Professor William John Ribbans

Statement No.WITN7707001

Exhibits: 0

Dated: 30 June 2023

INFECTED BLOOD INQUIRY

WRITTEN STATEMENT OF PROFESSOR WILLIAM JOHN RIBBANS

I provide this statement in response to a request under Rule 9 of the Inquiry Rules 2006 dated 16 December 2021

I, Professor William John Ribbans, will say as follows: -

Section 1: Introduction

1. **Professor William John Ribbans**
   Qualifications: BSc (Hons), MB BS, MChOrth, PhD, FRCSEng, FRCSEd (Tr and Orth), FFSEM(UK).
   Date of Birth: GRO-C 1954.
   Address: GRO-C, Northamptonshire. GRO-C
   GRO-C

2. Medical Appointments:

PRE-REGISTRATION HOUSE OFFICER

YEAR	DURATION	HOSPITAL	SPECIALTY	CONSULTANTS
1980	6 months	Royal Free (Academic Dept. of Medicine)	Liver Unit	Professor Dame Sheila Sherlock D.B.E., D.Sc.,M.D.,F.R.C.P.
			Gastroenterology	Professor R.E.Pounder M.A.,M.D.,M.R.C.P.
			Dermatology	Dr. I. Sarkany F.R.C.P.
			General Medicine	Professor I James Ph.D.,M.B.,B.S.,F.R.C.P.
1981	6 months	Royal Free	Orthopaedics	Mr. R.W. Rushman M.A.,B.Ch.,F.R.C.S.
			Urology/ General Surgery	Mr. J. Hopewell MB.,BS.,F.R.C.S.
			Urology	Mr. R. Morgan F.R.C.S.

SENIOR HOUSE OFFICER

1981	6 months	Luton and Dunstable	Casualty and Orthopaedics	Mr. J.F. Hindle F.R.C.S. Mr. M.V.L. Foss F.R.C.S. Mr. P.R.N. Kerr F.R.C.S.
1982	6 months	Northwick Park, Harrow	Casualty	Mr. T. Welch F.R.C.S.
1983	6 months		Orthopaedics	Mr. C.J. McCullough M.A.,F.R.C.S.
1983	6 months		General Surgery with Gastroenterology	Mr. A.G. Cox F.R.C.S.
1984	6 months		Urology, Endocrine and Breast surgery	Sir Arnold Elton K.B.E.,F.R.C.S. Mr. D. Mee F.R.C.S.

NON-ORTHOPAEDIC REGISTRAR POSITIONS

1984	13 months	St.Mary's, Paddington	Radiology	Director of Unit: Dr. J.O.C.M. Craig F.R.C.S.I.,F.R.C.S.,F.R.C.R.

ORTHOPAEDIC REGISTRAR

YEAR	DURATION	HOSPITAL	PARTICULAR INTERESTS	CONSULTANTS
1985	12 months	Wexham Park, Slough (+ Ascot, Windsor and Maidenhead)	Paediatrics	Mr. M. Swann F.R.C.S.
			Knees	Mr. R.A. Allum M.A.,F.R.C.S.

			Knees	Mr. G. Deane M.Sc.,F.R.C.S.
			Spine	Mr. N.C. Roles F.R.C.S.
1986	9 months	Northwick Park and Clinical Research Centre, Harrow	Foot and Ankle	Professor L.Klenerman Ch.M., F.R.C.S.
			Hand, Joint Replacement.	Mr. C.J. McCullough M.A.,F.R.C.S.
			Spine, Knee, Sports.	Mr. I.S. Fyfe F.R.C.S.,F.R.C.S.(Ed) Orth.

ORTHOPAEDIC CLINICAL FELLOW, HARVARD UNIVERSITY

1987	12 months	Massachusetts General Hospital	Tumour	Professor H. Mankin
				Dr. D. Springfield
				Dr. M. Gebhardt
			Allograft	Dr. W.W. Tomford
			Spine	Dr. J. Barr
				Dr. F. Mansfield
				Dr. D. Pierce
			Joint	Professor W. Harris
			Replacement	Dr. H. Chandler
				Dr. M. Jasti
			Sports	Dr. B. Zarins
				Dr. A. Boland
				Dr. D. Patel
				Dr. C. Rowe
			Upper Limb	Professor R. Leffert
			Trauma	Dr. J. Jupiter
				Dr. J. Siliski
			Hand	Professor R. Gelberman
			Paediatric	Professor M.Ehrlich
				Dr. D. Zaleske

ORTHOPAEDIC SENIOR REGISTRAR

1988	12 months	Central Middlesex Hospital, Park Royal	Joint Replacement, Dance injuries	Mr. A.J.G. Howse F.R.C.S.
			Spine, Sickle Cell	Mr. W.S. Taor F.R.C.S.
1989	12 months	Middlesex and University College Hospitals	Bone Tumours	Sir Rodney Sweetnam K.C.V.O.,C.B.E.,F.R.C.S.
			Scoliosis, Spine – general	Mr. M.A. Edgar M.Chir,F.R.C.S.

ORTHOPAEDIC CLINICAL AND RESEARCH FELLOW

1990	6 months	Childrens' Hospital, Northern General and Royal Hallamshire, Sheffield	Trauma, Reconstruction, & Lengthening. Paediatrics.	Prof. M. Saleh M.Sc., F.R.C.S.

ORTHOPAEDIC CONSULTANT SURGEON

January 1991- December 1995	5 years	Royal Free Hospital, Hampstead, London. N.W.3.	General Orthopaedics and Trauma Surgery. Special interests included: Haemophilia and H.I.V. Surgery, and Limb Reconstruction Surgery
January 1996- March 2012	16 years	Northampton General Hospital	General Orthopaedics and Trauma Surgery. Special interests included: Foot and Ankle Surgery Knee Surgery Sports Surgery
January 1991 – present	32 years +	Northampton and London	Private Orthopaedic and Sports Medicine practice

UNIVERSITY APPOINTMENTS

April 2005 – June 2010	5 years	University of Northampton	Visiting Professor in Surgical Sciences
June 2010 – present	13 years	University of Northampton	Personal Chair in Sports Medicine

3. Membership, past or present, of any committees, associations, parties, societies or groups relevant to the Inquiry's Terms of Reference, including the dates of your membership and the nature of your involvement:

Secretary and Treasurer of the Musculo-Skeletal Committee of the World Haemophilia Federation (1996-2000)

- **From 1996-2000, I ran the secretariat for the Musculo-Skeletal group of 180 members worldwide, including surgeons, rheumatologists, rehabilitation physicians, and physiotherapists.**
- **I maintained a membership database, collected annual subscriptions, and held the bank accounts.**
- **I wrote regular newsletters and established a website and e-mail address.**
- **I helped organise the annual meetings, including publicity and decisions over the Scientific programme.**

I ran the annual Business meeting for members and maintained minutes. The work involved weekly correspondence with colleagues throughout the world.

4. Have provided evidence to, or have been involved in, any other inquiries, investigations, criminal or civil litigation in relation to vCJD, HIV, HBV and/or HCV in blood transfusions or blood products.

I have not had any involvement.

Section 2: Royal Free Hospital and Northampton General Hospital "The Hospitals"

5. Please describe:
   a. Your role and responsibilities and how these changed over time.
   b. Your work at the Hospitals insofar as it involved treating patients with blood transfusions.

I progressed my career from pre-registration house officer through to consultant surgeon between 1980 and 1990.

During that time, I assumed increasing responsibilities and independence in decision-making like all doctors in my position.

As an orthopaedic and trauma surgeon, I would liaise with colleagues, especially anaesthetic colleagues, as to whether patients required blood transfusions as a result of blood loss during surgery, anaemia pre-operatively, or secondary to blood loss during trauma.

I stopped treating haemophilic patients after leaving the Royal Free in January 1996. I stopped NHS trauma surgery in 2005. I left the NHS in 2012. I ceased to undertake surgery from May 2021. I remain working in my capacity as an orthopaedic surgeon/physician and professor of sports medicine until the present time.

6.

a. Describe the roles, functions, and responsibilities of the Surgical departments ("the Departments") within the Hospitals during the time you worked there. Please also explain how the Department worked with other departments within the Hospitals, such as critical care, emergency medicine and/or haematology in so far as it related to blood transfusions.

Each hospital has many different surgical and medical departments, I only have specific knowledge of Trauma and Orthopaedic departments.
The role of T&O is to:

- **assess patients with musculoskeletal disorders in out-patients and Casualty.**
- **organise investigations accordingly.**
- **formulate a management plan and advise patients accordingly.**
- **consent patients and undertake any surgery.**
- **support patients post-operatively in out-patients and on the wards.**

The T&O team liaise closely with Casualty staff when 'on call' for trauma dealing with musculoskeletal injury.
We liaise with ITU staff on the rare occasions that patients' injuries are so severe that they require an ITU bed.
We liaise, via laboratory requests, with Haematology for estimations of blood indices and blood transfusion requests.

7. Please describe the practical steps that were taken when you decided that a patient required a blood transfusion. If this process changed over time, please set out relevant time periods and describe: a. How blood was requested from the Hospital's blood bank; b. What the record keeping requirements were; c. The consent process, including the information, if any, the patient was given before the transfusion; d. What information,

if any, was given to the patient after the transfusion where consent could not be obtained beforehand; and e. How, if at all, the consent process was documented.

My experience only relates to 1980-2012. This was a period in which no electronic records or requests could be made. Everything was recorded manually in patients' notes. Requests were made on paper Pathology request forms.
I estimate that:

- **80% of my surgical patients did not require cross-matching and/or subsequent blood transfusion.**
- **15% would have their blood sample 'group and save' in case of later transfusion requirement.**
- **5% of my surgical patients required a blood transfusion.**

Decisions on blood transfusion requirements were based upon:

- **Anticipated type of surgical procedure, e.g., major joint replacement, major trauma.**
- **Patient's medical status, particularly co-morbidities, pre-operative haemoglobin, etc.**
- **Further refinement during surgery dependent on per-operative blood loss and patient's response to anaesthesia and surgery. This would always be discussed with the anaesthetist towards the end of surgery if necessary.**

Blood was requested from the blood bank via the use of paper Pathology forms. These would be sent to the laboratory accompanied by a sample of the patient's blood.
The fact that either a 'group and save' or blood for transfusion had been requested would be hand-written in the notes.

The patient would be verbally advised that blood was being sent for potential transfusion purposes. I am not aware that any specific written consents were taken in relation to the use of blood transfusion products. Only the overall procedure itself.

Post-surgery, the patient would have been verbally advised that they required a transfusion due to blood loss following surgery, etc.

Changes during my NHS career:

- **Over the course of my career, the development of dedicated pre-operative clinics started. At these pre-admission sessions, trained nurses, junior surgeons, and anaesthetists would see patients. This would allow a more detailed explanation of the 'operative experience' to take place. I am not aware of any written educational material on blood transfusions – benefits, process, likelihood, and risks – being made available for patients. However, they may have existed.**
- **With time, less and less patients were transfused peri- and post-operatively. This was led predominantly by anaesthetists and the realisation that most patients can tolerate lower Hb levels without untoward side-effects than believed in the past.**

8. Did you have, on behalf of the Department, a relationship with the Regional Blood Transfusion Centre? If so, please describe that relationship.

I did not have any relationship with Regional Blood Transfusion Centres in any of medical positions.

9. Did you have, on behalf of the Department, a relationship with the National Blood Transfusion Service ("NBTS")? If so, please describe that relationship.

I did not have any relationship with National Blood Transfusion Service in any of my medical positions.

10. How many patients per week would receive a transfusion under the care of the Department? If you are able to give exact rather than approximate figures, please do so.

This number would vary widely. It would foremost depend upon the number of T&O consultants within the department. In my experience, this can vary from 3 up to at least 20. Additionally, it depended upon the sub-specialities of each consultant, e.g., paediatric, spine joint replacement, tumour, etc. and how many consultants participated in the trauma on-call.

My own personal experience was approximately 3 elective and 1 trauma list per week. Each list lasts 4 hours. If each list contains an average of 3-4 patients. My

annual operating surgical workload would vary between 500-700 patients annually as a consultant.

It would be reasonable to estimate that 1-2 patients per week of mine required a blood transfusion. However, my speciality progressively developed to more knee and foot and ankle surgery. Blood transfusion requirements would be less for myself than, for instance, a revision hip surgeon or tumour surgeon.

Therefore, cumulatively, it would be reasonable to estimate that each unit required blood transfusions per week = 1-3 patients x number of consultants in the unit.

11. Were you aware of any patients who subsequently developed HIV, HCV, or HBV under the care of the Department? If so, how many patients were infected? If you are able to give exact rather than approximate figures, please do so.

As a junior doctor (1980-1990), I was not aware of any patients who developed HIV, HCV, or HBV within the departments where I was employed.

As a consultant from 1991, I was aware of patients under my care who had been previously infected – particularly during my time as consultant T&O surgeon at the Royal Free (1991-1996). I undertook a monthly clinic within the Royal Free Haemophilia department and, subsequently, undertook surgery on certain patients. The RFH Haemophilia department will have records of patients who had been infected. The totality of infection numbers within that department was not made available to me as a visiting surgeon from another department.

12. Was any research undertaken within the Department regarding patients who received blood transfusions before, during or after surgery? a. If so, please explain what the research entailed, what the aims of the research were, whether patients were informed of their involvement in the research and whether consent was obtained. b. What, if any, involvement did you have in this research? c. Please provide details of any publications relating to the research.

As a member of the orthopaedic department, I undertook research principally around the outcomes of surgery in haemophilia patients. This was during my time as a consultant from 1991-1995.

13. Please list all research studies that you were involved with in any other relevant positions of employment, insofar as relevant to the Inquiry's Terms of Reference, ensuring your answer addresses: a. What the research entailed, what the aims of the research were, whether patients were informed of their involvement in the research and whether consent was obtained; b. Your involvement in this research; and c. Details of any publications relating to the research.

All of the research, and publications listed below, were undertaken as a result of my work at the Royal Free during my 5-year period as a consultant – although some research was not published until after I left London.

None of the haemophilia work was prospective. It entailed audit of the outcomes principally of surgery and the natural history of damage to musculoskeletal systems secondary to haemophilia.

PhD THESIS

Aspects of Orthopaedic Surgical Research with emphasis on Surgery in Haemophilia and Immunocompromised patients.

Manuscript submitted in fulfilment of the requirements for application for the degree of PhD by Publication.

University of Glamorgan. Awarded May 2003.

GUEST EDITOR OF PUBLISHED SYMPOSIUM

W.J.Ribbans, C. Rodriguez-Merchan.

Treatment and Prevention of Chronic Haemophilic Synovitis

Clinical Orthopaedics and Related Research. Vol. 343. 1997. ISSN 0009-921X

BOOK CHAPTERS

A. Seuser, T. Wallny, G. Schumpe, HH Brackmann, WJ Ribbans.
Biomechanical Research in Haemophilia. Chapter 4 pp 27-36. "Musculoskeletal Aspects of Haemophilia". Eds C. Rodriguez-Merchan, NJ Goddard and CA Lee. Blackwells. Oxford. 2000. ISBN 0-632-05671-1

JL Hicks, WJ Ribbans.
Surgical Complications in the HIV-positive Haemophilia patient. Chapter 20 pp 128-135. "Musculoskeletal Aspects of Haemophilia". Eds C. Rodriguez-Merchan, NJ Goddard and CA Lee. Blackwells. Oxford. 2000. ISBN 0-632-05671-1

W.J.Ribbans, P. Giangrande

Infected Blood Inquiry. Professor William Ribbans statement. June 2023.

Haemophilia. Chapter in "Oxford Textbook of Orthopaedic Surgery".
Chapter 2.7.20 in "Oxford Textbook of Orthopaedic Surgery". Editors: C. Bulstrode, J. Buckwalter, A.Carr and L. Marsh. Oxford University Press.pp 1455-1470. 2002. ISBN 0-19-262681-7

ORIGINAL RESEARCH PUBLICATIONS

N.C.Birch, W.J.Ribbans, C.A.Lee, JCA Madgwick
H.I.V. and Haemophilia Surgery
In "International Symposium on Orthopaedic Problems in Haemophilia". eds. P.L.Melanotte, A.Africano. pp 83-90. Published by Lagev S.A. Castelfranco, Italy. 1993. No ISSN.

N.C.Birch,W.J.Ribbans, E.Goldman, C.A.Lee
Knee Replacement in Haemophilia
J.B.J.S. 1994;76(B):165 (letter). ISSN 0301-620X

W.J.Ribbans, M.Phillips, D.Stock, E.Stibe
Haemophilic Ankle Problems: Orthopaedic Solutions
Haemophilia. February 1995(1):91-96. ISSN 1351-8216

M.Phillips, W.J.Ribbans, N.J.Goddard
Ipsilateral total shoulder and elbow prosthetic replacement in a patient with severe haemophilia B.
Haemophilia 1995;1:270-273. ISSN 1351-8216

W.J.Ribbans, M.Phillips.
Haemophilic Ankle Arthropathy.
Clinical Orthopaedics and Related Research. 1996:328. 39-45. ISSN 0009-921X

Miller R., Beeton K.M., Goldman E., Ribbans W.J.
Counselling guidelines for managing musculoskeletal problems in haemophilia in the 1990s
Haemophilia. 1997:3;9-13. ISSN 1351-8216

M.Phillips,N.Birch, W.J.Ribbans
Protective Gloves for use in high-risk patients: how much do they affect the dexterity of the surgeon?
Annals of the Royal College of Surgeons 79:124-127. 1997. ISSN 0035-38843

W.J.Ribbans, K. Beeton, P. Giangrande.
Conservative Treatment of Hemarthrosis for Prevention of Hemophilic Synovitis
Clinical Orthopaedics and Related Research. 343:12-18. 1997. ISSN 0009-921X

M.Phillips, W.J.Ribbans, C. Sabin, C.A.Lee.

Orthopaedic Surgery in Hemophilic patients with Human Immunodeficiency Virus
Clinical Orthopaedics and Related Research. 343:81-87. 1997. ISSN 0009-921X

Seuser A, Wallny T, Klein H, Ribbans W, Schumpe G, Brackmann H.
Gait Analysis of the Hemophilic Ankle with Silicon Heel Cushion.
Clinical Orthopaedics and Related Research. 343:74-80. 1997. ISSN 0009-921X

JL Hicks, WJ Ribbans, et al.
Infection joint replacement in H.I.V. +ve patients with haemophilia
Journal of Bone and Joint Surgery (B): 83(7);1050-1054. 2001. ISSN 0301-620X

EDITORIALS AND INVITED PUBLICATIONS

W.J.Ribbans
Third Musculoskeletal Congress of the World Federation of Hemophilia, Herzilya, Israel, 17-20 June 1995: a review of the scientific programme.
Haemophilia 1996;2:54-55. ISSN 1351-8216

W.J.Ribbans
"Double Jeopardy": Hepatitis and H.I.V. An Orthopaedic Viewpoint
Orthopaedic Product News. July/Aug/Sept 1996. 30-32. ISSN 0954-4755

W.J.Ribbans
Barrier protection in the Orthopaedic Operating Room
New World Health. January 1997. 63-64. ISSN 1350-2220

C. Rodrigues-Merchan, W.J. Ribbans
Editorial Comment. Prevention and Treatment of Chronic Haemophilic Synovitis
Clinical Orthopaedics and Related Research. 343:2. 1997. ISSN 0009-921X

W.J.Ribbans, M. Sayed.
Prevention of Infection in Orthopaedics
Orthopaedic Product News. December 1997; January-February 1998. p31-32. ISSN 0954-4755

W.J.Ribbans, J. Rees
Management of equinus contracture of the ankle in haemophilia.
Haemophilia 5:(Suppl 1):46-52. 1999. ISSN 1351-8216

W.J.Ribbans
Orthopaedic Care in Haemophilia
Hospital Medicine. 64(2);68-69. 2003. ISSN 1462-3935

W.J.Ribbans
Infection prophylaxis in Orthopaedics

Infected Blood Inquiry. Professor William Ribbans statement. June 2023.

National Association of Primary Care Review. Spring 2004. 157-160.
ISSN 19 03605 44X

PUBLISHED ABSTRACTS

M.Phillips, W.J.Ribbans
The natural history of haemophilic ankle arthropathy.
J.B.J.S. 78(B):Suppl II and III;137. 1996. ISSN 0301-620X

Bajekal R, Phillips AM, Ribbans WJ.
Elbow Arthropathy in Haemophilia
Haemophilia 2(Suppl. 1);15. 1996. ISSN 1355-0691

Beeton K, Ribbans WJ, Lee CA.
Removal of Anterior Osteophytes in Haemophilic Arthropathy of the Ankle
Haemophilia 2(Suppl. 1);39. 1996. ISSN 1355-0691

Sabin C, Miller R, Beeton K, Harrington C, Pollard D, Ribbans WJ, Pasi J, Lee CA.
Compliance with Home Treatment and Prophylaxis for Haemophilia - can we identify non-compliant patients in advance?
Haemophilia 2(Suppl. 1);116. 1996. ISSN 1355-0691

Miller R, Sabin C, Beeton K, Harrington C, Pollard D, Ribbans WJ, Pasi J, Lee CA.
VIII and XI Prophylaxis: Survey of attitudes and use of blood products
Haemophilia 2(Suppl. 1);117. 1996. ISSN 1355-0691

Ribbans WJ.
Total Joint Replacement for Haemophilic Arthropathy
Haemophilia 2(Suppl. 1);4. 1996. ISSN 1355-0691

A.M. Phillips, N.C. Birch, W.J.Ribbans
Protective gloves for use in high risk patients: How much do they affect the dexterity of the surgeon?
J.B.J.S. 79(B):Suppl I;104. 1997. ISSN 0301-620X

R. Bajekal, A.M. Phillips, W.J.Ribbans
Elbow arthropathy in Haemophilia
J.B.J.S. 79(B):Suppl I;104. 1997. ISSN 0301-620X

A.M.Phillips, C. Sabin,W.J.Ribbans, C.A.Lee.
The effect of Orthopaedic Surgery on the Prognosis of Haemophilic Patients with and without HIV infection.
J.B.J.S. 79(B):Suppl I;105. 1997. ISSN 0301-620X

Ribbans WJ, Hicks J, Miller R, Giangrande P, Wiedel J, Thomason C III
Infection and Joint replacement in Haemophilia

Haemophilia 4(3):209. 1998. ISSN 1351-8216

Miller R, Beeton K, Madgwick C, Sabin C, Miners A, Goddard N, Ribbans W, Lee C.
Joint Replacements from 1983-1998 in patients with Haemophilia and HIV infection: Medical, Psychological and Social factors
Haemophilia 4(3):320. 1998. ISSN 1351-8216

Miller R, Beeton K, Ribbans W, Goddard N, Lee C.
Counselling for Joint replacement in patients with Haemophilia
Haemophilia 4(3):320. 1998. ISSN 1351-8216

Miller R, Beeton K, Madgwick C, Ribbans WJ, Lee CA, Goddard N.
Review of decision-making about total joint replacement from 1963-2000 for patients with haemophilia.
Haemophilia 6(4):376. 2000. ISSN 1351-8216

K. Beeton, R. Miller, N. Goddard, WJ Ribbans, C. Madgwick, A. Miners, C Lee.
A Review of total knee replacement.
Haemophilia 6(4): 380. 2000. ISSN 1351-8216

Section 3: Policies and practices regarding blood transfusions in trauma surgery

14. Was there a Hospital Transfusion Committee at any of the Hospitals at which you have worked? If so:

a. Please provide a brief overview of the Committee, including when the Committee was created, its roles and responsibilities at the Hospitals, and its relationship with the Hospital Surgical Department.

I am sure that each of the NHS hospitals where I was employed had Blood Transfusion Committees. However, I was never asked to become a member of them or party to any minutes of their meetings. The Haematology departments would have convened them.

I have no knowledge of their history, roles, and responsibilities. They did not appear to have any direct relationship with the Trauma and Orthopaedic departments where I was employed.

b. Please outline any significant policies or practices related to blood transfusion established by the Committee.

See my answer to 14a. Unfortunately, I have no knowledge of significant policies or practices relating to the Blood Transfusion committees.

15. Please outline the extent to which any of those Committees were involved in the following matters:
a. Raising awareness of national guidelines for promotion of good transfusion practices;

Unfortunately, I have no knowledge of this.

b. Development of local hospital guidelines;

I am sure that the Committees would have been involved but I have no direct knowledge.

c. Transfusion policy induction procedure for new staff;

As a new employee at various hospitals, I cannot remember having any induction relating to Blood Transfusions. From 1980 to my last new job in 1996, I never received any formal induction education on any aspect of our work. Doctors simply turned up for work on their first day. This was also the case in my work in America.

Nowadays, I am aware that all new doctors receive induction programmes on arrival at new hospitals.

d. Review of nursing procedures for administration of blood products;

I have no experience of nursing procedures.

e. Promotion of new information regarding transfusion matters;

I cannot remember ever being made aware of new information regarding blood transfusion issues.

f. Blood transfusion record keeping and documentation;

Blood transfusion details were hand-written into medical notes and drug charts. Laboratory forms for such would have been placed within the medical records.

g. Review and notification of post transfusion complications including adverse reactions and transfusion associated infections);

Rare blood transfusion complications were reported to Haematology. The suspected transfused blood unit details returned to the pathology department and the necessary tests undertaken. I do not recall a systematic process of feeding back results to T&O.

h. Policies and practice relating to consent for blood transfusion;

I do not recall specific consent policies or practices being readily available on T&O wards.

There was no specific consent for blood transfusion. It was taken as part of the overall consenting process for procedures. My memory of transfusions for non-procedural indications was that the consent was taken orally. The indications would be hand-written in the notes.

16. Please identify any significant policies created by a Hospital Transfusion Committee or similar group in which you were involved, insofar as relevant to the Inquiry's Terms of Reference. Please describe the reason for and impact of the policies, and the extent of your involvement.

See the answers to Q14 and Q15. Unfortunately, I have no knowledge of significant policies relating to the Blood Transfusion committees in relationship to the Inquiry.

17. In your role as a Fellow of both the Royal College of Surgeons of England and Edinburgh, have you played any roles in the evolution of blood transfusion policies and practices, particularly in relation to any trauma surgery policies? Policies and practices.

I have not undertaken any such role. In 1992, I was member of the British Orthopaedic Association committee on the Collection and Storage of Bone Allografts.

18. Please outline, during your career as a surgeon, the approach by the Royal Free and then at Northampton General Hospital in relation to blood transfusions.

Inevitably, this will have changed and evolved since 1980. In Trauma and Orthopaedics, there has been a declining request for blood transfusions – see answer to Q7 – over this time in my experience.

As a junior doctor in 1980, patients would routinely be cross matched for 2-3 units of whole blood prior to procedures such as a major joint replacement. By 2000, the patient was more likely to have blood 'group and saved' pre-operatively.

The indications for blood transfusions would include blood loss at surgery, the patient's co-morbidities, and their post-operative recovery process and physiological response to a diminished haemoglobin level. As stated previously, the decision to transfuse would always be a joint decision with the surgeon and anaesthetist.

19. Please outline at what level generally a patient's haemoglobin count would be considered low, and thus require a blood transfusion. Please also explain how the level at which transfusion was deemed necessary may have changed over time. You may find the discussions within NHBT0004029_005 of use.

Once again this has changed over time. Additionally, there was no specific algorithm. Each patient would be assessed separately taking into accounts several factors such as age and co-morbidities.

Towards the end of my surgical career, in a haemodynamically stable patient, a transfusion threshold of 7-8g/dL would be reasonable. 40 years previously that threshold was more likely to be 9-10g/dL.

20. Please outline the types of blood components and blood products that were most commonly transfused to patients under your care and how this changed over time.

I would estimate that 98% of patients received packed cell transfusions in T&O. There has been little change over time in my practice in T&O.

Other types of blood products would only be considered in conjunction with colleagues, e.g., anaesthetists, ITU, and haematologists.
Platelets: for thrombocytopaenia
Fresh frozen plasma (FFP): for either prophylaxis or cessation of bleeding

21. During trauma surgery, were there preferences as to the type of blood components used for specific procedures? Please provide details of which procedures, if any.

In my experience, the preference would be for packed cell transfusions in trauma surgery. Except for the indications given in Q20.

22. Was there a minimum number of units of blood that would be routinely transfused to patients before, during or after surgery? Did this change over time? You may wish to refer to [NHBT0000104_027] and [DHSC0035471].

There was no fixed minimum number of units because the indications were so multiple and the Hb level at which a patient might be transfused variable.

There was usually a view that, if you were intending to transfuse a patient, then prescribe a minimum of two units. A frequent practice would be to give two units, assess the patient's response physiologically and on laboratory testing, and decide if two units was sufficient. Clearly this policy would change in the setting of a low initial Hb, operative bleeding, or continuing post-operative blood loss.

23. To the best of your knowledge, was guidance provided to you and/or other medical professionals by the Hospitals as regards transfusion policies and practices during your employment? If so, please outline in as much detail as possible the policies in place which would prompt you to transfuse in the course of trauma surgery. If applicable, please ensure your answer addresses treatments throughout the 1970s and 1980s at any institution you worked at. If possible, in your answer please refer to:
a. how many units of blood would be used;
b. alternative treatments, including the option not to transfuse at all;
c. applicable haemoglobin threshold levels for transfusion;
d. adverse reactions or infection risk;
and/or e. resource and cost considerations
You may wish to refer to [RLIT0000977].

A number of these points have been answered in previous sections.

a. **See previous answers.**
b. **This would be discussed with the patient – particularly if there were any perceived risks based on co-morbidities.**
   When working if America (1987-1988), much greater use was made of autologous blood transfusion and cell saver blood per-operative techniques. The latter was occasionally available during my time at Northampton General Hospital.
c. **See previous answers.**
d. **Previous adverse reactions would be discussed pre-operatively with the anaesthetists and, if necessary, with haematology.**
e. **I do not remember that resource or cost considerations were ever an issue – except for the cost of cell-savers in the 1990s and 2000s. It was always 'what was best for the patient'.**

24. Please consider the British Committee for Standards guidelines for blood transfusion and the management of transfused patients produced in 1999 in collaboration with the Royal College of Surgeons of England [AHCH0000049]. Were any of these recommendations

implemented during your time at the Royal Free and then at Northampton General Hospital, or any other institution at which you have worked, either before or after the publication of this document?

I do not recall at any time these BCS guidelines being discussed as a total document during my career either pre- or post-1999. However, the guidelines follow the sound principles on which decision-making was made in all the units in which I was employed. The guidelines appear to consolidate what should have already been standard practice in all acute hospitals for doctors and nurses involved in patient care and, specifically, the administration of blood transfusions.

25. In your experience at any of the institutions at which you have worked, did any particular blood products or transfusion methods carry a higher risk of viral infection? You may wish to refer to [NHBT0041922] and [NHBT0077712].

The threat of viral transmission became increasingly known during my junior hospital positions (1980-1990). By the time of my consultant appointment in 1991, these risks were well-established and strict measures taken to minimise these risks for our patients.

I was made aware that blood products, prior to my clinical experience, that had been imported from abroad (where patient and donated blood products may not have been so carefully screened as in the UK) carried increased risk. Similarly, any products derived from 'pooled patients'.

26. Were patients informed that there would be a possibility of a transfusion during the procedure? a. If so, what policies applied regarding how to inform patients.

Patient were informed orally. This would be in pre-admission clinics (once established or on the ward once admitted. I am not aware of being shown policies relating to this.

Red cell concentrates (packed cell transfusions)

27. What considerations were made by the Departments for the use of red blood cell concentrate transfusions? In particular: a. In what circumstances would red blood cell concentrate transfusions be considered necessary by the Department, and if applicable, necessary over other blood components? b. Approximately how often would red cell concentrates be used; c. The perceived benefits and/or risks of red cell concentrate transfusions known to the Department and how this changed over time; d. Any measures taken by the Departments to minimise the risk of infection; e. The process for obtaining informed consent and informing patients or their relatives of the risks associated with red blood cell concentrate transfusions; and f. How many units of red cell concentrates would be administered in one sitting to one patient, and what factors would be taken into account in determining this amount? You may wish to refer to [NHBT0095400_0019].

a. These would be prescribed predominantly during and post-surgery

b. In my personal practice, probably only 1-2 patients per week would receive red cell concentrates.

c. See my answers previously. Q25

d. We followed strict hygiene guidelines. We only transfused only if absolutely required for the patient.

e. Consent was taken orally from the patient and/or relative in the case of minors.

f. See my answer to Q22.

28. Were guidelines circulated to surgeons concerning the use of red cell concentrate? If so, did the usage pattern of red cell concentrate change as a result of these guidelines? If not, why were guidelines not provided?

I cannot recall any guidelines being provided for surgeons during my career. I am not sure why Transfusion departments did not issue guidelines. I am sure that they would have audited requests and uses.

Platelets

29. Please outline: a. Whether you used platelets to treat patients; b. How often patients would require a transfusion of platelets; c. Whether full testing was undertaken before administering platelets; d. The perceived benefits and/or risks associated with platelet transfusions known to the Department; e. How many units of platelets would be administered in one sitting to one patient, and what factors would be taken into account in determining this number; and f. Was there ever any difficulty in obtaining platelets? You may wish to consider [BSHA0000031] when answering questions regarding platelets.

In my recollection over more than 40 years, I can only remember a handful of times that patients under my care received platelet transfusions. It would always be a decision that I would defer to ITU and/or anaesthetic staff after discussion with Haematology. They would advise on what investigations were required.

The rare indications would include thrombocytopaenia or excessive platelet consumption in a condition like disseminated intravascular coagulation (DIC).

I would defer to more experienced physicians in this field for advice on how many units. I cannot recall being aware of difficulties obtaining platelets on the rare occasions that they were indicated.

Fresh Warm Blood

30. The Inquiry has received evidence that on rare occasions when a blood transfusion was needed urgently, fresh warm blood donated by hospital staff was administered to patients. To your knowledge, did this practice occur at Nuffield Hospital? If so, please explain in as much detail as you are able to, ensuring your answer addresses: a. The circumstances in which fresh warm blood transfusions were considered necessary; b. Approximately how often this practice occurred; c. The perceived benefits and risks of fresh warm blood transfusions (you may wish to refer to NHBT0000037_013); d. Any measures taken to minimise the risk of infection, including assessing donor suitability and post transfusion testing; and e. The process for obtaining informed consent and informing patients or their relatives of the risks associated with fresh warm blood transfusions.

I have never worked at a Nuffield Hospital. I am not aware than any patient with whom I was involved ever received fresh warm blood donated by hospital staff.

Fresh Frozen Plasma "FFP"

31. To what extent was fresh frozen plasma (FFP) utilised in trauma surgery?

In my experience, FFP was used only on rare occasions on trauma patients and reserved mainly in polytrauma patients.

32. Please discuss how FFP was administered in the instance of trauma in regards to:
a. Serial measurements of clotting times, fibrinogen levels, prothrombin time
b. Risks associated with FFP in trauma surgery.

FFP was mainly reserved for trauma patients experiencing severe haemorrhage and, frequently, with internal organ damage. In such circumstances, the patients were invariably managed on ITU with input from anaesthetics, general surgery, orthopaedics and, possibly, neurosurgery and plastic surgery.

The monitoring, risk assessment and administration would come under the care of the intensivists in ITU.

33. Were there discussions within the Hospitals about the use of FFP transfusions?

I am sure that ITU and Haematology would have discussed the use of FFP. I cannot recall being involved in my capacity as a Trauma and Orthopaedic surgeon.

34. Did either of the Hospitals provide policy guidance to surgeons and hospital staff concerning the use of FFP transfusions? If so, what was this guidance?

The numerous hospitals may have provided policy guidance to ITU and anaesthetic staff, but I did not receive any in my capacity as a Trauma and Orthopaedic surgeon.

Section 4: Knowledge of risk

35. During your training at medical school, what was your understanding of the risks of blood-borne infections from blood transfusions?

My medical school training was from 1973-1980. We were taught elements of haematology/blood transfusion in physiology and pathology. We were made aware of the need to screen for Hepatitis B surface antigen, but no other infections that I can recall – other than those caused by poor hygiene.

36. When you began working as a surgeon, what did you know and understand about the risks of infection associated with blood transfusions? What were the sources of your knowledge? How did your knowledge and understanding develop over time?

In my training from 1980-1990, we became more aware of the additional sources of risks of infection from microbes such as Hepatitis C, HIV and CMV. Our sources would have been from:

i. **Lectures and textbooks in preparation for post-graduate examinations**
ii. **Clinical ward rounds**
iii. **In-hospital teaching programmes**
iv. **Reading the medical literature**

By the time that I became a consultant in 1991, the full scale of the tragedy associated with HIV and Hepatitis B and C specifically for Haemophilia patients became evident. I was entrusted with their orthopaedic surgery and gained knowledge through my clinical experience. The outcomes of such surgery became a principal strand of my PhD in 2003.

37. What were you taught during your training about when a transfusion should be given?

I do not recall any specific pre-clinical medical school training, via lectures, about indications for transfusions. On our clinical placements, the need for transfusion of patients would be taught by the qualified staff usually on a patient-to-patient basis.

Hepatitis

38. What was your knowledge and understanding of the risks and transmission of hepatitis, including HBV and HCV from blood transfusion? What were the sources of your knowledge? How did that knowledge and understanding develop over time?

See my answer to Q36.

HIV and AIDS

39. When did you first become aware of HIV and AIDS and in particular of the risks of transmission through blood transfusions? How did that knowledge and understanding develop over time?

See my answer to Q36. I recall increasing concern over the nosocomial transmission of HIV, including via blood products, in the mid-1990s. Screening tests gradually became available. When I was working at Harvard from 1987-1988, the HIV risks from infected blood transfusions were becoming appreciated.

Other

40. If you were responsible for making decisions and actions on behalf of the surgical department or any other departments in response to any known or suspected risks of infection, please explain what decisions and actions were involved. If applicable, do you consider that those decisions were adequate and appropriate? If so, why? If not, please explain what you believe could or should have been done differently. You may wish to refer to [HSOC0005958].

I cannot recall being in that position involving any patient, within a department that I was working, contracting an infection as a result of contaminated blood products.
However, if such an eventuality occurred while working at the Royal Free, I would have had access to world-leading departments in Hepatology, Haemophilia, and HIV for advice.
They provided me personally with excellent support and monitoring when I received a needlestick injury from an infected-HIV patient while undertaking major surgery in the early 1990s.

Section 5: Treatment of patients

Provision of information to patients

41. Were you involved in discussions with patients regarding risks of infection by blood transfusion? If so, what information did you provide or cause to be provided to patients under your care about those risks prior to treatment commencing?

As a junior doctor in the late-1980s, patients were more aware about transmission risks. This would be discussed orally. I found this more so in America (1987-1988). All information was provided verbally. As a consultant, from 1991, the risks were established. Once again, counselling was undertaken as part of the overall risk/benefit discussion pre-surgically and discussed orally.

42. Prior to treatment being started, what, if anything, were patients being told about the likely risks of transfusion?

See answer to Q41.

43. If the nature of provision of information changed over time during your employment as a surgeon, please explain what changes occurred, and the reasons for any such change/s.

The information given remained verbal throughout my surgical career. Clearly, when comparing 1980 to 40 years later, both medical and patient awareness had changed. This was reflected in the pre-operative counselling that took place.

Adverse reactions

44. Did any of the Hospitals at which you have worked have any procedures in place to ensure patients reported any adverse reactions or symptoms following a blood transfusion? How, if at all, did this change over time? Please explain: a. What procedure did the Hospitals have in place? b. Did this procedure extend to after a patient had been discharged from Hospital? c. Were patients asked to report any adverse reactions or symptoms within a certain timeframe? d. If clinicians were informed and/or became aware of a patient having suffered any adverse reactions or symptoms, who were they required to report this to? e. Was there any mechanism for the Hospitals to report any adverse reactions or symptoms to the Regional Transfusion Centre?

If patients had adverse reactions to blood transfusions, it occurred principally during or immediately after the transfusion. Each hospital has similar protocols in place in terms of:

- **immediate cessation of the transfusion and cross-checking of the 'bag' and patient,**
- **increased monitoring of the patient,**
- **institution of any appropriate treatment,**
- **informing the Haematology department, sending the transfused blood bag (and any remaining contents) back to the laboratory for testing**
- **undertaking the appropriate investigations in discussion with Haematology**

To the best of my knowledge, the procedures did not extend beyond patient discharge. It is possible that the Haematology departments did have their own patient self-reporting system.

I am sure that each hospital would have mechanisms in place to liaise with Regional Transfusion Centres in the presence of any adverse reactions. However, this would not involve the Trauma and Orthopaedic units.

45. At any of the institutions at which you have worked, were you involved in any efforts made to trace potentially infected donors or recipients of infected blood transfusions? If so, please explain these processes and their outcomes. practice.

No. I was not involved in any processes to trace potentially infected donors or recipients of infected blood transfusions.

Consent

46. Are you aware if patients under the care of the Hospitals were treated with blood transfusions without their express or informed consent? If so, how and why did this occur?

The only clinical scenario would have been in dire emergency situations. Occasionally, unconscious patients suffering from polytrauma required immediate surgery and would require blood transfusions as part of life and limb saving measures.

Other

47. Were any audits or surveillance programmes regarding the use of blood transfusions in surgery conducted? If so, please explain these processes and the impact they had on blood transfusion standards and practice.

I was not aware of any audits or surveillance programmes regarding different forms of blood transfusions in various UK hospitals where I worked. During, my time in Boston (1987-1988), I was aware that the use of autologous blood and cell-saver techniques were audited to ensure efficiency and efficacy. I am not aware if that work of the results of those audits or whether the outcomes were ever published.

Section 6: Other Issues

48. Please provide details of any complaints made about you (insofar as relevant to the Inquiry's Terms of Reference) to your employer or to any other body or organisation which has a responsibility to investigate complaints.

There have been no complaints made about me in relation to Inquiry's Terms of Reference.

49. Please explain, in as much detail as you are able to, any other matters that you believe may be of relevance to the Infected Blood Inquiry, having regard to its Terms of Reference and to the current List of Issues.

There is nothing further that comes to mind.

50. In addition to any documents exhibited in support of your statement, the Inquiry would be grateful to receive copies of any potentially relevant documents you possess relating to the issues addressed in this letter.

There are no further documents that I feel are relevant.

Statement of Truth

I believe that the facts stated in this witness statement are true.

Signed: GRO-C

Dated: 30 June 2023