-9 1Co 6:9, 10 Eph 5:5 Col 3:5 1Th 4:3
k Ac 18:23

las,[a] who were leading among the brothers. 23 wrote this and sent it thr them:

"The apostles and the el your brothers, to those b ers in Antioch,[b] Syria, an li'cia who are from the nation Greetings! 24 Since we have heard that some went out from among us and caused you trou- ble with what they have said,[c] trying to subvert you,* although we did not give them any in- structions, 25 we have come to a unanimous decision to choose men to send to you together with our beloved Bar'na·bas and Paul, 26 men who have given up their lives* for the name of our Lord Jesus Christ.[d] 27 We are therefore sending Judas and Silas, so that they also may re- port the same things by word of mouth.[e] 28 For the holy spir- it[f] and we ourselves have fa- vored adding no further burden to you except these necessary things: 29 to keep abstaining from things sacrificed to idols,[g] from blood,[h] from what is stran- gled,#[i] and from sexual immoral- ity.*[j] If you carefully keep your- selves from these things, you will prosper. Good health to you!"[a]

30 So when these men were dismissed, they went down to Antioch, and they gathered the whole group together and hand- ed them the letter. 31 After reading it, they rejoiced over the encouragement. 32 And Judas and Silas, since they were also prophets, encouraged the brothers with many talks and strengthened them.[k] 33 After they had spent some time there, they were sent off in peace by the brothers to those who had sent them. 34 *— 35 But

15:24 *Or "your souls." 15:26 *Or "souls." 15:29 ^Or "Farewell." 15:34 *See App. A3.

to God,[g] 20 but to write them to abstain from things polluted by idols,[h] from sexual immorali- ty,*[i] from what is strangled,#[i] and from blood.[j] 21 For from an-

turn and visit the brothers in every one of the cities where we proclaimed the word of Je- hovah,* to see how they are."[a] 37 Bar'na·bas was determined to take along John, who was called Mark.[b] 38 Paul, how- ever, was not in favor of tak- ing him along with them, seeing that he had departed from them in Pam·phyl'i·a and had not gone with them to the work.[c] 39 At this there was a sharp burst of anger, so that they separated from each other; and Bar'na·bas[d] took Mark along and sailed away to Cy'prus. 40 Paul selected Si- las and departed after he had been entrusted by the brothers to the undeserved kindness of Jehovah.*[e] 41 He went through Syria and Ci·li'cia, strengthening the congregations.

16 So he arrived at Der'be and also at Lys'tra.[f] And a disciple named Timothy[g] was there, the son of a believing Jew- ish woman but of a Greek father, 2 and he was well-reported on by the brothers in Lys'tra and I·co'ni·um. 3 Paul expressed the desire for Timothy to ac- company him, and he took him and circumcised him because of the Jews in those places,[h] for they all knew that his father was a Greek. 4 As they trav- eled on through the cities, they would deliver to them for obser- vance the decrees that had been decided on by the apostles and the elders who were in Jerusa- lem.[i] 5 Then, indeed, the con- gregations continued to be made

15:35, 36, 40; 16:14, 15 *See App. A5. 15:36 #Or possibly, "by all means."

c Ac 13:13
d Ac 4:36, 37
e Ac 14:26

CHAP. 16

f Ac 14:5-7 2Ti 3:11
g Ac 19:22 Ro 16:21 1Co 4:17 1Th 3:2 1Ti 1:2
h 1Co 9:20
i Ac 15:28, 29

Second Col.

a Ac 18:23
b 1Pe 1:1
c Php 1:1
d Re 1:11
e Ac 16:33 Ac 18:8

province of Asia. 7 Further, when they came down to Mys'i·a, they made efforts to go into Bi·thyn'i·a,[b] but the spirit of Je- sus did not permit them. 8 So they passed by* Mys'i·a and came down to Tro'as. 9 And during the night a vision appeared to Paul—a Mac·e·do'ni·an man was standing there urging him and saying: "Step over into Mac·e- do'ni·a and help us." 10 As soon as he had seen the vision, we tried to go into Mac·e·do'ni·a, drawing the conclusion that God had summoned us to declare the good news to them.

11 So we put out to sea from Tro'as and made a straight run to Sam'o·thrace, but on the following day to Ne·ap'o·lis; 12 and from there we went to Phi·lip'pi,[c] a colony, which is the principal city of the district of Mac·e·do'ni·a. We stayed in this city for some days. 13 On the Sabbath day we went outside the gate beside a river, where we thought there was a place of prayer, and we sat down and be- gan speaking to the women who had assembled. 14 And a wom- an named Lyd'i·a, a seller of pur- ple from the city of Thy·a·ti'ra[d] and a worshipper of God, was lis- tening, and Jehovah* opened her heart wide to pay attention to the things Paul was saying. 15 Now when she and her household got baptized,[e] she urged us: "If you have considered me to be faith- ful to Jehovah,* come and stay at my house." And she just made us come.

16:8 *Or "passed through."

Bible-based reason for refusing blood transfusions

Abstinence from blood placed alongside prohibitions against idolatry and sexual immorality

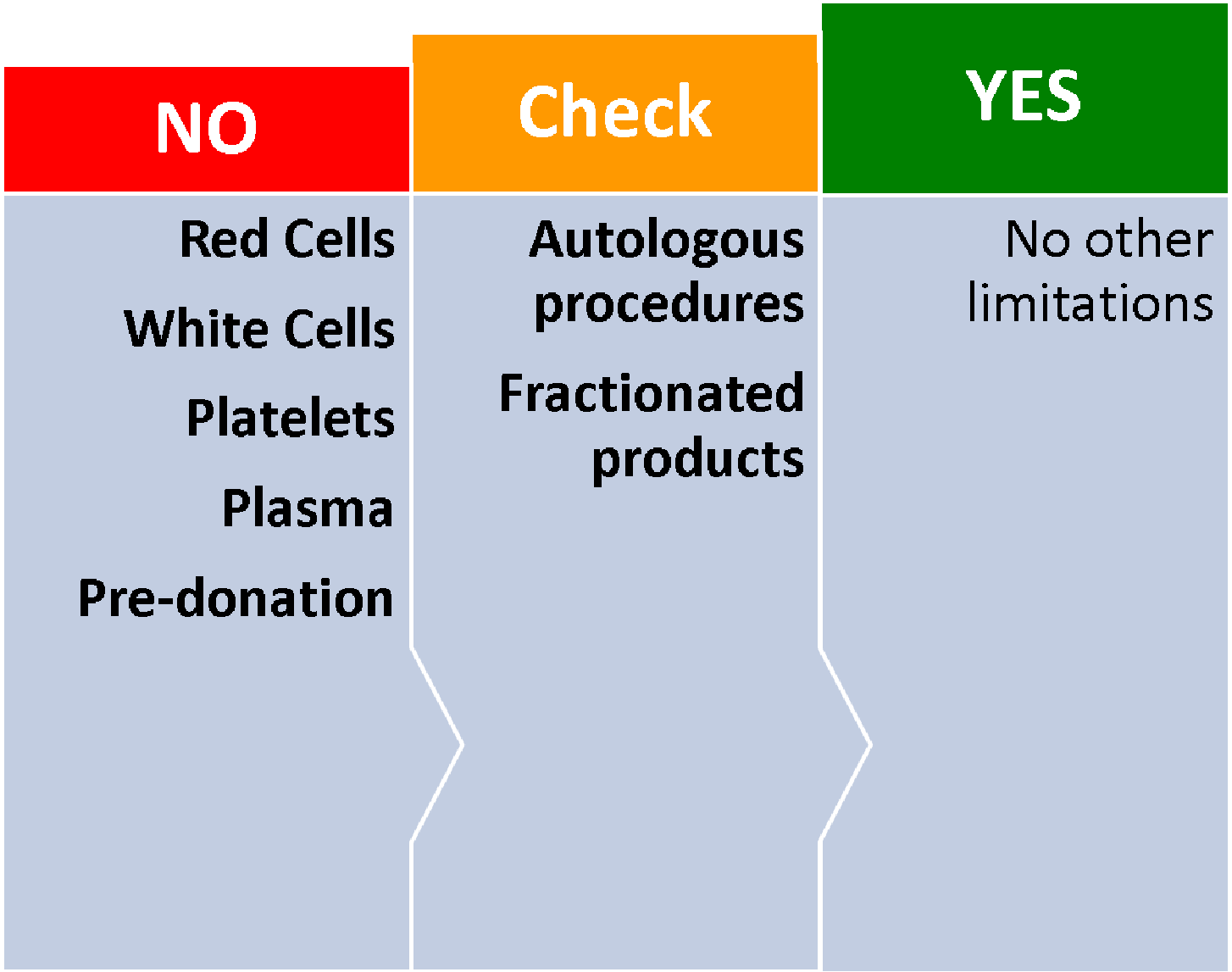
Ethical and moral standards have changed enormously since 49 CE when those words were written

At no time has God repealed or amended those injunctions, so Jehovah's Witnesses believe strongly that all four restrictions are still binding

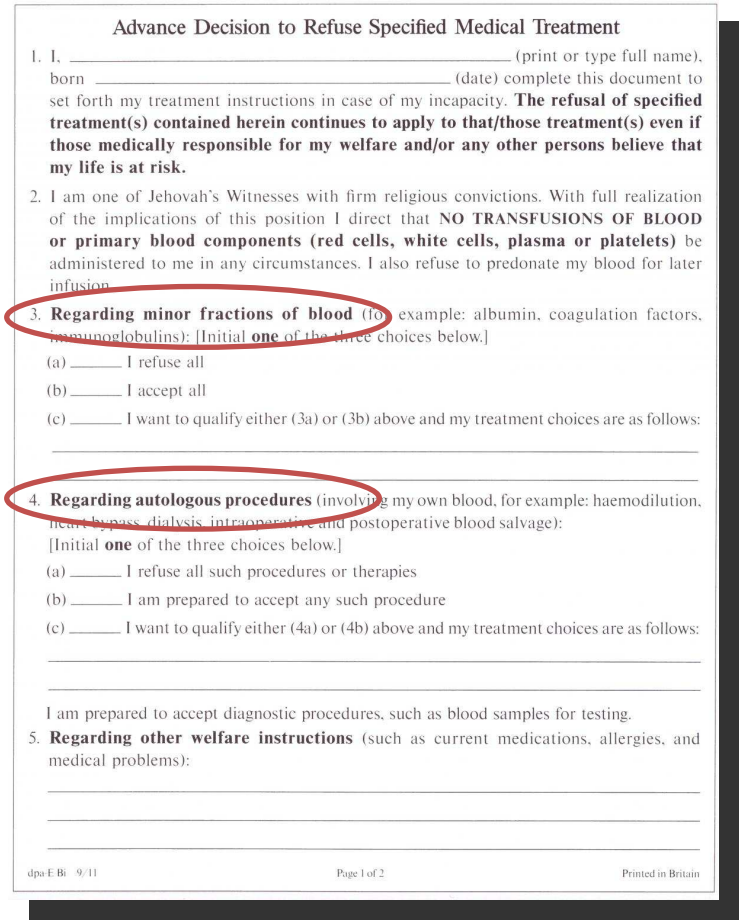
“The line in the sand”

“Jehovah’s Witnesses do not accept transfusions of whole blood or the four primary components of blood – namely, red blood cells, white blood cells, platelets and plasma. They also do not donate or store their own blood for transfusion”

Our Kingdom Ministry, November 2006, page 3


NO
Check
YES
Red Cells
White Cells
Platelets
Plasma
Pre-donation
Autologous procedures
Fractionated products
No other limitations

Jehovah's Witnesses and medical treatment



Advance Decision to Refuse Specified Medical Treatment

1. I, _____ (print or type full name), born _____ (date) complete this document to set forth my treatment instructions in case of my incapacity. **The refusal of specified treatment(s) contained herein continues to apply to that/those treatment(s) even if those medically responsible for my welfare and/or any other persons believe that my life is at risk.**
2. I am one of Jehovah's Witnesses with firm religious convictions. With full realization of the implications of this position I direct that **NO TRANSFUSIONS OF BLOOD or primary blood components (red cells, white cells, plasma or platelets)** be administered to me in any circumstances. I also refuse to predonate my blood for later infusion.
3. **Regarding minor fractions of blood** (for example: albumin, coagulation factors, immunoglobulins): [Initial **one** of the three choices below.]
   (a) _____ I refuse all
   (b) _____ I accept all
   (c) _____ I want to qualify either (3a) or (3b) above and my treatment choices are as follows:
4. **Regarding autologous procedures** (involving my own blood, for example: haemodilution, heart-lung bypass, dialysis, intraoperative and postoperative blood salvage): [Initial **one** of the three choices below.]
   (a) _____ I refuse all such procedures or therapies
   (b) _____ I am prepared to accept any such procedure
   (c) _____ I want to qualify either (4a) or (4b) above and my treatment choices are as follows:

   I am prepared to accept diagnostic procedures, such as blood samples for testing.
5. **Regarding other welfare instructions** (such as current medications, allergies, and medical problems):

dpa·E·Bi 9/11 Page 1 of 2 Printed in Britain

6. I consent to my relevant medical records and the details of my condition being shared with the Emergency Contact below and/or with member(s) of the Hospital Liaison Committee for Jehovah's Witnesses.
7. Signature _____ NHS No. _____ Date _____
   Address _____
8. **STATEMENT OF WITNESSES:** The person who signed this document did so in my presence. He or she appears to be of sound mind and free from duress, fraud, or undue influence. I am 18 years of age or older.

   Signature of witness _____ Name _____ Occupation _____ Address _____ Telephone _____ Mobile _____

   Signature of witness _____ Name _____ Occupation _____ Address _____ Telephone _____ Mobile _____
9. **EMERGENCY CONTACT:**
   Name _____ Address _____ Telephone _____ Mobile _____
10. **GENERAL PRACTITIONER CONTACT DETAILS:** A copy of this document is lodged with the Registered General Medical Practitioner whose details appear below.
    Name _____ Address _____ Telephone Number(s) _____

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Advance Decision to Refuse Specified Medical Treatment (signed document inside) NO BLOOD

Advance Decision to Refuse Specified Medical Treatment
(signed document inside)
NO BLOOD

6. I consent to my relevant medical records and the details of my condition being shared with the Emergency Contact below and/or with member(s) of the Hospital Liaison Committee for Jehovah's Witnesses.

7. _____ ___ ___ ___ _____ _____
Signature NHS No Date

_____
Address

8. **STATEMENT OF WITNESSES:** The person who signed this document did so in my presence. He or she appears to be of sound mind and free from duress, fraud, or undue influence. I am 18 years of age or older.

_____	_____
Signature of witness	Signature of witness
_____	_____
Name Occupation	Name Occupation
_____	_____
Address	Address
_____	_____
_____	_____
Telephone Mobile	Telephone Mobile

Summary: Jehovah's Witnesses and medical treatment

- Seek quality medical care
- Refuse allogeneic blood transfusion and component transfusion but *may* choose to accept blood products
- Likely to request use of transfusion-alternative strategies including autologous procedures
- Have made an informed choice

The *Care Plan*

CARE PLAN FOR WOMEN IN LABOUR REFUSING A BLOOD TRANSFUSION

(As referred to in the *RCOG News* of the Royal College of Obstetricians & Gynaecologists)

This document is an aid for medical staff and midwives managing a Jehovah's Witness (JW) or other patient who declines blood. Autologous procedures such as **blood salvage** and the use of **plasma-derived products** such as clotting agents are matters of **personal choice** for each Witness. Most will carry an advance decision document expressing their wishes. Please check with the patient.

Risk management

- All Jehovah's Witnesses and others declining a blood transfusion should be seen in a consultant clinic.
- Clinicians should **plan in advance for blood loss.** If the Hb is ≤ 105gm/L use **ferrous sulphate 200mg tds and folic acid**–with acidic fruit juice or 100mg ascorbic acid to aid absorption. If unresponsive to oral iron, use **IV iron** which replenishes iron stores faster and more effectively than oral iron (IV iron is contraindicated in the first trimester; see overleaf for current iron preparations)[1,2]. To further enhance response to a critically low Hb, the addition of **recombinant human erythropoietin** (**EPO)** has been reported safe in pregnancy[3,4].
- High-risk patients should be booked into a unit with **facilities such as interventional radiology, blood salvage, and surgical expertise.** All elective surgery must be planned as far ahead as possible.
- For **high-risk caesarean section**, e.g. abnormal placentation, consider with the interventional radiologist elective preoperative insertion of balloon catheters for intraoperative **uterine artery embolisation** as needed, and arrange **blood salvage**.
- At the time of labour ensure the **consultant obstetrician and anaesthetist are aware a Jehovah's Witness has been admitted.**
- The **third stage of labour should be actively managed with oxytocics** as well as **prophylactic syntocinon** infusion.
- **Delay umbilical cord clamping** for at least 1 minute for healthy term infants and up to 3 minutes for healthy pre-term infants to allow time for a transfusion of placental blood to maximise their Hb level[5].
- Check patient's **vital signs and evidence of uterine contraction** every 15 minutes for 1 to 2 hours after delivery.
- Contact the **Hospital Liaison Committee for Jehovah's Witnesses in an emergency** (contact details over page).

Management of active haemorrhage

First steps: AVOID DELAY. Involve obstetric, anaesthetic, and haematology consultants. Establish IV infusion, along with **uterine massage** (every 10 minutes for 1 hour can reduce blood loss[6]). **Give oxytocic drugs first, then exclude retained products of conception or trauma** (this could save time). Proceed with **bimanual uterine compression**. Give oxygen. Catheterise and monitor urine output. Consider CVP line. **Slow, but persistent blood loss requires action**. Anticipate coagulation problems. Keep patient fully informed. Proceed with following strategies if bleeding continues:

Oxytocic agents: **Ergometrine** with **oxytocin (Syntometrine)** marginally more effective than oxytocin alone. If patient is hypertensive, give 5 IU **oxytocin** by slow IV injection then reassess, if bleeding not settled or uterus not contracted after a few minutes, give another 5 IU[7,8]. **Carboprost (Hemabate)** 250µg/ml IM, can be repeated after 15 minutes. Direct intra-myometrial injection is faster (less hazardous at open operation).

Misoprostol (Cytotec): Useful option in atonic PPH where first-line treatment has failed. Can be given either by **sub-lingual** (600-800µg) or **rectal** route **(**800-1000µg)[9,10]. **Intrauterine route (**800µg) also reported to be effective[11]. Control of haemorrhage reported for rectal and intrauterine routes when unresponsive to oxytocin, ergometrine, and carboprost[10,11].

Intrauterine balloon tamponade: Use 500 ml **Bakri tamponade balloon** (Cook Medical). Drainage of blood and cessation of bleeding can be observed via the catheter drainage shaft. Continue oxytocin. Expulsion of balloon can be prevented by vaginal packing. To minimise bleeding-risk during removal, use graduated deflation or slowly deflate to half volume and observe; if no bleeding, continue deflation; if bleeding starts, reinflate[12]. Alternatively, in emergency, stomach balloon of **Sengstaken-Blakemore oesophageal catheter** can be used, average indwell time of balloon 24 hours[13]. **Bakri balloon used to control PPH due to vaginal lacerations** when suturing or vaginal packing fails[14].

Haemostatic agents:

Tranexamic acid: Antifibrinolytic agent well-established for controlling haemorrhage (1gm IV x tds slowly)[15]. Also consider IV **vitamin K.**

Fibrinogen concentrate (RiaSTAP), plasma-derived **alternative to cryoprecipitate**: Fibrinogen enhances clot strength and is used to normalise coagulation in PPH[16,17]. A reduced fibrinogen level is a critical marker for the severity of PPH, with greatest risk if the level falls < 2g/l[18,19]. For ongoing bleeding consider 4gm (70 mg/kg) fibrinogen concentrate.

Prothrombin complex concentrates (PCCs) (**Beriplex** & **Octaplex**): Widely prescribed in preference to FFP in Europe. Use 15-20 U/kg.

PCCs combined with fibrinogen concentrate: Used to effectively replace FFP as first-line therapy in 80 cases of trauma coagulopathy[20]. The *refusal of FFP by JWs may be resolved to a large extent by the use of these plasma-derived products which are a matter of patient choice.*

Recombinant factor VIIa (NovoSeven) [Note: may contain traces of animal serum proteins]: Consider off-licence use under consultant guidance for life-threatening PPH unresponsive to standard therapies. 90 µg/kg provides site-specific thrombin-generation, repeat if unresponsive. Successfully used to control bleeding in 88% of 118 massive PPH cases and in 17 anecdotal PPH cases complicated by DIC, also to prevent hysterectomy in 20 of 22 patients when all other methods failed[21,22,23]. To avoid possible failure of rFVIIa **ensure fibrinogen level is adequate** and use antifibrinolytics (tranexamic acid) to stabilise the clot beforehand, also correct acidosis (pH<7.2) and hypothermia which decrease the efficacy of rFVIIa[17].

Tissue sealants (plasma-derived): Can be a useful adjunct to control surface bleeding in life-threatening situations. **FloSeal**: Used (off-license) to control intractable massive bleeding in surgical bed following obstetric hysterectomy[24]; **Tisseel**: Used to arrest uncontrollable bleeding of complicated vulval and vaginal lacerations in 2 cases when suture haemostasis and other methods failed due to friable/oedematous tissue[25,26].

Non-inflatable anti-shock garment: Recently-developed neoprene Velcro-fastened garment (zoexniasg.com) can be applied in 2 minutes and allows perineal access for obstetric procedures. Can reduce blood loss and reverse hypovolaemic shock within minutes by the transfer of blood from the lower body and abdomen to the vital organs. Enables patient to be stabilised e.g. in home birth while awaiting transfer or in hospital while awaiting more definitive treatment. Successful trials have been conducted with more than 400 women experiencing PPH in developing countries[27].

Uterine or internal iliac artery embolisation or ligation: Emergency interventional radiology can be performed in theatre using angioplasty balloon catheters for temporary occlusion, with transfer for later definitive embolisation[28].

B-Lynch uterine compression suture: The B-Lynch brace suture can also be successfully **combined with intrauterine balloon catheter** if bleeding persists[29,30]. **Prophylactic insertion of this suture** has been used in high-risk caesarean section[4]. For some the **Hayman suture technique** may be a simpler procedure and quicker to apply as the lower uterine segment is not opened[31].

Intraoperative blood salvage: Endorsed for use during caesarean section by NICE (2005) and RCOG guidelines (2008). Should be set up whenever possible (check if acceptable to the patient). Either single- or double-suction methods can be used for collection. However, to maximise blood recovery, there is good evidence that single-suction is a safe procedure[32,33]. Swab-washing also increases RBC recovery. A 'collect-only' setup of the anticoagulation/suction tubing will enable blood salvage to begin within minutes[33]. Conventionally a leukocyte filter has been used when reinfusing, though in an emergency situation the filter may be removed completely to maximise the flow rate, as prior to availability of filters no adverse events were reported. These are clinical decisions based on the balance of benefit/risk.

Hysterectomy and care in theatre: Subtotal hysterectomy can be just as effective, also quicker and safer. Use Flowtron Excel to decrease risk of DVTs. Avoid hypothermia (impairs coagulation), use fluid warmer, Bair Hugger, hats etc. Avoid unnecessary over-dilution.

Management of postpartum anaemia—see over page

Management of postpartum anaemia

Consider IV iron with vitamin B_{12} & folic acid for severe anaemia, as oral iron can be slow and unreliable due to limited absorption and adverse gastrointestinal effects. Three postpartum anaemia studies have shown that IV iron sucrose (2 x 200mg, 48 hours apart) can raise the Hb rapidly and effectively[34,35,36]. Mean Hb increments from baseline in the 3 studies after 1 week were 25, 19 and 18 gm/L respectively and after 2 weeks 38, 31 and 28 gm/L. These Hb increases in 1 week on IV iron are considerably faster than oral iron and comparable to a 2U blood transfusion[35]. IV iron preparations now have a very low level of life-threatening adverse drug events. Four preparations are currently available in the UK: iron sucrose (Venofer), low-molecular-weight iron (III)-hydroxide dextran (CosmoFer), plus two more recent additions of ferric carboxymaltose (Ferinject) and iron (III)-isomaltoside (MonoFer), neither of which require a test dose and both can be given as total dose infusion up to 1000 mg[1].

Erythropoiesis-stimulating agents (ESAs): Administer **together with IV iron** in life-threatening anaemia to further accelerate erythropoiesis or where the patient is unresponsive to IV iron[37]. An EPO dosage of 300 IU/kg (20,000 IU) for 4 consecutive days together with 200mg IV iron, also for 4 days, has proved efficacious for postpartum anaemia[38]. JWs suffering blood loss with extremely low Hb (between 15 and 25 gm/L) have been successfully treated with an EPO dosage of 600 IU/kg together with IV iron on alternate days. As a general guide, the eMC (Medicines Compendium UK) recommends 300 IU/kg daily for 15 days to raise the preoperative Hb before orthopaedic surgery or 600 IU/kg twice a week to raise the Hb for a predonation programme.

Check oxygen saturations: Give **100% oxygen** if necessary (no contraindications for 48-72 hours of use). Use **microsampling techniques** to conserve blood (e.g. HemoCue), as well as **paediatric sample tubes**. If bleeding continues consider reinfusing washed drain fluid.

Hyperbaric oxygen therapy: Option in life-threatening obstetric anaemia[39]. For suitable and available centres contact 0151 648 8000 [24 hours].

How the *Care Plan* is used

- Regularly updated
- Two copies provided early in pregnancy
- HLC member telephones or visits to talk through all aspects
- Glossary provided to explain medical terms
- Included in hand held notes from outset
- Handed to obstetrician on arrival in labour

Hospital Liaison Committee (HLC)

We suggest:

- To plan to deliver in a consultant led centre with ample blood conservation facilities
- Optimization of antenatal haemoglobin (Oral & IV iron, EPO)
- To bring copies of an Advanced Decision form at the outset
- To complete bespoke Hospital Checklists