Witness Name: Dr Damien Carson
Statement No.WITN7178001
Exhibits: WITN7178002 - WITN7178018
Dated:

INFECTED BLOOD INQUIRY

WRITTEN STATEMENT OF DR DAMIEN CARSON

I, Dr Damien Carson, will say as follows: -

I provide this statement in response to a written request dated 8th August 2022 on behalf of the Chair of the Infected Blood Inquiry, Sir Brian Langstaff, for a written statement and production of documents under Rule 9 (1) and (2) of the Inquiry Rules 2006. I believe the relevance of my evidence to the inquiry is linked to my appointment as the Chair of the Northern Ireland Regional Transfusion Committee (NIRTC) from 2003 to 2009 and the Audit and Implementation Lead of the same committee *(name simplified to the Northern Ireland Transfusion Committee (NITC))* from 2009 until present.

Section 1: Introduction

1. Please set out your name, address, date of birth and professional qualifications.

1. My name is Dr Damien Carson.
   Address GRO-C Co Down, GRO-C
   My date of birth is GRO-C 1962
   My Qualifications are:
   - MB BCh BAO University College Dublin 1986
   - Fellow of the Royal College of Anaesthetists (FRCA) 1992
   - Masters in Business Improvement 2018

2. Please set out your current role within the South Eastern Health and Social Care Trust and your responsibilities within that role.

2. Current roles within my South Eastern Trust Job plan:

(a). I am a Consultant Anaesthetist working in the South Eastern Trust. My responsibilities are mainly around the peri-operative anaesthetic management of major Head and Neck cancer patients with additional on-call responsibilities.

(b). I am the current Theatre Performance Lead in the South Eastern Trust (4 hours per week). My responsibilities include working with the Assistant Director and Clinical Director of Surgery to assist in the delivery, development and reform and modernisation of the Day Surgery Service in the South Eastern Trust.

(c). I am also the current Audit and Implementation Lead of the Northern Ireland Transfusion Committee (NITC) (8 hours per week). My responsibilities include innovation, prioritisation and the driving of audit initiatives, report production and education strategies to ensure implementation of change within the transfusion community in Northern Ireland.

3. Please set out your relationship with the Department of Health's Strategic Planning and Performance Group (or its predecessor, the Regional Health and Social Care Board).

3. My relationship with the Regional Health and Social Care Board (HSCB):

(a). I have submitted various business cases to the HSCB to improve blood safety and have been successful:

- In 2009 with gaining sustained funding for the 5 Trusts in Northern Ireland to expand their Haemovigilance service.

• In 2014 with funding for 8 hours per week of Consultant time for the NITC positions of Chair and my own position of the Audit and Implementation Lead. This funding is paid to my employer – the South Eastern Trust, and I am job planned into the role by my clinical Director.
• In 2022 the NITC was granted recurring project funding to continue its projects focusing on reducing exposure to red cell transfusion by the Directorate of Commissioning within the Strategic Planning & Performance Group (SPPG).

4. Please set out your employment history including the various roles and responsibilities that you have held throughout your career, as well as the dates.

4. Employment History:

(a) Consultant Anaesthetist working in the South Eastern Trust. Appointed by interview – commenced July 1996

(b) Audit and Implementation Lead of the Northern Ireland Transfusion Committee. Appointed by interview – commenced April 2014

(c) Day Surgery Lead in the South Eastern Trust. Appointed by interview – commence November 2019 – ceased October 2022 (3 year term)

5. Both the Chair and Audit and Implementation Lead roles were broadly defined by the NI Transfusion Committee's terms of reference (exhibit WITN7178009) summarised as follows:

(a) The overall objective was to promote good transfusion practice by providing a framework to:

• Improve the safety of blood transfusion practice
• Improve the appropriateness of clinical blood transfusion

• Explore and facilitate the implementation of methods to reduce the need for allogeneic blood transfusion
• Promote the highest quality and consistency in transfusion practice
• Educate staff involved in blood transfusion practice
• Drive up standards for training and assessment of staff involved in blood transfusion practice

(b) Consult with national groups in the development of guidelines for best practice in transfusion medicine

(c) Identify service development needs and provide assistance with contingency planning for blood shortages

(d) Identify and respond to patients' concerns and perceptions about the provision of transfusion services.

(e) Facilitate communications between NI Blood Transfusion Service (NIBTS) and hospitals concerning transfusion practice. Support the work of Trust Transfusion Committees and Teams and Haemovigilance Practitioners

(f) Provide advice to the Chief Medical Officer on aspects of transfusion practice

6. Full employment history *(continued)*

1993 - 1996	Senior Registrar in Anaesthetics Ninewells Hospital, Dundee, Scotland
1990 – 1993	Registrar in Anaesthetics Ninewells Hospital, Dundee, Scotland
1989 – 1990	Registrar in Anaesthetics Perth Royal Infirmary Hospital, Perth, Scotland

1988 – 1989 Senior House Officer in Anaesthetics
Perth Royal Infirmary Hospital, Perth, Scotland

7. Responsibilities in all the above Anaesthetic trainee posts 1988 -1996 have been mainly around the peri-operative anaesthetic management of surgical patients with additional on-call responsibilities.

8. 1987 – 1988 - Junior House Officer in Medicine, Ballochmyle Hospital, Ayrshire, Scotland

9. Jan - July 1987 - Junior House Officer in Surgery, Mater Hospital, Dublin

5. Please set out your 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.

10. Additional relevant membership history:

11. I was the Chair of the Northern Ireland Regional Transfusion Committee (NIRTC) September 2003 – September 2009. Appointed as a unpaid role – nominated and voted into post by membership of NIRTC

12. I was the Audit and Implementation Lead of the Northern Ireland Transfusion Committee (NITC) September 2009 – April 2014. Appointed as an unpaid role – nominated and voted into post by membership of NITC

13. I have also been a member of the Ulster Hospital Transfusion Committee since 2003

14. I have been the lead or co-lead of six regional audit studies (2004-2018) supported by a variety of funding bodies over the years seeking to improve blood product transfusion practice in Northern Ireland.

15. I have worked with various individuals and groups to co-author guidance to promote better transfusion practice

- Guidelines for Blood Transfusion Practice (2009) (Exhibit WITN7178004)
- Guidelines on the management of anaemia and red cell transfusion in adult critically ill patients (2013)
- Guidance on the Management of Iron Deficiency Anaemia for Primary Care Professionals (2015) (Exhibit WITN7178012)
- Guidance on the Management of Iron Deficiency Anaemia prior to Surgery (2015) (Exhibit WITN7178013)
- Guidance on the Management of Iron Deficiency Anaemia for Endoscopy Professionals (2015) (Exhibit WITN7178014)
- Guidelines from the expert advisory committee on the Safety of Blood, Tissues and Organs (SaBTO) on patient consent for blood transfusion (2020)

6. Please confirm whether you have provided evidence to, or have been involved in, any other inquiries, investigations, criminal or civil litigation in relation to HIV, HBV and/or HCV in blood transfusions. Please provide details of your involvement and copies of any statements or reports which you provided.

16. I have not previously provided evidence to, or have been involved in, any other inquiries, investigations, criminal or civil litigation in relation to HIV, HBV and/or HCV in blood transfusions.

Section 2: CREST 1989 recommendations

7. The following recommendations were made by CREST in 1989, aimed at promoting clinical efficiency in the Health Service in Northern Ireland [SCGV0000004_019]:

1. ***Each clinician should review their prescribing policy for blood products in the light of the constraints referred to above*** **[a production capacity shortfall in blood products requiring their purchase from commercial sources].**
2. ***Each acute hospital should establish a Hospital Transfusion Committee which would monitor and audit the use of blood products and also promote good clinical practice by consultants and junior doctors.***
3. ***Each Health & Social Services Board should establish a Committee to monitor and audit the use of blood products in hospitals throughout its area. Each Board should identify an individual doctor to oversee this monitoring and audit role and ensure that Hospital Transfusion Committees-***
    - ***i. are established in each hospital;***
    - ***ii. fulfil their monitoring role; and***
    - ***iii. are active in the promotion of good practice.***
4. ***At regional level, the N.I. Blood Transfusion Service together with representatives of clinical specialities, should draw up regional guidance on the use of blood products in their particular area of expertise. The clinical representatives may be drawn from the appropriate Speciality Advisory Committee.***
5. ***Formal procedures for ordering blood products should be established These would involve the use of request forms completed in respect of each patient. Every effort should be made to ensure that these procedures are uniform throughout Northern Ireland and, if possible, that a common request form is introduced. This would require the Blood Transfusion Service to work closely with Hospital Transfusion Committees.***

Please outline how and when the Health and Social Services Boards complied with or supported each of the above recommendations. If any of the recommendations were not complied with or supported, why not? Please include details of the following:

a. Whether Committees were established by the Health and Social Services Boards to monitor and audit blood product usage within hospitals;

b. What role the Health and Social Services Boards played in the establishment and subsequent work of Hospital Transfusion Committees ("HTCs") within Northern Ireland; and

c. Whether regional guidance on the use of blood products was produced by the N.I. Blood Transfusion Service alongside clinical specialties, and how this was distributed.

17. In response to **7(a)** I did not attend University or practice medicine in Northern Ireland until July 1996 and joined the Ulster Hospital Transfusion Committee (HTC) around 2003. I have asked Hospital IT for my historical email records, but they do not go back beyond 2003 so I cannot be sure of the exact date of starting HTC attendance. In September 2003 – I was appointed as chair of the Northern Ireland Regional Transfusion Committee *(name later simplified to the Northern Ireland Transfusion Committee (NITC)).* I can confirm from memory that all hospitals had a Hospital Transfusion Committee (HTC) when the NITC was formed in 2003 – and this is confirmed in the RQIA review of Blood Safety during 2009 (Exhibit WITN7178006).

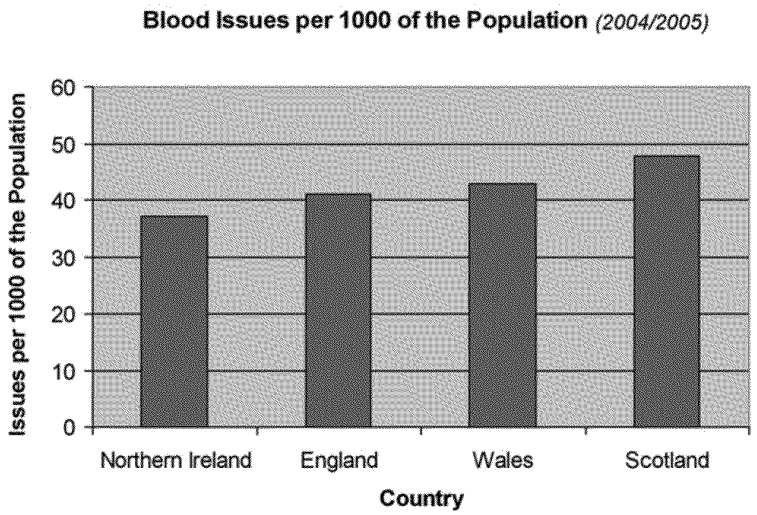
18. I myself do not have knowledge of when each Hospital HTC commenced and therefore I am unable to assist with the role played by the Health and Social Services Board. That question may be best directed to each HTC in each Trust directly.

19. I can confirm that the NITC itself took a strong interest in the regional monitoring and auditing of blood component usages from its early days and

review of regional component use has been a frequent agenda item at NITC regional meetings.

20. Examples of the NITC proactive activity

21. In 2004 – Northern Ireland issued fewer red cells per head of its population than the other three UK Nations.



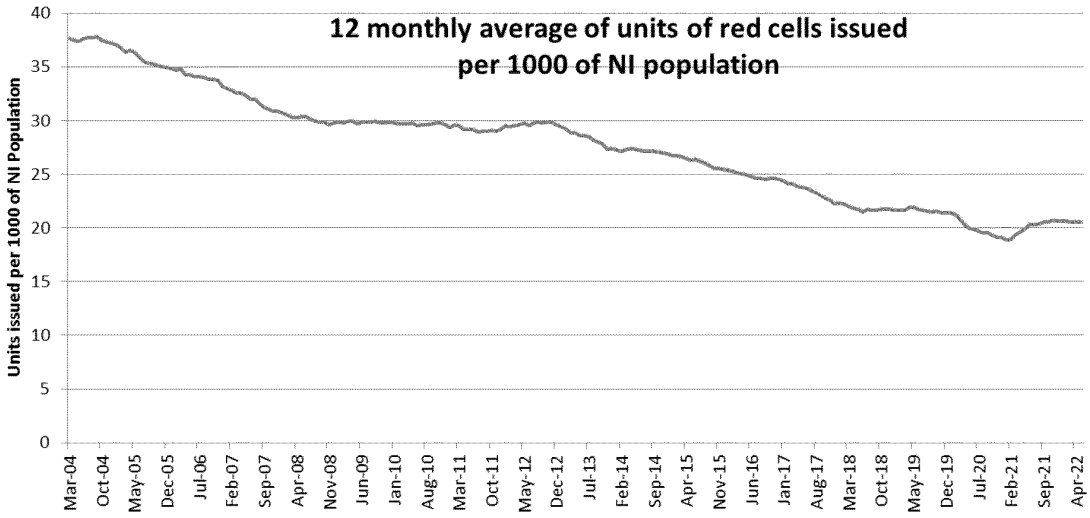
22. Despite this benchmarked good performance - as evidence of increasingly restrictive transfusion practices emerged in the literature - the NITC with HTC support from all Hospitals led a major regional study to identify where further improvement of transfusion exposure reduction was possible. This major study was carried out through 2005, compiled, published and widely distributed via both NITC channels and a regional educational release event (Regional Appropriateness of Blood Transfusion Audit 2006 (Exhibit WITN7178002). This was the first of many successful initiatives by the NITC and HTCs looking at reducing exposure to blood component use to the Northern Ireland population (Exhibits WITN7178004, WITN7178005, WITN7178007, WITN7178010, WITN7178011, WITN7178012, WITN7178013, WITN7178014, WITN7178015, WITN7178017)

23. Key examples of successful outcomes in improved clinical practice leading to reduced blood component exposure to the NI population include:

Red cells

24. Red cells are the commonest blood components transfused to patients representing over 75% of all components transfused. As it is the component most transfused – much NITC activity over the last 19 years has been directed towards its reduction in use.

25. In the year ending March 2004 there were 37.8 red cell units issued per 1000 of the NI population and by 2022, NITC initiatives and HTC activity in hospitals had worked to reduce this exposure to 20.5 units issued per 1000 of the NI population.



26. Additionally, given that most red cells are transfused in patients over 50 years of age and that this subdivision of the population is increasing by ~ 2% per year – the performance of reduction of patient exposure is closer to a 53% reduction overall when weighing includes the changing population demographics.

27. To put the performance into perspective with established practice elsewhere in Europe – the graph below is taken from the 2017 publication

28. "Supporting Patient Blood Management (PBM) in the EU (Exhibit WITN7178018), it compares the red cell use per 1000 of the population across

most European countries in 2011 and 2012. In 2011/12 Northern Ireland transfusion index had fallen below 30 units and not only was it the best performing UK country – but it was one of the lowest transfusing countries in Europe at that time.

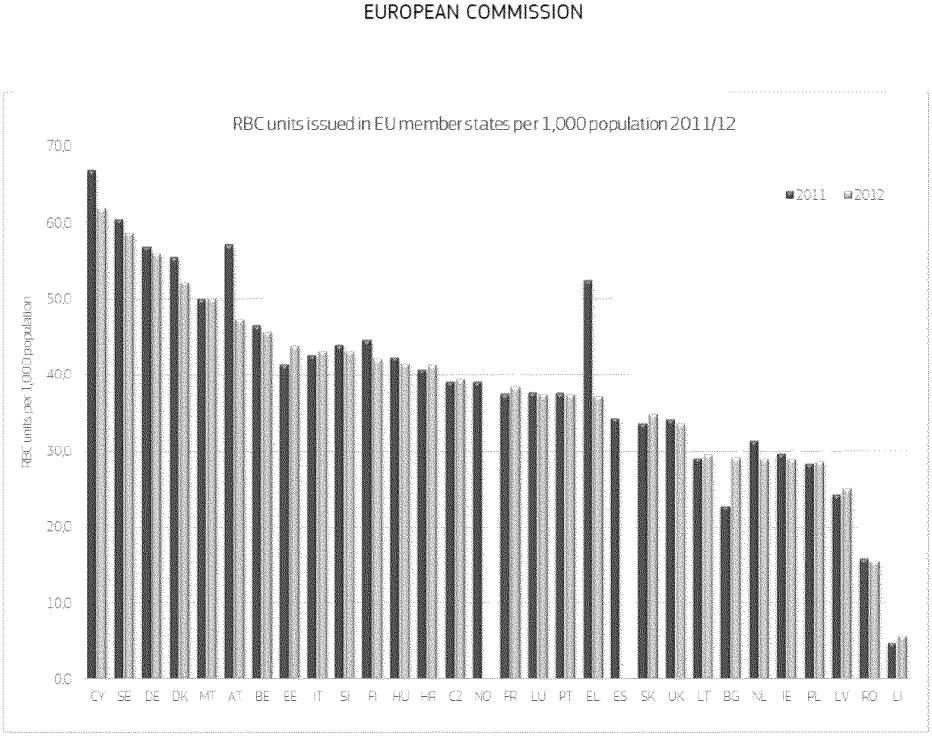
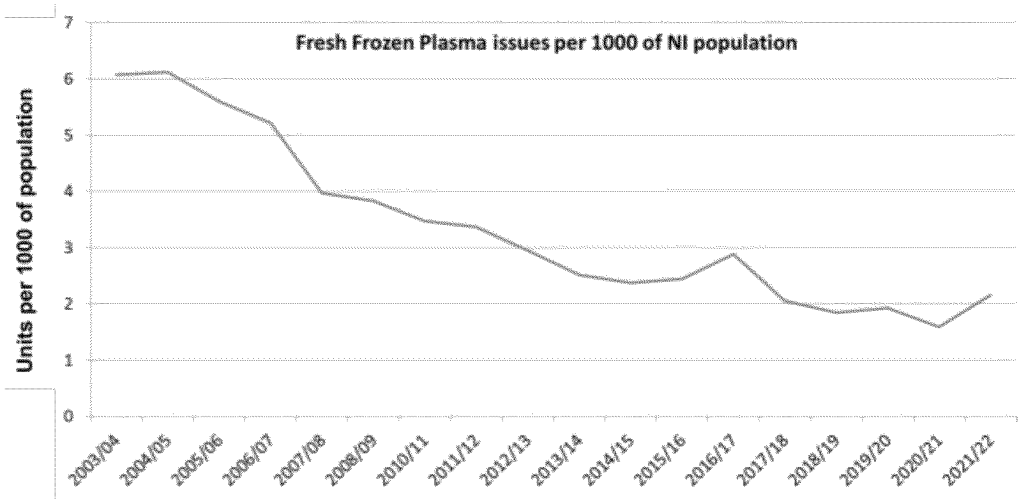


Figure 1. RBC issued per 1,000 population 2011 and 2012 in European countries

29. The additional further major reductions in use of red cells over the last 10 years (NI Red Cell Index now 20.5) – now make Northern Ireland one of the lowest red cell transfusing regions in the world *(relative to other countries with a developed blood service)* – indicating the very successful co-ordinated effort on the ground over the last 20 years to ensure there is only the minimal necessary exposure to transfused red cells.

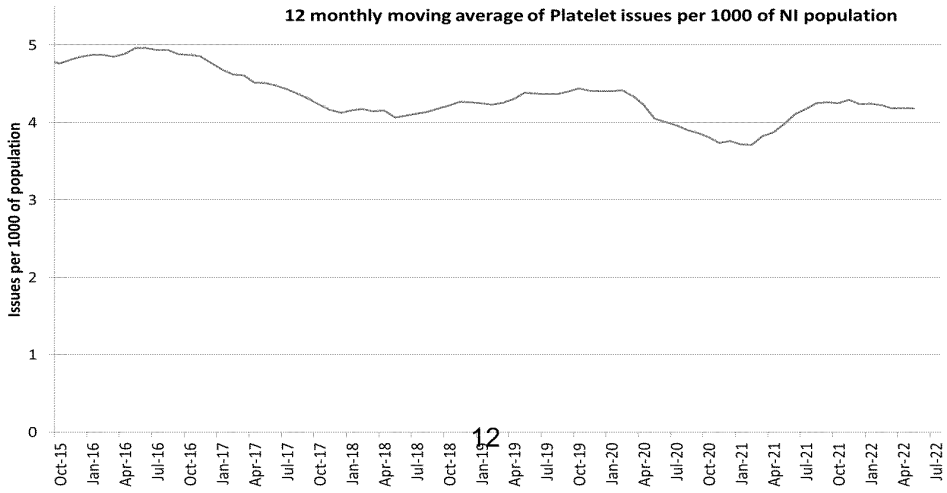
Fresh Frozen Plasma

30. In the year end March 2004 – 6.08 units per 1000 of the NI population NI population were issued and following an NITC study in 2005, continued monitoring and educational initiatives - this has been reduced to 2.16 per 1000 of the NI population by 2022 – a 64.5% reduction in issues per head.



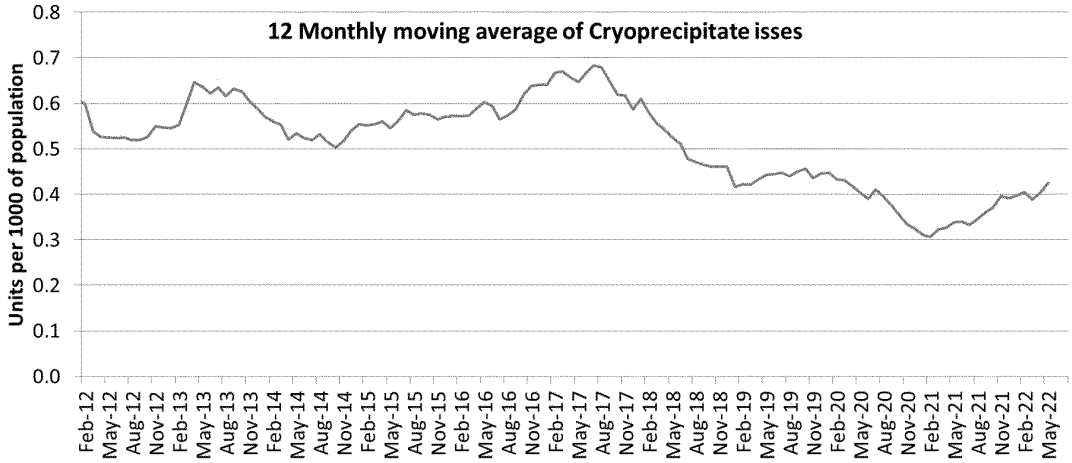
Platelets

31. Platelets are a short shelf life product, with continuous supply pressures and their issue has always been closely monitored by NIBTS. The NITC carried out a major study in 2015 (Exhibit WITN7178011), and while high appropriateness of use across NI was found – the study identified that dose could be modified downwards in some patients – again reducing patient exposure:



Cryoprecipitate

32. The 4th blood component transfused to patients is cryoprecipitate and the volume of use of this component is small with currently about 1.5% of transfusions with a downward trend over the last 10 years:



33. Red Cells, Platelets and FFP represent 98.5% of the 4 blood components transfused to patients in 2022 and most NITC activity has been directed towards reducing the use of these 3 components.

34. In response to 7(b), as stated above in 7(a), I am unable to answer about the role that the Health and Social Services Boards played in the establishment of the HTCs.

35. The formation of the NIRTC came after the NI Blood Transfusion Service (NIBTS) hosted a preliminary meeting of the NIRTC in mid 2003 – after which I was nominated as chair.

36. While the NIRTC/NITC has provided the co-ordination for the initiatives indicated in 7(a) – there has been ongoing support from a variety of sources within NI Healthcare:

- **Chief Medical Officer (CMO):**

- Support from CMO and his department in NITC activities, NITC workplan review, advisory notices and related regional publications (exhibits WITN7178003, WITN7178008 and WITN7178016).

- **Health and Social Care Board HSCB (predecessor of SPPG):**

- 2004 regional business case was approved - providing funding for the initial Haemovigilance service to promote the safety agenda within all Trusts
- 2009 regional business case was approved to expand the Haemovigilance service across all Trusts
- 2014 business case was approved for NITC officer time
- In 2022 the NITC was granted recurring project funding to continue its projects focusing on reducing exposure to transfusion by the Directorate of Commissioning within the Strategic Planning & Performance Group (SPPG).

- **Regional Audit Funding bodies:**

- 7 regional audit studies (2004-2018) supported by a variety of funding bodies over the years including the Northern Ireland Audit Advisory Committee (NIAAC), Regional Multiprofessional Audit Group (RMAG), Guidelines and Audit Implementation Network (GAIN), Regulation and Quality Improvement Authority (RQIA).

37. In response to 7(c) Regional guidance on the use of blood products was available to clinicians and I do recall the 1999 Better Blood Transfusion guidance and the 2001 Guidelines for Blood Transfusion Practice when working as a Consultant at the time.

38. Since I joined the NITC in 2003 – I have found that NIBTS and their Consultants have always played an important part in the role of the NITC from acting as a neutral hosting venue, offering some secretarial support and regularly attending meetings of the NITC. In addition, NIBTS Consultants have been involved in all of the NITC regional studies and have contributed to the reports and their regional recommendations.

Guidelines:

39. Dr Kieran Morris (NIBTS) and I reviewed and updated the CREST 2001 guidance "Guidelines for Blood Transfusion Practice" in 2007 initially under the direction of the Clinical Resource Efficiency Support Team (CREST). As CREST itself became part of the Guideline and Audit Implementation Network (GAIN) – these updated guidelines were finally released under GAIN in 2009 (Exhibit WITN7178004),

40. Additional guidance such as

- Management of the anaemic adult patient prior to scheduled major surgery (2012)
- Investigation and management of the patient with anaemia (2015)
- Guidance on the Management of Iron Deficiency Anaemia for Endoscopy Professionals (2015)
- Guidance on the Management of Iron Deficiency Anaemia prior to Surgery (2015)
- Guidance on the Management of Iron Deficiency Anaemia for Primary Care Professionals (2015)

were also produced by the NITC with input from NIBTS Consultants (Exhibits WITN7178010, WITN7178012, WITN7178013, WITN7178014, WITN7178015)

Section 3: Hospital Transfusion Committees history, structure & relationships

8. **The Inquiry understands that the establishment of HTCs within Northern Irish hospitals had been recommended by CREST by 1989 [SCGV0000004_019]. Please provide details of the following:**

a. **Where HTCs were established within Northern Ireland;**
b. **When these HTCs were established;**
c. **Who established these HTCs;**
d. **Why these HTCs were established;**
e. **What the initial aims of these HTCs were; and**

f. How these hospitals monitored transfusion practice before the establishment of HTCs.

41. In response to 8(a) – (f) As detailed in 7 (a) – I am aware that each hospital had a HTC by the formation of the NIRTC in 2003 – but I myself have no knowledge about the where, when, who, why and aims of each hospitals HTC establishment. These questions would be best directed towards the current HTC chairperson in each hospital.

9. Please explain the composition of these HTCs including staff, positions, and areas of specialty. Please explain if the composition has changed since the HTCs were established.

42. I was a member (but never chair) of the Ulster Hospital HTC from 2003 and we had multidisciplinary representation from Blood Bank, Haematology, medical specialities including Anaesthesia, Medicine, Surgery and Nursing. As the Haemovigilance funding became secured regionally and was utilised by Trusts after 2004 – the Haemovigilance Practitioner also formed a key part of the HTC. I believe this multidisciplinary composition was typical of many HTCs across the region. A more detailed picture could be identified by requesting this information from the current HTC chairperson in each hospital.

10. The Inquiry understands that the roles, functions and responsibilities of HTCs were recommended to include:

a. Awareness of national guidelines for the promotion of good transfusion practices;
b. Development of local hospital guidelines;
c. Transfusion policy induction procedure for new staff;
d. Review of nursing procedures for administration of blood products;
e. Promotion of new information regarding transfusion matters;
f. Ensuring patients are adequately informed of transfusion matters, such as availability of alternative treatments;
g. Blood transfusion record keeping and documentation;

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

i. Assessment of transfusion practices in light of product usage; and

j. Consent for blood transfusion.

What roles, functions and responsibilities did these HTCs carry out from the date established? Please also include any other functions not mentioned above.

43. During my membership of the Ulster Hospital HTC over the years (2003 onwards) – I clearly recall that the HTC carried out a wide range of activities including:

(a) Promoting regional and national guidelines for good transfusion practices.

(b) Development of local hospital policies for transfusion within the Ulster Hospital *(Later South Eastern Trust)*

(c) Developing a mandatory competency-based assessment programme for all staff involved in sampling, ordering, collection and administering blood components for transfusion. These competency assessments were obligatory for staff to complete before dealing with blood components.

(d) In addition to (c) above – Trust policy was created to advise correctly on the administration of blood components.

(e) The promotion of staff information about transfusion in the form of email communications, newsletters, posters, etc.

(f) The promotion of patient information leaflets about transfusion and the availability of alternative treatments.

(g) The development of a transfusion record to organise all documentation around transfusion into a logical and organised booklet.

(h) Engagement with the Serious Hazards of Transfusion (SHOT) and Serious Adverse Blood Reactions and Events (SABRE) – the MHRA's online system for reporting blood safety incidents.

(i) Participation in local, regional and national audits of transfusion practices to review and improve the compliance of blood component use to practice standards.

(j) The promotion that staff must engage in adequate patient consent for transfusion and the development and incorporation of a consent section into the transfusion record.

44. In addition the HTC engaged with other Trust HTCs in standardisation projects with examples such as:

(a). developing a regional bloodless pathway for patients who did not wish to be transfused

(b). developing a single NI regional blood ordering form,

(c). developing common competency assessments for sampling, ordering, collecting and administering blood components so that staff assessments remained valid as staff moved across all trusts.

45. As detailed above - I have limited knowledge of other hospital HTCs prior to the formation of the NITC and was not involved in their operational matters. These questions regarding roles, functions and responsibilities of each HTC would be best directed towards the current HTC chairperson in each hospital.

11. Please explain the nature of the relationship between these HTCs and the various departments in the hospitals that administered blood transfusions. Specifically:

a. Has this changed over time;

b. What oversight did these HTCs have over the decisions made by the different departments utilising transfusions;

c. How did any such oversight operate;

d. What was the aim of these HTCs' oversight; and

e. What were the challenges that arose in the relationship between these HTCs and the hospital departments?

46. In terms of relationships between the South Eastern Trust HTC and various departments within the Trusts – I am aware that

(a). Laboratory and clinical departments have engaged well with the HTC – attending meetings and bringing information back to their respective areas and this has continued over the years.

(b). The HTC always had strong representation from the blood bank staff who had knowledge of the types and volumes of components used in various departments across the Trust. Also, the HTC has had good representation from the Haemovigilance team *(since ~ 2004)* who would have summarised safety incidents along with relevant training and educational updates at various meetings.

(c). The oversight operated by a combination of the blood bank staff reporting on laboratory information (the supply side of the blood components) and Haemovigilance staff reporting on clinical information (the end user / administration side) and this information being reviewed by the HTC.

(d). The aim of the HTC oversight was to ensure both safety and appropriateness of transfusion throughout the Trust.

(e). Challenges within the HTC were mainly resource based. As the HTC grew, attendance of various department representatives depended on the clinical availability of these staff with their other work commitments. The success of the first Haemovigilance business case in 2004 – ensured that each Trust had a dedicated Haemovigilance practitioner. Similarly, the successful 2009 Haemovigilance expansion business case – strengthened the Trust Haemovigilance presence and activity.

12. What do you understand to be the main obstacles faced by these HTCs from the date established until the early 2000s? Did these obstacles change over time?

47. As detailed previously – I only joined the Ulster Hospital (Later South Eastern Trust) HTC around 2003 and have little awareness of obstacles faced by the HTC prior to this. In a similar answer to question 9 – I believe that having limited resources – e.g. no dedicated Haemovigilance personnel, until they became available after successful regional business cases in 2004 and their staffing expansion in 2009 would have been a major obstacle to both training and influencing the behaviour of front-line staff.

Section 4: Other

13. Please provide any further comment that you wish to provide about matters of relevance to the Inquiry's Terms of Reference.

48. In 2009 The RQIA carried out an extensive review of Blood Safety across all the Trusts in NI (87 page report published in February 2010 (Exhibit WITN7178006). It provides a documented timeline of actions taken to improve blood transfusion practice in Northern Ireland (January 2001 - June 2009) together with a detailed review of the state of Blood Safety across NI at that time. It is a detailed examination of where transfusion practice was in 2009 across all 5 Trusts and may be of considerable use to the inquiry.

14. 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.

49. Documents in support of my statement have been exhibited and are contained within the below exhibit table.

They've attempted contact with three individuals

Statement of Truth

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

Signed GRO-C

Dated 31st October 2022

Table of exhibits:

Date	Notes/ Description	Exhibit number
2006	Regional Appropriateness of Blood Transfusion Audit (2006)	WITN7178002
17 November 2006	Appropriate use of blood in Northern Ireland – Chief Medical Officer (2006)	WITN7178003
March 2009	Guidelines for Blood Transfusion Practice	WITN7178004
2009	Guidelines for red cell transfusion Wall Chart (2009)	WITN7178005
11 February 2010	RQIA Report of blood safety review (2010)	WITN7178006
February 2010	Management of Anaemia and Avoidance of Transfusion (2010)	WITN7178007
24 August 2011	Better Blood Transfusion 3 (NI) - Chief Medical Officer (2011)	WITN7178008
Undated	NI Transfusion Committee Terms of Reference (2014)	WITN7178009
2012	Management of the anaemic adult patient prior to scheduled major surgery (2012)	WITN7178010

March 2015	Platelet transfusion in Northern Ireland (2015)	WITN7178011
August 2015	Guidance on the Management of Iron Deficiency Anaemia for Primary Care Professionals (2015)	WITN7178012
August 2015	Guidance on the Management of Iron Deficiency Anaemia prior to Surgery (2015)	WITN7178013
August 2015	Guidance on the Management of Iron Deficiency Anaemia for Endoscopy Professionals (2015)	WITN7178014
August 2015	Investigation and Management of the Adult Patient with Anaemia (2015)	WITN7178015
13 January 2016	NICE Clinical Guideline NG24 – Blood transfusion: assessment for and management of blood transfusions in adults, young people and children over 1 year old. Department of Health (2016)	WITN7178016
July 2018	Where does the blood go in Northern Ireland? (2018)	WITN7178017
March 2017	Supporting Patient Blood Management in the EU (2017)	WITN7178018