PATIENT INTEREST CORE PARTICIPANTS - SUBMISSIONS FOR THE B2 TOPIC

Ambit of the topic

B2) The use of blood product concentrates in Scotland, including any perceived disadvantages of such products, from their introduction in or around 1974; the continuation of the use of commercial concentrates in particular after:

- international realisation that these carried a risk of AIDS;
- the proposal by Dr Galbraith of the Public Health Laboratory Service in May 1983 that use in the UK should be stopped; and
- significant progress towards self-sufficiency in the manufacture of blood products by the NHS in Scotland had been made.

The diagnosis and classification of bleeding disorders

1. How were patients diagnosed with bleeding disorders in the late 1970s/1980s?
2. How was the severity of their condition classified in the late 1970s/1980s?
3. Whether the system of diagnosis and classification was fit for the purpose of maximising the chance that patients would receive the best and most appropriate treatment available

In response to these 3 issues, we note that in his evidence to the Inquiry, Dr Mark Winter explained his understanding of the WHO classifications of what constituted severe haemophilia (under 1% iu/dl), moderate haemophilia (between 1 and 5 % iu/dl) and mild haemophilia (between 5 and 50% 1/u/dl). It was pointed out to him that there was evidence from the WHO which suggested that the classification at the mild end may be either 30 or 40%. He replied that there had been some controversy about that and that clinicians would want the classification to go up to 50% on the basis that patients whose levels were between 30 and 50% could have "really pretty significant clinical problems". Further, the factor levels could be known to fluctuate (mostly in mild patients) and the
assays were not the easiest to perform consistently.¹ We would submit that patients with levels up to 50% should have been recognised as haemophiliacs and that guidance issued should have reflected the experience and concerns of experienced haemophilia clinicians of the levels likely to produce significant bleeding episodes, as spoken to by Dr Winter. Professor Ludlam explained that there was a reluctance to diagnose patients on the margins without a "significant history" due to the "knock-on consequences" of such a diagnosis.² In our submission, this approach runs the risk that a patient would require to have a potentially damaging bleed before getting into the haemophilia care system and that a more proactive approach to getting patients into that system would be preferable. It may be that since guidance for the treatment of patients tended to be issued on the basis of the classification of a patient's bleeding disorder, that inaccurate classification might result in patients being exposed to inappropriate products which, in turn, may have exposed them to inappropriate risk of infection with disease transmitted by those products.

We would submit that rigid classifications may be useful as a general guide but the question of where a patient fitted into the classification system should never have been allowed to replace the more significant questions of (a) whether an individual was likely to have a bleed and (b) what the appropriate treatment would be to minimise the chances of that individual suffering adverse consequences of any kind. Decisions of classification were made and continue to be made by medical professionals not expert in the treatment of bleeding disorders such as general practitioners or other primary care doctors. Treatment decisions might be made on the basis of the patient's classification (or non-classification) in urgent situations. The exclusion of a mild haemophiliac with a level of between 30 and 50% on the basis of the WHO criteria or the International Society of Thrombosis and Haemostasis' 30% limit³ would have excluded that patient from receiving advice about treatment for their bleeding disorder and living with it which would have been afforded to him, had he been so classified and referred to an expert haemophilia centre. In her evidence, Dr Pettigrew talked about the initial counselling which parents received at Yorkhill, which presumably included lifestyle advice designed to prevent bleeds occurring, on diagnosis of a child with a bleeding disorder.⁴ The haemophilia centres had been providing specialist diagnostic, registration and treatment services to patients with bleeding disorders in the United Kingdom since 1954.⁵ We would also submit that, given the potentially severe consequences which might be suffered by patients at the milder end of the spectrum, the advantages of receiving the proper advice and treatment from

¹ Transcript for 26/04/11 (day 15); 57 (21) to 59 (24) (Dr Winter)
² Transcript for 04/05/11 (day 19); 115 (18 to 19) and 116 (21 to 25) (Professor Ludlam)
³ Transcript for 26/04/11 (day 15); 59 (10 to 15) (Dr Winter)
⁴ Transcript for 05/05/11 (day 20); 49 (16 to 21) (Dr Pettigrew)
⁵ LIT.001.0234
the appropriate specialist within the NHS would far outweigh any stigma associated with being
diagnosed with a bleeding disorder and save money which might be required in the treatment of a
patient whose bleed may be caused in the first place or be allowed to develop unnecessarily on the
basis of his non-diagnosis. Bleeding being allowed to develop in this way may also have had the
consequence of a patient requiring to be treated with a concentrate (and thus exposed to a greater
likelihood of viral infection).

**Infection routes**

4. How the patients with bleeding disorders in Scotland who were infected with HIV
through blood products were infected

The statistical information available to the Inquiry at this stage concerning infections with HIV of
people with bleeding disorders in Scotland suggests that the total number of infections was around
59. This number has been reached by the application of a certain methodology on the part of the
Scottish haemophilia clinicians who were responsible for compiling the material. There are other
sources which would suggest that the total number of such infections in Scotland is higher than
this. This discrepancy will be dealt with in our submission on statistics. For present purposes, the
detailed treatment histories and other information upon which conclusions can be reached about
the likely infection routes of the Scottish patients is only available for the limited number of patients
identified by the haemophilia directors. We very much hope that the Inquiry as a result of further
work will be able to reconcile the total numbers from these different sources. Further, the data used
in these spreadsheets is derived from the UKHCDO database. This information may be incomplete or
otherwise unreliable. This will be addressed by us elsewhere.

**Edinburgh**

The circumstances in which the patients in the group known as the Edinburgh cohort came to be
infected is addressed in our submission on the B5(d) topic. These patients were all infected by their
exposure to SNBTS concentrates. The implicated batch is apparently responsible for most but
possibly not all of the infections (see the submission at B5(d)). It is noteworthy that that in his report
on HIV infection routes in Scotland, Dr Cuthbertson suggests that the data provided by Professor

---

6 Transcript for 30/03/11 (day 14); 57 (16) to 58 (3) (Professor Ludlam)
7 PR, paras 3.60 to 3.61 and footnote
Ludlam relating to the 18 cohort patients whom he considers to have been infected by the "implicated batch" "could be open to other interpretations".8

The material provided by Professor Ludlam as regards patients infected in the Edinburgh centre demonstrates that there were other patients infected in Edinburgh as well. The Edinburgh spreadsheet identifies a total of 23 patients who are thought to have been infected in Edinburgh.9 All of these patients are listed as being severe haemophilia A sufferers. Professor Ludlam has identified 18 patients whom he claims were the cohort patients (which, in this sense, we take to mean likely to have been infected by the implicated batch in Professor Ludlam’s view). The remaining 5 require separate consideration and are patients E5, E16, E19, E21 and E22 in the Edinburgh list.10 Information relating to the timing of their last negative and first positive tests gives some indication as to the timing of their infection ("the infection window") and their treatment histories give some indication as to their likely infection route, subject to the reservations about the completeness and accuracy of the data set out above.

The infection window of patient E5 is between 21 June 1982 and 18 October 1984. This patient was treated exclusively with domestically produced products.11 The infection window of patient E16 is between 5 August 1982 and 15 September 1983. This patient was also treated exclusively with domestically produced products.12 The infection window of patient E21 is between 5 May 1984 and 11 October 1984. This patient was also treated exclusively with domestically produced products.13 The treatment of these patients (as well as patient E19) appears to have been exclusively with NHS products. Given that these patients were not treated with the implicated batch, it appears likely that a number of other SNBTS products are likely to have been infective over a varied timescale potentially between 21 June 1982 and 17 November 1986. Further, the relatively late infection date of patient E21 is worthy of note, in light of developing knowledge of the risks of HIV infection by 1984 (covered below).

The infection window of patient E19 is between 1 January 1985 and 17 November 1986. This patient was also treated exclusively with domestically produced concentrates.14 This very late infection is of

---

8 PEN.012.1633 @ 1634
9 PEN.012.0159
10 This can be deduced from the identification of the 18 cohort patient on the list by Professor Ludlam in PEN.013.0001 @ 0004
11 PEN.012.0159 @ page 3
12 PEN.012.0159 @ pages 7 - 8
13 PEN.012.0159 @ pages 9 - 10
14 PEN.012.0159 @ page 9
considerable interest. By this time, a heat treated NHS factor VIII was available in Scotland. The infection of this patient at this time should not have occurred due to the availability of a safe concentrate product.

The infection window of patient E22 is between 16 March 1981 and 1 December 1981. This patient was treated with domestically produced products, other than a single infusion of Armour Factorate in 1981. His early infection and his exposure to commercial concentrate on that one occasion seems to suggest that he was probably infected by commercial products at a time similar to the infections of some of the boys at Yorkhill and by the product which they received (we address the appropriateness of commercial products being used at that time below).

Glasgow Royal Infirmary

The spreadsheet provided for the infections at Glasgow Royal Infirmary indicates that 13 patients were infected there. Nine of those are listed as being severe haemophilia A patients and one was a moderate haemophilia A patient (see below for the others including “David”).

A number of the Glasgow patients were treated with a mixture of commercial and domestically produced products, making it more difficult to determine how they are likely to have become infected. Patient G5 (whose infection widow is between 15 July 1982 and 15 December 1983) was treated only with PFC factor VIII over that period. Patient G7 has also been deemed to have been infected at the GRI and only received PFC concentrates there. Patient G8 (whose infection widow is between 1 January 1982 and 15 February 1984) was treated only with PFC factor VIII over that period. Patient G9 (whose infection widow is between 15 October 1984 and 15 October 1985) was treated only with PFC factor VIII over that period. These patients were infected with Scottish product over a period potentially lasting from 15 July 1982 to 15 October 1985.

The lateness of the infections of patient G3 (between 15 December 1984 and 15 November 1985) and patient G9 (between 15 October and 15 November 1985) are noteworthy. Heat treated concentrates were available from December 1984. Any infection after this time (particularly G3) should not have happened.

Yorkhill

15 PEN.012.0159 @ page 9
16 PEN.012.0158
The spreadsheet provided for the infections at Yorkhill indicate that 21 boys were infected there.\textsuperscript{17} A fuller analysis of the data provided is given below.

\textbf{Aberdeen}

The spreadsheet provided for the infections in Aberdeen indicate that 8 patients were infected there.\textsuperscript{18} There appears to be some confusion as to whether this figure is accurate as even the spreadsheet itself seems to discount some of the listed patients (which may to some extent explain the confusion in the total number of HIV infections in Scotland spoken to in evidence by Professor Ludlam). Inquiry Counsel certainly only appeared to be counting 3 infections in Aberdeen, a proposition with which Professor Ludlam agreed.\textsuperscript{19} The spreadsheet for Aberdeen does not provide the dates of the last negative tests so conclusions about timing are difficult. Dr Cuthbertson indicates that at least one of the patients in Aberdeen is likely to have been infected with a product which was not part of the "implicated batch".\textsuperscript{20}

\textbf{Dundee and Inverness}

The evidence available to the Inquiry suggests that there were no infections in either the Dundee\textsuperscript{21} or Inverness\textsuperscript{22} centres, subject to the limitations on the material presented at the oral hearings by haemophilia clinicians referred to above.

\textbf{Haemophilia B}

The tables provided to the Inquiry would suggest that there are only 2 haemophilia B patients who were infected with HIV in Scotland. This submission will consider predominantly, therefore, the position as regards haemophilia A patients, other than where haemophilia B patients are considered directly. The haemophilia B patients were both infected in Glasgow and both very late. Patient G10 was infected between January 1985 (revealed in later evidence) and 15 November 1985 (during

\textsuperscript{17} PEN.012.0160
\textsuperscript{18} PEN.012.0161
\textsuperscript{19} Transcript for 30/03/11 (day 14); 58 (Professor Ludlam)
\textsuperscript{20} PEN.012.1644 @ 1645
\textsuperscript{21} PEN.001.0234
\textsuperscript{22} PEN.001.0235
which time he received only PFC factor IX). Patient G11 was infected between 15 October 1985 and 15 July 1986 (during which time he received a mixture of domestic and commercial factor IX).

As Dr Winter observed without any detailed scientific explanation, the position internationally was that the manufacturing process of factor IX tended to result in less viral transmission than was the case with factor VIII.\(^\text{23}\) It could be that lower numbers of infections of haemophilia B patients is due to national self-sufficiency in factor IX being achieved much earlier than with factor VIII. Nevertheless at least one of the haemophilia B patients in Scotland was definitely infected by PFC factor IX.\(^\text{24}\)

Knowledge of the risks of viral infection and, in particular, HIV infection for patients with bleeding disorders

5. Knowledge of the risks of viral transmission from blood products at the start of the 1980s

It is submitted that it was clear by the start of the 1980s that there was a risk of viral transmission through blood and blood products. It was known that there were a number of potentially harmful viruses which could be transmitted parenterally, including hepatitis B, cytomegalovirus, Epstein-Barr virus and NANB hepatitis. It was known that these viruses could be transmitted after exposure to blood or blood products.\(^\text{25}\) Professor Lever also mentioned parovirus.\(^\text{26}\) A list of viruses transmitted by blood and blood products as at October 1984 is contained in an article by virologists Tedder and Barbara of that date.\(^\text{27}\) Many of these were known about at the start of the 1980s.

Even as early as the 1960s, the need to avoid transfusions was recognised because of the threat of viral diseases. In an SHHD document dated 16 December 1964 setting out the responsibilities of the SNBTA, it had been pointed out that serum hepatitis was transmitted in 0.5% of infusions with blood or small pool plasma and that, consequently, "no transfusion should be undertaken unless the

\(^{23}\) Transcript for 27/04/11 (day 16); 58 (24) to 59 (9) (Dr Winter)

\(^{24}\) Transcript for 27/04/11 (day 16); 59 (20 to 25) (Dr Winter) and Transcript for 03/05/2011 (day 18); 49 (1 to 3) (Professor Ludlam)

\(^{25}\) Transcript for 11/10/11 (day 52); 19 (5 to 17) (Professor Thomas)

\(^{26}\) Transcript for 18/05/11 (day 27); 22 (5 to 9) (Professor Lever)

\(^{27}\) LIT.001.3739 at 3740
benefits outweigh the risks of hepatitis" and the products "should only be used where there is a clear clinical necessity".\textsuperscript{28} This shows a clear recognition of the risks of viral infection from blood products for many years before the 1980s such that the policy was that blood and blood products should only be used where clinically necessary. This message applied \textit{a fortiori} to the use of factor concentrates, given that even a single infusion constituted exposure to many more potentially infected donors than the products in use in the 1964 paper. Despite these general principles having been in place since the advent of blood product use in the United Kingdom, the overall use of blood products grew dramatically between 1969 and 1991 in the UK, with cryoprecipitate being used much less in favour of factor VIII concentrate.\textsuperscript{29} In our view, the massive increased usage of concentrates from 1980 onwards to the virtual exclusion of products made from smaller pools such as cryoprecipitate lost sight of these early warnings about the risk of viral transmission and the consequent need to use these products only where absolutely clinically necessary.

Serious outbreaks of viral disease in Scotland were not unheard of by 1980. For example, as Dr Boulton described, there had been a serious hepatitis B outbreak in the renal unit in Edinburgh the year before he arrived (1979). In Dr Boulton's opinion, this affected the transfusion services in Edinburgh, in particular because a technician in the Edinburgh BTS had died as a result of that outbreak.\textsuperscript{30} The Edinburgh haemophilia centre director changed in 1980. Perhaps the memory of this incident and the significant risks of viral transmission were not as significant in the choice of products in the haemophilia department.

Before the AIDS crisis emerged, it was known that blood products transmitted numerous potentially harmful viruses. The presence and transmission of new viruses was discovered periodically. It was understood that the risk of viral transmission was increased by the use of concentrates rather than products made from smaller donor pools. That this had been evident for some time at the start of the 1980s is exemplified by the content of the 1975 World in Action film viewed during the course of the oral hearings.\textsuperscript{31} Professor Cash’s reference to the film in the BMJ demonstrates that it was known that hepatitis B was a "potentially lethal virus".\textsuperscript{32} Professor Cash refers to the importation of foreign concentrates as an unequivocal means to increasing the level of this virus in the whole

\textsuperscript{28} SNB.005.7275 @ 7277
\textsuperscript{29} See the overall UK factor VIII concentrate, cryoprecipitate and plasma usage in SNB.001.6095 and the overall increase in the usage of factor IX concentrate in SNB.001.6096
\textsuperscript{30} Transcript for 12/05/11 (day 24); 30 (16) to 31 (3) (Dr Boulton)
\textsuperscript{31} See, for example, PEN.015.0238 relating to an outbreak of hepatitis B and "non-B" hepatitis in Bournemouth in 1974 and the "pronounced increase in risk of post-transfusion hepatitis when some batched of commercial freeze dried concentrates are used" @ 0240
\textsuperscript{32} LIT.001.0245
community. Thus it was realised (and perhaps should have been more widely) that patients with bleeding disorders do not live in social isolation. The introduction of a potentially lethal virus into their community is a serious public health issue.

At the UK Haemophilia Directors’ Annual Meeting in September 1982 hepatitis was being discussed as a potentially serious problem with risk reduction measures being proposed including, for infrequent users of concentrate, the use of small pool cryoprecipitate and, for regular users of concentrate improved donor screening and pool security. At the dawn of the AIDS crisis the risks of viral transmission from blood products were known as was the need to reduce to a minimum the numbers of potentially infected donors, as was the need to make better use of treatments made from smaller donor pools.

6. The point at which it was and the point at which it should have been known that AIDS was a serious disease which could kill those infected with HIV

In the evidence which the Inquiry heard in connection with hepatitis C, it was often stated that attitudes towards preventative measures were influenced by the perception that the disease was relatively benign. In contrast, it was known from the outset that AIDS was a very serious disease with a high mortality rate. This should have meant that those responsible for the production and administration of blood products in Scotland adopted a cautious approach to prevent the transmission of AIDS to patients with bleeding disorders.

Professor Lever made it clear that one of the earliest details of AIDS which was known was that it was a disease which suppressed the immune system. Given the known risks of transmission of other viruses through blood products, it should have been realised that an immuno-suppressant disease could have the effect of making it less likely that recipients would be resistant to the other viruses to which it was known they were exposed. As Professor Lever accepted, the evidence of immuno-suppression and, in particular, evidence of death from immuno-suppression should have triggered a new analysis of the risk/benefit balance of using products which might transmit the

---

33 SNB.001.7431 @ 7435 - 7436
34 Transcript for 18/05/11 (day 27); 25 (3 to 8) (Professor Lever)
virus.\textsuperscript{35} In light of this, the "carry on as usual" approach adopted by haemophilia clinicians and seen in correspondence from senior figures like Professor Bloom was not justified.

As far as knowledge within Scotland was concerned, the Inquiry has seen notes of a meeting which was held at Heathrow Airport on 24 January 1983.\textsuperscript{36} The note was prepared by Dr Boulton (who attended the meeting) who expressed the view in evidence that the handwritten annotations on it were likely to have been made by Dr McClelland. In particular, the 45% mortality rate reported in the 800 infections in the US by 10 December 1982 (reported by Dr Craske) has been underlined.\textsuperscript{37} It is also marked that the incubation period of the disease (also reported by Dr Craske) appeared to be between 6 months and 2 years.\textsuperscript{38} Further knowledge about the emerging threat and the likely severity of it is considered below.

7. The point at which it was and the point at which it should have been known that there was a real risk that AIDS was caused by a virus which was transmissible by blood and blood products

Evidence available in 1981/1982 of the risk of AIDS in patients with bleeding disorders

Evidence emerged from the USA concerning the link between AIDS and haemophilia from the summer of 1982. The information emanating from the USA from that time should have been available to those responsible for the treatment of bleeding disorders in Scotland. It should have been influencing attitudes towards treatment. After all, there was general knowledge about the disease and its risks in this country and the risks of extensive use of imported US products

Dr Boulton pointed out that the report in the MMWR on 16 July 1982\textsuperscript{39} commenting on three cases of AIDS in heterosexual haemophiliac patients was well known to historians of HIV.\textsuperscript{40} It was this first report which gave rise to the initial concern that AIDS might be caused by an agent transmissible in blood, as earlier reports had been restricted to the drug using and homosexual communities. The MMWR of July 1982 referred to the probability that AIDS was transmitted by a blood-borne

\textsuperscript{35} Transcript for 18/05/11 (day 27); 26 (17 to 21) (Professor Lever)
\textsuperscript{36} SNB.001.4033
\textsuperscript{37} SNB.001.4033 @ 4035
\textsuperscript{38} SNB.001.4033 @ 4036
\textsuperscript{39} LIT.001.0559
\textsuperscript{40} Dr Boulton B2 statement at page 4
infection. This information and opinion stemmed from the US Centers for Disease Control (CDC), the federal agency whose responsibility it was to investigate new infectious diseases.

As became clear in evidence, there appeared to be evidence of an earlier infection in a haemophiliac under the care of Dr Ratnoff in 1981 but there is no evidence that this as known about widely, other than to Professor Forbes, who was contacted directly by Dr Ratnoff with whom he had worked previously. The case does not seem to have been reported until 1983. It is interesting to note that Professor Forbes did not indicate in his evidence that he had taken the opportunity to contact Professor Ratnoff over the crucial period during which news of greater number of infections amongst US haemophiliacs was emerging. One would have thought that this might have avoided the inevitable delay in the reporting of cases from the USA. It seems likely, given his views, that Dr Ratnoff would have advised him that this was a very serious matter and that he should consider minimising the exposure of his patients to factor concentrates.

A Department of Health Memo dated 16 July 1982 entitled ‘American Factor VIII’ indicates that there was a knowledge within the department at that time that American factor VIII seemed to be transmitting a new virus, and that around 400 haemophiliacs there had become infected. Dr Winter was of the view that the author of the memo might have shown a bit more concern about this emerging picture. He also suggested that the tone of it indicated a greater concern for the furore surrounding the emerging news than for the haemophiliacs in the UK who might have been similarly infected, thought he did concede that this was very early in the emerging story.

American articles available at the beginning of 1983 relating to AIDS were presented to a Joint meeting of the SNBTS and haemophilia directors by Professor Cash on 7 January 1983. These joint meetings appear to be the only formal setting in which haemophilia directors came together at this time. Professor Ludlam told the Inquiry that no formal haemophilia directors' meetings took place until 1985 and that before that the Scottish centres worked much more independently from each other as separate units. No information about the precise nature of the information communicated on 7 January 1983 is minuted, no action is proposed and the entry about AIDS is surprisingly brief in light of the contemporaneous US material. Amongst that material is an article by

---

41 PEN.016.1172  
42 DHF 001.6744  
43 Transcript for 26/04/11 (day 15); 116 (15 to 16) (Dr Winter)  
44 Transcript for 26/04/11 (day 15); 117 (6 to 9) (Dr Winter)  
45 SNB.001.5160 @ 5166 (21 January 1983)  
46 Transcript for 03/05/2011 (day 18); 7 (4 to 5) (Professor Ludlam)  
47 Transcript for 03/05/2011 (day 18); 102 (18 to 23) (Professor Ludlam)
Dr Bruce Evatt. In it he describes contemporaneous appreciation of scientists at the CDC in Atlanta that (a) it had been warned in a similar article in Science on 7 January 1982 that the CDC considered haemophiliacs to be at high risk of AIDS which may be transmitted by an agent in factor concentrates (b) AIDS was the second leading cause of death amongst the haemophiliac population in 1982 though it had only been discovered in the haemophiliac population in the summer of that year and (c) haemophilia clinician Dr Oscar Ratnoff had suggested that a way to minimise the risk for haemophiliacs would be to use cryoprecipitate rather than factor concentrates.

Also amongst the material available from the US at the meeting in January 1983 would have been the MMWR article of 10 December 1982. This was the article with the information about the infection of the baby in San Francisco as well as updates on the infections of other haemophiliac AIDS patients in the USA. The transmission of AIDS to the San Francisco baby via multiple blood transfusions indicated that the disease was transmissible through blood products whether multiple or single donor. In his evidence, Professor Lever stated that the material in this article was "very compelling data for an infection."

It is submitted that the system for the appreciation and reaction to this information was deficient. Unfortunately in Scotland after the December 1982 MMWR article, the possibility of producing freeze dried cryoprecipitate was abandoned (see below). The lack of consideration of the materials evident in the minutes of the joint meeting on 9 January 1983 is indicative of an attitude which prevailed in Scotland and the United Kingdom throughout this period of complacency that this was an American problem from which recipients of blood and blood products here would be protected due to the voluntary donor system.

The UK background to the emergence of the US evidence in 1982

It would be inaccurate for the impression to be gained that it was purely through American evidence that knowledge of the existence of a new disease (later called AIDS) emerged. Dr Winter, in his evidence spoke of an "extraordinary event" (the publication in the Lancet of details of a case of a

48 LIT.001.1589 - published in "Science" dated 21 January 1983 reporting the details of a workshop held at the Centre for Disease Control in Atlanta on 4 January 1983
49 SGH.008.5105
50 SGH.008.5105 @ 5108 (10 December 1982) (MMWR)
51 Transcript for 17/05/11 (day 26); 49 (5) (Professor Lever)
52 SNB.001.5160 (21 January 1983)
man with what turned out to be AIDS in 1981 and there being "a lot of talk" about it. He worked in London at that time. The man had been treated at the Brompton Hospital. Dr Winter notes that the theory prevalent at that time was that there was a link between the homosexual lifestyle and the immune function changes which were apparent in this patient. The article specifically links this case to the similar presentations of homosexual males with an unexplained respiratory illness in the US. Dr Winter talked of this being treated as a "new disease". He commented that the theory about the aetiology of the disease later changed as haemophilia and blood transfusion patients started to be described. The important thing to take from this is that, even in hospitals in the UK and in publications such as the Lancet, evidence of the emergence of a new disease was evident from 1981. It was therefore not out of the blue that similar cases emerged in the blood and blood product recipient communities in the US in 1982 and in the UK in spring 1983. Nor was the disease a uniquely American phenomenon from 1981. It is against this background that one requires to view the emerging evidence from the US of the three haemophiliac infections described by Dr Evatt. Far removed from the attitude demonstrated at the joint meeting in January 1983, Dr Winter took the view these cases made viral aetiology very much more likely than the previously favoured theories.

Further emerging evidence - 1983

Articles began to be published in the Lancet in early 1983 with the details of AIDS-like disease in haemophiliacs. One of these concluded that transmission of an infectious agent in blood products seemed likely. A further such article in the Lancet reported steps being taken as a result of infections amongst the haemophiliac community in the US involving (a) the cancellation of elective surgical procedures (b) the reduction of exposure to concentrates and (c) where possible, the switching of patients to cryoprecipitate rather than factor concentrate treatment. The reaction of the author of this article was typically non-urgent, suggesting that the available evidence merited further monitoring of patients and did not constitute a strong argument for treatment policy. No consideration is given here to the temporal coincidence between the rise of AIDS in the homosexual and drug using populations and the emergence of an apparently similar disease in the blood and blood product recipient population.

53 LIT.001.0399 (12 December 1981)
54 Transcript for 26/04/11 (day 15); 110 (25) to 111 (21) (Dr Winter)
55 Transcript for 26/04/11 (day 15); 114 (13 to 17) (Dr Winter)
56 SNB.007.3455 (29 January 1983)
57 LIT.001.0408 (2 April 1983)
Knowledge and understanding of the risks in the infectious diseases community in the UK

In a letter from Dr NS Galbraith of the Public Health Laboratory Service to Dr Ian Field (department of health and social security) dated 7 May 1983, the author's current understanding of AIDS was set out.58 The letter was sent the week after a case of AIDS in a haemophiliac patient in Cardiff was reported. The attached paper recommended that all blood products made from blood donated in USA after 1978 should be withdrawn based inter alia on the current understanding that (a) the AIDS epidemic in the USA was probably due to a transmissible agent (b) the agent was probably transmissible through blood and blood products (c) AIDS had already spread to haemophiliacs (d) although number of cases was small, this did not indicate that the risk was small because there was known to be a long incubation period (e) there was no known way of ensuring that blood or blood products were free from AIDS and (f) the mortality rate of AIDS was 50% one year after diagnosis and was likely to rise to 70%.

It was clear from the oral evidence heard by the Inquiry that the understanding of AIDS set out in this letter was largely unknown to those responsible for the treatment of patients with bleeding disorders at this time. This was explained by Professor Ludlam by the fact that the matters discussed at the Committee on the Safety of Medicines were highly confidential due to the fact that they related to products and hence were commercially sensitive.59

Professor Lever explained the culture which existed at the time as far as the medical discipline of infectious diseases was concerned. He considered the views expressed by Dr Galbraith to be "understandable and rational". He also said that during the 1960s and 1970s infectious diseases practice had rather faded away. However, he made it clear that this was not due to the lack of new infectious diseases which come along every year.60 He described a general reluctance in the medical profession to seek the advice of specialists in infectious diseases or a lack of such specialist advice being available in clinical practice in the 1980s.61 This may account for the low level of attention paid to the possibility of new infectious diseases arising in the world of blood and blood products but

58 MIS.001.0001
59 Transcript for 04/05/11 (day 19); 35 (23 to 24) and 36 (5 to 6) (Professor Ludlam)
60 Transcript for 17/05/11 (day 26); 78 (13) to 79 (10) (Professor Lever)
61 Transcript for 17/05/11 (day 26); 79 (19) to 80 (15) (Professor Lever)
does not excuse it. Professor Lever said that the possibility of an infectious aetiology was clearly known to senior haemophilia clinicians and they received advice from infectious diseases experts like Dr Galbraith. However, they appear not to have taken enough notice of it or appreciated the level of the threat.  

In his Inquiry statement, Professor Lever states that "in May 1983 [there was] much circumstantial evidence and consensus opinion in the majority of doctors that a transmissible agent, almost certainly a virus, is the most likely aetiology". He told the Inquiry that this would have been the consensus opinion amongst doctors in different disciplines at that time. He also commented that if he had been asked for his honest opinion at that time, without the requirement to reassure the audience, that he thought it was quite likely that AIDS was caused by an infectious agents transmitted by blood products. He expanded upon his reasoning at the time by saying that he would have been persuaded by the infectious theory based on (a) there was evidence that this disease caused lymphocyte dysfunction and there was experience of a retrovirus targeting lymphocytes in humans (HTLV-I) (b) there appeared to be clusters in particular geographic areas (c) sexual transmission of infectious diseases and transmission in blood are extremely well documented. He was also of the view in May 1983 that the connection between AIDS and blood products, particularly (but not restricted to) commercial products made in the US was very strong. It is submitted that the very real threat of AIDS to patients with bleeding disorders should have been realised and acted upon by those responsible for their care by the spring of 1983.

Professor Lever contrasted the position being taken by Professor Bloom in his advice to the Haemophilia Society (see below) and that given by Dr Galbraith only a few days later from an infectious diseases point of view. He stated that the latter had a duty to apply a precautionary principle in the public interest. His position was therefore unequivocal. This was contrasted with the position of Professor Bloom who came at the problem from a haemophilia clinician's perspective. In our view what was required was a greater balance between the two extremes. It is interesting to note that, at that time, Professor Lever confirmed that there would be consultant

---

62 Transcript for 17/05/11 (day 26); 82 (13) to 83 (1) (Professor Lever)
63 PEN.015.0517 @ 0521
64 Transcript for 18/05/11 (day 27); 4 (20 to 22) (Professor Lever)
65 Transcript for 18/05/11 (day 27); 2 (20 to 25) (Professor Lever)
66 Transcript for 18/05/11 (day 27); 3 (3 to 14) (Professor Lever)
67 Transcript for 18/05/11 (day 27); 5 (9) to 6 (2) (Professor Lever)
68 Transcript for 18/05/11 (day 27); 12 (4 to 9) (Professor Lever)
69 Transcript for 18/05/11 (day 27); 12 (12 to 17) (Professor Lever)
virologists in all large hospitals and access to virological advice in all hospitals in the UK. Links through the requirement to treat chronic infections with diseases like hepatitis B would already have been established between haemophilia clinicians and virologists. Such infectious diseases experts would have been likely to have had a broader perspective and a deeper understanding of the emerging infection at that time. Haematologists giving evidence to the Inquiry seemed to be unaware of the Galbraith recommendations at the time. This suggests that the advice of virologists may not have been sought or, if sought, was not understood.

The response of the clinicians responsible for the care of patients with bleeding disorders to the emerging evidence of the viral threat

The minutes of the UKHCDO Hepatitis Working Party from 1 March 1983 are instructive as to the state of knowledge of the members of that group, and hence the UKHCDO, at that point in time. The latest information was that there had been at least 10 haemophilia A patients reporting with the clinical symptoms of the disease (9 with no other pre-disposing factors) and three such blood or platelet transfusion patients. The disease had an incubation period of between 6 months and 2 years. Half of the haemophilia patients were already dead. The total number of reported AIDS cases in the USA to 10 December 1982 was just under 800 and the slow progression of the disease from the first presentation of symptoms to diagnosis was also known. Importantly as a result of this information and a consideration of the various theories about the aetiology of the disease the following statement was made:

"All the epidemiological evidence is consistent with the existence of a transmissible agent whose mode of spread is remarkably similar to that of hepatitis B"  

This conclusion based on “all the epidemiological evidence” was reached by an expert group of the UKHCDO, the organisation responsible for the treatment of patients with bleeding disorders in the United Kingdom. The evidence upon which it is based appears to stem from the period to December

---

70 Transcript for 18/05/11 (day 27); 15 (22) to 16 (12) (Professor Lever)  
71 Transcript for 18/05/11 (day 27); 17 (16) to 18 (2) (Professor Lever)  
72 Transcript for 18/05/11 (day 27); 21 (4 to 10) (Professor Lever)  
73 DHF.001.7178  
74 DHF.001.7178 @ 7181  
75 DHF.001.7178 @ 7182  
76 DHF.001.7178 @ 7178  
77 DHF.001.7178 @ 7182
1982. The urgency of the emerging AIDS picture in late 1982 is perhaps best summed up by the fact that the topic of AIDS was raised almost as an afterthought, possibly under "any other business" at the UKHCDO meeting in 1982.\textsuperscript{78}

Dr Mark Winter, a relatively independent haemophilia clinician whose practices do not fall directly within the remit of the Inquiry, gave evidence to the effect that by December 1982 any clinician looking at the available data (the MMWR articles available to that point) would have to believe that AIDS was a transmissible disorder and that it could be transmitted by blood and blood products. It was the only clinical interpretation of the data that was available.\textsuperscript{79} Dr Winter (not a centre director by that stage) seemed to have been fully aware of this emerging picture in 1982. In light of that, it is surprising that Professor Ludlam (by then a centre director at Edinburgh for almost 3 years) saw fit to downplay his apparent awareness of that publication and to say that "we [the haemophilia directors] weren't, apart from hepatitis, in the infectious diseases business".\textsuperscript{80} We would suggest that the history of haemophilia care and the viral risk associated with it to that point should have made it clear to clinicians like him that they were in the infectious diseases business, whether they had chosen to be or not.

News of the infection of the San Francisco baby was described by Dr Winter as a really critical moment.\textsuperscript{81} There then developed a major split amongst the haemophilia clinicians as to whether it was likely that AIDS would be transmissible by UK concentrates as well, given (a) the relative safety of the voluntary blood donor system on the one hand and (b) the susceptibility of large pool concentrates to transmit viruses on the other.\textsuperscript{82} As has been noted above, evidence of AIDS in the potential donor community in the UK had been available since December 1981. Nothing had been done to exclude high risk donors such as homosexual men. As Dr McClelland was later quoted in the Scotsman after the emergence of details of HIV infections of patients in Edinburgh through their use of SNBTS concentrates as admitting "it would not have been realistic to expect Scotland to be bypassed". Dr McClelland had liked to think that the infected blood had been given unwittingly but, as the article notes, the system had no real protection against this or deliberate donation by a member of a high risk group.\textsuperscript{83}

\textsuperscript{78} Transcript for 03/05/2011 (day 18); 94 (20 to 23) (Professor Ludlam)
\textsuperscript{79} Transcript for 27/04/11 (day 16); 8 (16 to 21) (Dr Winter)
\textsuperscript{80} Transcript for 03/05/2011 (day 18); 95 (1 to 8) (Professor Ludlam)
\textsuperscript{81} Transcript for 27/04/11 (day 16); 9 (3) (Dr Winter)
\textsuperscript{82} Transcript for 27/04/11 (day 16); 9 (19) to 10 (6) (Dr Winter)
\textsuperscript{83} SGH.002.6484 (22 December 1984)
Under reference to an article by virologists Tedder and Barbara, and its claims about the qualities of viruses transmitted by blood, Professor Ludlam accepted in evidence that it is in the nature of such viruses that they tend to have a sub-clinical initial phase. Given this background, we would submit that the reaction to the news of transmission of a potentially lethal virus should have been informed by the knowledge that viruses transmitted by blood tend to have a lengthy sub-clinical period. A limited number of cases could, therefore, be, as some commentators did think at the time, merely the "tip of the iceberg".

Certain haemophilia clinicians (such as Professor Ludlam) continued to pursue the hypothesis that symptoms of immuno-suppression in haemophiliacs might be caused by the overloading of their immune systems by their frequent concentrate infusions over a long period, known as the antigen overload theory. In our submission, this theory (a) disregarded the evidence of the San Francisco baby, deemed so influential to the opinion of Dr Winter (b) was very much outwith the generality of medical understanding and opinion at the time (Professor Lever confirmed that it was never the most prevalent theory based on the fact that there was no precedent for infection being caused by protein overload at that time) (c) largely disregarded the temporal coincidence of the development of symptoms of immuno-suppression in the homosexual community in the USA and similar symptoms in haemophiliacs and (d) was based largely on research done in vitro which was not necessarily relevant to what happened in vivo. Most importantly, the existence of this alternative theory did not absolve the clinicians from taking action to reduce the risk of their patients by reducing their exposure to factor concentrates. The general acceptance of the viral theory in itself was a sufficient basis upon which action should have been taken to reduce exposure of haemophilia patients to concentrates, in particular US concentrates. The fact that the antigen overload theory also deemed immuno-suppression to result from exposure to concentrates was also a reason to minimise that exposure, whatever theory one favoured as to the cause of the symptoms. As Professor Ludlam himself put it in his evidence, the genesis of the theory had been "that it was possible that AIDS was arising in haemophiliacs because during the 1970s there was increasing use, massive increasing use of factor VIII concentrates". Professor Lever commented at length in his evidence about the risks of antigenic overload and the introduction of foreign proteins into the body. He responded to the suggestion that the advantages of treatment made the downsides of such treatment a price worth paying by saying that that would be the case on the assumption that

---

84 LIT.001.3739
85 Transcript for 04/05/11 (day 19); 2(8) (Professor Ludlam)
86 Transcript for 18/05/11 (day 27); 30 (10 to 14) (Professor Lever)
87 Transcript for 27/04/11 (day 16); 19 (4 to 15) (Dr Winter)
88 Transcript for 03/05/2011 (day 18); 150 (2 to 5) (Professor Ludlam)
the amount of clotting factor being used was the minimum required to sustain normal clotting. The evidence clearly suggests that the amounts being given to patients over this period were not controlled in accordance with that standard.

Professor Lever expressed the view that the fact that haemophilia clinicians appeared to be less inclined to suspect a viral aetiology was due to their desire not to have to face up to the consequences of that situation. Further, Dr Mark Winter informed the Inquiry that he became the local designated physicians for AIDS in his area as he "seemed to be the only doctor who knew anything of it." He described the concept of "comprehensive care" for people with bleeding disorders as being based on a mistrust of their patients being allowed to go anywhere else in the hospital without them being involved. Professor Lever made it clear that clinical virology was emerging as a discipline at this time and the material considered above makes it clear that evidence was available internationally and from other medical specialists which haemophilia clinicians may have been slow or unwilling to accept.

This reluctance to accept advice from elsewhere, to face up to the evidence and to accept the fact that concentrates could be the problem was a cause of ongoing endangerment of their patients and stemmed not only from a reluctance to stop using concentrates which had been so successful but also from a realisation that if the theory were true, it was possible that many of their significantly exposed patients could be infected.

Proposed response to this knowledge

By the time of the agenda for the Council of Europe blood transfusion experts meeting in May 1983 being circulated on 28 April 1983 cases of AIDS amongst the haemophilic/blood transfusion population had been reported in Austria (1 suspected), Belgium (1), the Federal Republic of Germany (2), Spain (3) and Finland (1 suspected).

It was part of the Council of Europe's Recommendation R83(8) that efforts should be made "to expose the recipient to a minimum number of donations of blood when the transfusion is of cellular
and coagulation factor products”. Further, it was recommended (a) to avoid where possible the use of coagulation factor concentrates prepared from large pools (especially but not exclusively in countries where self sufficiency had not been achieved) and (b) to inform attending physicians and selected recipients, like haemophiliacs of the potential hazards of haemotherapy and the possibilities of minimising the risks. This Recommendation was made specifically "considering the growing importance of a new and severe health hazard, Acquired Immune Deficiency Syndrome (AIDS), that may be caused by an infectious agent transmissible by blood and blood products". This recommendation was therefore made at a time when this international body considered the risk to be great enough, even in countries which drew heavily or exclusively on their own products, that action required to be taken in the form of reducing exposure to concentrates made from large plasma pools. A leaflet prepared by the American Red Cross is attached as an appendix for the assistance of national blood transfusion services in the preparation of similar leaflets. No attempt is made to classify AIDS as an American problem. Dr McClelland was of the view that the Council of Europe recommendations were mostly transfusion focussed and would not have been considered much by clinicians. Given that their content shows an international concern which is relevant to those clinicians’ patients, this narrow approach was misguided.

8. The point at which it was and the point at which it should have been known that there was a real risk that the virus which caused AIDS had entered the donor population in Scotland, including knowledge about the extent of protection offered to recipients of blood products by the Scottish system of self exclusion of blood donors

Action taken to minimise the risk of the virus penetrating the Scottish blood transfusion system

A meeting of the Haemophilia and Blood Transfusion Working Group in Scotland took place on 22 March 1983. It was noted that in the USA and Canada the AIDS problem had caused there to be a move away from the use of factor VIII concentrate to cryoprecipitate with resultant problems of supply. A concern about AIDS spreading to UK was also noted in the next sentence but no proposals were discussed about whether a policy change as regards product use or availability. The

95 DHF.002.2149 (23 June 1983)
96 Transcript for 06/05/11 (day 21); 116 (8 to 21) (Dr McClelland)
97 SNB.001.5183
98 SNB.001.5183 @ 5184
transfusion directors were loathe to ask questions of potential donors but "it was hoped" that homosexuals and others at risk would be deterred from donating blood. In light of the recognised risk that AIDS may become a problem for the recipients of blood and blood products in the UK, it appears remarkable that the directors seemed to think that at risk donors would be discouraged from donating without any measures being out in place to ensure that happened. The risk was clearly recognised at this meeting but not acted upon. Haemophilia directors were aware of that from this meeting.

The presence of the risk in the Scottish donor population - knowledge on the part of the clinicians

In his evidence, in response to questions relating to a meeting in May 1983 and a document emanating from it, Professor Forbes indicated that, in light of the fact that there had been patients found to be HIV positive in the UK "we had no problem in saying that there was a potential for contamination of blood products even from local, home grown sources. So that was always a concern, that HIV would come into the donor population of the UK. And that has already happened". Despite this when asked about his reaction to that state of affairs, he answered by saying that "we were scratching our heads" and treatment was favoured over non-treatment.99 He gave no indication that changing the type of treatment or reducing the amount of treatment was contemplated. Later in his evidence, under reference to a statement from Dr Sandy Macmillan who had pointed out that he had started to see patients with AIDS in the GUM department from early to mid 1983, Professor Forbes confirmed that Dr Macmillan had been part of their team and that he had been aware of these patients with AIDS in Scotland (though he could not commit to the time frame).100 He was based in Edinburgh and Professor Ludlam also had professional contact with him.101 One can deduce from his contact with Dr Macmillan in Edinburgh and in light of the anxiety in the haemophilia world that it seems likely that haemophilia clinicians would have known about the emergence of AIDS in Scotland in mid 1983.

Further, Dr McClelland had a definite recollection of having had meetings with Dr Macmillan and Derek Ogg in the first half of 1983 at which he was told about his patients showing signs of a new

99 Transcript for 28/04/11 (day 17); 110 (19) to 111 (11) (Professor Forbes)
100 Transcript for 28/04/11 (day 17); 121 (3 to 6) (Professor Forbes)
101 Transcript for 04/05/11 (day 19); 23 (1 to 3) (Professor Ludlam)
form of immune deficiency. In the context of the information available about the nature of AIDS in patients in the US, this was a clear indication that AIDS had arrived in Scotland.102 Dr McClelland accepted that his contact with Dr Macmillan indicated to him that the Rubicon had been crossed by this stage.103 By the spring of 1983 the signs were such that the transfusion service needed to do something about it.104 Dr Bouton indicated in his evidence that by summer 1983 there was a concern in the blood transfusion service in Edinburgh not just about potentially infected homosexual donors but also about drug users giving blood in Edinburgh.105 By that time there was a concern about the possibility that HIV had entered the donor population then or that it would do so imminently.106 This information could and should have been clearly and swiftly relayed to Professor Ludlam and indeed to all haemophilia clinician in Scotland. Dr McClelland indicated that he recalled having communicated this information to clinicians "quite early on" but his testimony in this regard as to when and how this was done was extremely vague107 He later accepted that he did not think that there was inter-disciplinary sharing of how close the risk might be.108 At the same time, there was an ever increasing demand for concentrates.109

Information consistent with AIDS having arrived in Scotland even appeared in print at that time.110 Professor Ludlam accepted that he was aware of the possibility that people (meaning potential donors) might become infected in Scotland and that they required to keep their antennae out.111 He also accepted that they knew it would arrive but did not know when due to the long incubation period.112 Indeed, it was a probability that AIDS would arrive in Scotland.113

This evidence is indicative of a distinct lack of urgency and decisive action by haemophilia directors and the SNBTS in light of the known and accepted risk that positive donors might have given blood in Scotland, with the consequence that SNBTS concentrates might be infected. Keeping one's antennae out, as Professor Ludlam put it was insufficient. AIDS was known to be a lethal disease with a

102 Transcript for 06/05/11 (day 21); 130 (14 to 27) and 135 (1 to 11) (Dr McClelland)
103 Transcript for 06/05/11 (day 21); 134 (22 to 25) (Dr McClelland)
104 Transcript for 06/05/11 (day 21); 135 (22) to 136 (2) (Dr McClelland)
105 Transcript for 12/05/11 (day 24); 30 116 (19) to 117 (3) (Dr Boulton)
106 Transcript for 12/05/11 (day 24); 117 (21) to 118 (2) (Dr Boulton)
107 Transcript for 06/05/11 (day 21); 133 (11 to 18) (Dr McClelland)
108 Transcript for 06/05/11 (day 21); 137 (22 to 25) (Dr McClelland)
109 Transcript for 06/05/11 (day 21); 141 (6 to 11) (Dr McClelland)
110 SGH.002.6698 (Gay News of 9 July 1983)
111 Transcript for 04/05/11 (day 19); 26 (5 to 8) (Professor Ludlam)
112 Transcript for 04/05/11 (day 19); 27 (1 to 3) (Professor Ludlam)
113 Transcript for 04/05/11 (day 19); 28 (13 to 14) (Professor Ludlam)
lengthy sub-clinical phase. The attitude adopted was really consistent with infection having to occur within the blood product recipient community before action would be taken. In our submission, the available evidence demanded urgent preventative action to minimise the risk of transmission.

**Action taken by the transfusionists to exclude high risk donors**

Professor Ludlam indicated that he was aware of the efforts being made by Dr McClelland to institute a system of high risk donor exclusion in 1983.\(^ {114}\) The Inquiry has heard evidence that even after the donor leaflet system was introduced in the summer of 1983, it was not implemented throughout the different regions uniformly. The extent to which the clinicians were aware of this is not clear. There was little point in having a system which was not uniform in application given the cross regional use of blood. Professor Lever also suggested that the system left it open to regional transfusion directors to make up their own minds, based on their own perception of the available evidence as to the risk and of the likely effectiveness of the leaflets in their region, as to whether to institute the system or not.\(^ {115}\) The material available to the Inquiry demonstrates that this lack of uniformity was, in fact a reality. The leaflet of the type used by Dr McClelland in the east of Scotland and dated 24 May 1983 sets out the current understanding of the disease and its possible transmission routes and refers to homosexual men, partners of bisexual men, drug users and women who have multiple sexual partners as high risks groups who should refrain from giving blood.\(^ {116}\) In a donor leaflet available to the Inquiry from the west of Scotland dated 16 June 1983, there is no mention of transmission routes, homosexual donors, partners of bisexual men, women who have multiple sexual partners or drug use in the text. The only reference to the disease at all is a sticker on the leaflet saying "Have you heard of AIDS?".\(^ {117}\)

This regional autonomy resulted in a total lack of protection. In Edinburgh, where the system was instituted, the clinicians may have taken some comfort from the fact that efforts were made to exclude high risk donors. This was a false comfort, however, on the basis that the products being used were made from plasma donated in any part of the country.

\(^ {114}\) Transcript for 04/05/11 (day 19); 28 (11 to 12) (Professor Ludlam)
\(^ {115}\) Transcript for 17/05/11 (day 26); 112 (1) to 113 (6) (Professor Lever)
\(^ {116}\) SNF.003.7153
\(^ {117}\) PEN.013.1395
9. Communication of and access to current information and opinions on the risks of viral transmission from blood products for those treating patients with bleeding disorders in the first half of the 1980s

As noted above the extent and efficiency of communication and discussion between medical professionals not immediately involved in the care of patients with blood disorders to those in immediate charge is questionable. Other communication issues are apparent. The extent of communication between infectious diseases experts and haemophilia clinicians on the aetiology of AIDS and the risk which it posed to patients with bleeding disorders is addressed above, as is the extent of communication between the transfusionists and the clinicians on the likely arrival of AIDS in Scotland and the extent of the protection afforded by the donation system.

Communication between the SNBTS and the haemophilia clinicians on the risks

From as early as 1982, there was Scottish representation at international conferences at which the emerging AIDS problem was discussed. At such a conference in Budapest in August 1982, Dr Aledort spoke about the emergence of pulmonary infection in haemophiliacs in the US (as described in the July MMWR). This conference was attended by Dr McClelland and Dr Foster, not by the Scottish haemophilia clinicians. The WHO conference in Geneva in November 1983 considered the emerging threat of AIDS. Proposals relevant to various measures which might be taken to reduce the risk of the spread of AIDS were considered, including certain measures relevant to haemophilia clinicians. The conference considered the possibility of (a) concentrate use being limited to essential situations only and (b) reducing the number of donors to which a patient is exposed in light of the emerging AIDS threat. The conference was attended by Dr Brian McClelland on behalf of the SNBTS. After the conference he reported back to his SNBTS colleagues, reporting on elements of the conference and its proposals which appeared relevant to the blood transfusion side. He presented this report to the SNBTS directors meeting on 8 December 1983. There is no evidence of his having reported the haemophilia related proposals or information back to the haemophilia clinicians. In her evidence, Dr Pettigrew discussed how she, as a junior doctor at Yorkhill, required to rely on comments from colleagues and trying to source journals from elsewhere in the hospital for

118 Transcript for 06/05/11 (day 21); 91/92 (Dr McClelland)
119 SNF.001.2575 @ 2592
120 SNF.001.2575 @ 2591
121 SNF.001.0552
up to date information. Given the picture she painted of the extensive responsibilities of the consultant at Yorkhill over a number of different areas, one wonders whether he was able to achieve any greater degree of precision in keeping his knowledge up to date.

Dr McClelland worked in the office next to that occupied by Professor Ludlam. He indicated that the haematology department and the blood transfusion service were "extremely close together" within the RIE. He was clear to point out, however, that the two were very much separate departments with one being a department of the hospital and the other being a department of the SNBTS. It seems that administrative distance counted more than physical proximity. Dr McClelland stated that he had regular contact with Professor Ludlam and that he was not "immune" to considering the needs of the haemophilia treaters. We would have expected that the needs and interests of the patients, the end users of the products he was distributing, would and should have been at the forefront of his mind in everything he did. One would have expected that Dr Boulton might form a natural bridge between the two departments as he had experience on both areas. He confirmed, however, that he would not speak to Professor Ludlam about the way patients should be treated.

Dr McClelland had attended the two conferences referred to above and, indeed, (as detailed above) had been actively involved in the deferral of high risk donors in order to minimise the risk of transfusion of HIV infected blood in Scotland and the preparation of properly worded donor leaflets throughout 1983. He had been so keen that homosexual donor groups be excluded from donating blood that he had been involved in negotiations with homosexual rights groups who had concerns about this proposal. The fact that he was prepared to go through this process to ensure the introduction of a leaflet designed to achieve exclusion of homosexual donors, demonstrates that from spring 1983, Dr McClelland entertained serious concerns that HIV had entered the Scottish donor population. He had been in contact with Dr Macmillan and was aware of the possible AIDS infections in Edinburgh in the GUM clinic. There is no evidence of him having communicated these concerns to his neighbour who, at this time, continued to expose his patients to ever increasing amounts of factor concentrates, with many of them receiving home and/or prophylactic treatment.

---

122 Transcript for 05/05/11 (day 20); 70 (2) to 71 (16) (Dr Pettigrew)
123 Transcript for 05/05/11 (day 20); 8 (8 to 21) (Dr Pettigrew)
124 Transcript for 06/05/11 (day 21); 96 (10) (Dr McClelland)
125 Transcript for 06/05/11 (day 21); 96 (16 to 20) (Dr McClelland)
126 Transcript for 06/05/11 (day 21); 119 (3 to 6) (Dr McClelland)
127 Transcript for 12/05/11 (day 24); 100 (6 to 11) (Dr Boulton)
He did not communicate these concerns to any haemophilia clinicians for that matter, nor is there any evidence that he communicated the suggested risk minimisation measures proposed for haemophilia care at the Geneva conference. In his evidence, Dr McClelland seemed to work on the assumption that information to which he was privy would have been available to Professor Ludlam as well. The position in Edinburgh is illustrative of the existence of sub-optimal practices as regards information communication at a time when a clear understanding of the information and a frank exchange of professional opinions between senior colleagues in different disciplines was essential to ensuring the correct response to an emerging killer disease.

Professor Hann was asked about a conference which he had attended in Stirling in 1982. He explained that he had attended it due to his interest in infection in immuno-suppressed patients but that (a) it was very difficult for consultant to get away to such events as they were very busy and (b) he would have expected that it was a conference of interest to leukaemia treaters and not "clotters". The conference disseminated information about the emerging AIDS crisis, reporting the apparent symptoms, outbreaks of infection in the USA and Europe and the high mortality rate. It is interesting that the rigidity of medical disciplines was a reason for this information not being disseminated to those primarily concerned with bleeding disorders. Professor Hann left the conference thinking that it was most likely that this new disease was caused by a new viral agent and that it might possibly be relevant to the patients whom he treated with haemophilia.

Professor Hann accepted that there required, over this period, to be better co-ordination amongst the various parts of the medical profession so that the best approach possible could be formulated at as early a time possible. The crisis gave rise to the need for multi-disciplinary teams to achieve this aim. The infancy of virology as a discipline was also a factor.

In later evidence to the Inquiry, Professor Lowe commented as follows:

128 Transcript for 06/05/11 (day 21); 39 to 40 (Professor Hann)
129 Transcript for 06/05/11 (day 21); 45 (14 to 15) (Professor Hann)
130 Transcript for 06/05/11 (day 21); 46 (3) (Professor Hann)
131 Transcript for 06/05/11 (day 21); 57 to 58 (Professor Hann)
"So I think we have the mentality in healthcare professions that if there is a difficult topic, the best way to spread knowledge and information and good practice is to talk to each other."

In our submission, there is little evidence of such an approach having been adopted in connection with the emerging AIDS threat in the first half of the 1980s.

**Risks associated with particular blood products**

10. **The state of knowledge amongst those responsible for the treatment of bleeding disorders in Scotland as to the relative risks associated with the various blood products in the first half of the 1980s**

It seems clear that it was well understood throughout the relevant period that greater risks of viral transmission were associated with products which (a) were derived from larger donor pools and (b) came from the USA (partly because of pool size there being greater and partly because the plasma as collected from paid donors which increased the risk of high risk donors contaminating the products).

Dr McClelland pointed out that in Edinburgh the main treatment for haemophilia A patients had been with cryoprecipitate under the Dr Howard Davies regime prior to 1980. The reasons for this, he explained, were based on elementary biology that the less donors one was exposed to, the less chance there would be of contracting something nasty from the product and the less foreign product one had, the less likely it was to that patient would contract a new virus from elsewhere.

Professor Hann did not become the director at Yorkhill until 1983. However, when asked about the attitude to the risks associated with products he pointed out that it was thought that the concentrates all carried a very high risk of transmitting hepatitis with the result that, if one accepted that concentrates had a part to play in therapy, the issue of viral transmission became more of a neutral consideration in product selection. In his evidence, Professor Ludlam said that haemophilia clinicians were in the bleeding business, and not the infectious diseases business. We find it interesting to note that, by the start of the 1980s (in particular before the more convincing evidence regarding the severity of NANB hepatitis which emerged in print in around 1985) it would

---

132 Transcript for 16/12/11/11 (day 80); 13 (16 to 19) (Professor Lowe)
133 Transcript for 06/05/11 (day 21); 153 (11 to 14) (Dr McClelland)
134 Transcript for 06/05/11 (day 21); 153 (19) to 154 (2) (Dr McClelland)
135 Transcript for 06/05/11 (day 21); 22 92 to 10) (Professor Hann)
136 Transcript for 03/05/2011 (day 18); 95 (1 to 8) (Professor Ludlam)
appear that the haemophilia clinicians had become used to not according viral transmission a very high priority in their choices of treatment. In our submission, such clinicians should have been aware of the possibility of new viral threats and also weighed up carefully the advantages of treatment choices against the risk of both known and potential viral agents.

Communication of information and guidance

11. The accuracy of information and guidance emanating from the UKHCDO regarding the risk of AIDS from blood products in the first half of the 1980s, including the views expressed by Professor Bloom in the Haemophilia Society letter of May 1983

The Haemophilia Society letter of May 1983

The Inquiry has considered the terms of a letter sent out by the Haemophilia Society in May 1983 which contains advice from Professor Arthur Bloom, then Chairman of the UKHCDO, regarding the emerging AIDS risk. In the letter Professor Bloom’s words are quoted directly (indeed, as noted below from the evidence of Mr David Watters, he drafted the whole thing). He says that “AIDS...has not yet been proven to result from transmission of a specific infective agent in blood products”.

In the first place, it is interesting to note that the commentary from Professor Bloom comes against the background of the first known case of AIDS in a haemophiliac emerging. In our submission, Professor Bloom must have known about this as it was in his own centre in Cardiff. The document DHF.001.4350 is a department of health memo dated 6 May 1983 in which the diagnosis of AIDS in the male haemophilia patient in Cardiff with haemophilia appears to be confirmed. It appears that the case was reported in the first week in May 1983. In his letter to Dr Field, Dr Galbraith describes the haemophilia patient infected with AIDS in Cardiff as "Professor Bloom’s case". He had been ill for a month by that time. Further, it seems to have been assumed once details of this case emerged that the patient had been infected by commercial products but he received NHS

---

137 DHF.001.4474
138 MIS.001.0001
139 MIS.001.0001 @ 0002
concentrates as well as US imports.\textsuperscript{140} There was information of 3 haemophiliacs in Spain thought to have been infected with AIDS by this time. Given this background, it seems that, though perhaps technically true regarding the conclusiveness of the proof that AIDS was be caused by a virus transmitted through blood products, the message given by Professor Bloom at this crucial time is certainly not the whole truth. This letter would not only have been read by patients but also by those treating patients with bleeding disorders. Matters in the letter were described as "highly contentious" and "misleading" by Dr Peter Foster in subsequent correspondence with his union.\textsuperscript{141}

Further, his reliance on the non-emergence of AIDS cases amongst the recipients of blood products in Germany is factually inaccurate. By the time of the agenda for the Council of Europe blood transfusion experts meeting in May 1983 being circulated on 28 April 1983, two confirmed cases of AIDS amongst the haemophiliac population had been reported in the Federal Republic of Germany.\textsuperscript{142} In any event, it was certainly known by this time that the number of infections based on the number of reports of the disease were notoriously unreliable, given the fact that it took some time for symptoms to emerge. No mention of this is made by Professor Bloom. It is interesting to note that, in terms of the subsequent Council of Europe Recommendation R83(8), it is recommended that information about the risks should be given to selected recipients of blood and blood products. Haemophiliacs are named specifically.\textsuperscript{143} Whilst on a national level, one might have expected the government to wish to take a certain cautious approach to the dissemination of information about AIDS, this should not have prevented the provision of more honest and accurate information to such selected at risk groups, as the Recommendation suggests.

The overly optimistic tone of Professor Bloom’s advice was, in our submission, entirely wrong for the moment. In our submission, the time had some for an urgent rethink of strategy and a minimisation of the exposure of patients to concentrates which, by this time, were known to be potentially infective. The wait and see attitude which the advice from Professor Bloom advocated was typical of a system which was ill-equipped to deal with the urgency and potential severity of the situation.

\textbf{The general UKHCDO position in response to the AIDS threat}

\textsuperscript{140} See SNF.001.3712 @ 3713
\textsuperscript{141} PEN.013.1231 @ 1283 - 1284
\textsuperscript{142} DHF.001.4394 @ 4397
\textsuperscript{143} DHF.002.2149 @ 2150
The threat of AIDS to patients with bleeding disorders is mentioned in the minutes of the UKHCDO directors meeting in the context of the July 1982 MMWR reports by Dr Evatt of the disease having occurred in three US haemophiliacs.\textsuperscript{144} AIDS merits less than half a page in the minutes. The possibility of concentrates being involved in their infection is minuted as "remote\textsuperscript{145}" (a word which does not appear in the Evatt article in the MMWR from July which states that the cases suggest "the possible transmission of an agent through blood products\textsuperscript{146}"). In that article, the three patients are described as having no history of drug abuse\textsuperscript{147}, but one of the notes the Inquiry has from the UKHCDO meeting refers to possible drug abuse in their histories, suggesting that some reference to that inaccurate state of affairs was made at the meeting.\textsuperscript{148} In that version, the word "remote" is underlined. This comes at an early stage in the developing picture of HIV in the bleeding disorder community but it demonstrates that there was a lack of appreciation of the urgency and potential significance of the emerging situation for that community amongst those responsible for their treatment. Dr Winter described the attitude of both patients and their doctors at that time as being "we really don't want to hear about any problems with them [concentrates] unless we can find a very convincing reason so to do".\textsuperscript{149} That the patients were of this view is hardly surprising. It is of real concern that the doctors should take this view though they (unlike the patients) possessed the knowledge of the emerging serious risks.

A special meeting of the UKHCDO reference centre directors was convened on 13 May 1983 to discuss the AIDS problem.\textsuperscript{150} At the meeting, it was reported that there was one suspected case of AIDS in a haemophiliac in the UK. It was considered important that patients with some evidence of impaired cell-mediated immunity should not be reported as AIDS cases on the basis that such patients may not develop the full blown condition. This shows a lack of caution. Recent evidence existed of how the disease had started and how it had progressed in haemophiliac and non-haemophiliac patients in the US. Reference is made to the diagnostic criteria developed in the US on page 2. No restriction was proposed on the use of concentrates and the only restriction considered was on the use of imported concentrates. It was considered circumspect for clinicians who had already reserved a stock of NHS concentrate for use for mild patients and children under 4 to continue with that policy. These decisions in the form of guidance were communicated to

\textsuperscript{144} SNB.001.7419 (minutes)
\textsuperscript{145} SNB.001.7419 @ 7428
\textsuperscript{146} LIT.001.0559 @ 0660
\textsuperscript{147} LIT.001.0559
\textsuperscript{148} See SNB.001.7494 @ 7502 (Dr Boulton)
\textsuperscript{149} Transcript for 26/04/2011 (day 15); 126 (5 to 8) (Dr Winter)
\textsuperscript{150} DHF.001.4384
haemophilia centre directors, including those in Scotland. No consideration was given to their
different position.\textsuperscript{151} The early reports of the emergence of the disease and its transmissibility by
blood and blood products had been met in the US with a degree of incredulity in the face of
evidence of transmission to haemophiliacs.\textsuperscript{152} It seems to us that that attitude also prevailed when
the infection arrived in the haemophiliac community in the UK with lessons not being learned from
the US experience. Information was available from the US at the time of this guidance from the
UKHCDO about the development of the disease in the gay population in the USA which suggested
that the disease normally had a latency period of up to one year with no symptoms. However, it was
understood to be the case that the infected person would be infective from the start of this period.
Predicted mortality was 100%.\textsuperscript{153} The material available from the US at this time is consistent with a
serious disease, the prevalence of which would, by its nature, be impossible to detect. We submit
that, given the knowledge of the transmissibility of the disease through blood and blood products,
its severity and the experiences of similar disease such as hepatitis B, what was needed was decisive
and firm guidance and action. This does not appear to have been the nature of the reaction from
those responsible for the treatment of patients with bleeding disorders at all.

The information communicated by Dr Bruce Evatt to the WHO/ISTH conferences in Stockholm in
June 1983 is summarised in the Memo referred to above by Dr Foster (who attended) to Dr Watt.\textsuperscript{154}
That information, as detailed above, could have been and should have been considered by the
UKHCDO at least by the time of its dissemination at that conference, if not sooner and appropriate
urgent guidance issued. A number of mainly European delegates were concerned that they were
only seeing the tip of the iceberg, given the latency period of the disease and the consequent (a)
difficulty with identifying infected donors and (b) delay in the emergence of symptoms amongst the
recipients of blood and blood products. They were right.

12. The accuracy and appropriateness of information and guidance emanating from
the government on the risks of AIDS associated with blood products in the first
half of the 1980s

\textsuperscript{151} See SGH.002.2175 (24 June 1983)
\textsuperscript{152} PEN.016.1183 @ 1186 - 1187
\textsuperscript{153} This is amongst the information reported from the Stockholm conference attended by Dr Foster at which
information about current knowledge and experiences was shared by Dr Evatt of the CDC in Atlanta - see
SNF.001.3712 (memo dated 15 July 1983)
\textsuperscript{154} SNF.001.3172
The line adopted by the government over this period regarding AIDS appears to have been to state that there was no conclusive proof that AIDS was transmitted by blood or blood products. Whilst technically correct, the government's own expert advisory CSM sub-committee had taken the view the day before Lord Glenarthur's statement that an infectious aetiology was likely and measures to prevent the spread to recipients of blood and blood products were actively under consideration. As with the comments by Professor Bloom, the state of knowledge and medical opinion was deliberately portrayed more optimistically than the reality.

Later in the year, the Inquiry is aware that Lord Glenarthur became involved in correspondence with the ASTMS union regarding the risk of contracting AIDS from blood products. The absence of conclusive proof of the transmissibility of AIDS through blood products is again relied upon. He denies complacency and refers to measures in place to facilitate reporting of the disease, rather than prevention of its occurrence. By the time of a further such letter dated 5 January 1984, it was accepted that there was, in fact, strong circumstantial evidence that AIDS was transmitted by blood products and that conclusive proof could only be achieved when the transmissible causative agent had been identified. It is interesting to note that Dr Foster was the source of the argument being presented by the union in this correspondence. He was well informed and had attended international conferences regarding the matter. That his identity was not known at the time suggests that he was free to express his views without fear of professional reprisal. This, in our submission, makes the contemporaneous opinions expressed in these letters valuable evidence from an informed source of the known risks at that time. He confirmed in evidence that he told nobody about this other than Dr Perry who was also a member of the union. It was known, for example, at this time that the long incubation period of the disease meant that the numbers of actual infections could not be taken as indicative of the number of known infections at any given time, both in the donor and the recipient population. Further, it is interesting to note that Dr Foster considered there to be an air of fatalism about the Glenarthur correspondence. Just because there was not conclusive proof was no reason to do nothing.

155 See Lord Glenarthur on 14 July 1983 @ SGH.002.6720 @ 6721
156 MIS.0010291
157 DHF.001.4718
158 DHF.001.4718 @ 4719
159 SGH.007.6160
160 Transcript for 11/05/11 (day 23); 26 (22) to 27 (5) (Dr Foster)
161 PEN.013.1231 @ 1280
162 PEN.013.1231 @ 1298
The then Secretary of State for Health, The Rt. Hon Kenneth Clarke stated in answer to a parliamentary question on 14 November 1983 that “There is no conclusive evidence that AIDS is transmitted by blood products”.\textsuperscript{163} As is covered elsewhere in this submission, the evidence that AIDS had been contracted by recipients of blood products with no other risk factors, even in the United Kingdom, was readily available. The extent of the real concern within the government is demonstrated by the fact that Dr Diana Walford attended the UKHCSO reference centre directors meeting on 19 September 1983, specifically due to the Department of Health’s interest in AIDS.\textsuperscript{164} At that meeting (prior to the announcement made by Kenneth Clarke) the death of a haemophiliac patient in Bristol was discussed and measures taken to follow up patients who had received the same products.\textsuperscript{165} The government’s official message\textsuperscript{166} was deliberately understated, in our submission, with the result that it misled the public (and the haemophiliac community) regarding the risks of blood products. In the absence of having isolated a virus responsible for the transmission of AIDS, one could hardly be expected to have conclusive proof about its aetiology and transmissibility. However, given the known severity of the disease and the strong evidence that it was being transmitted via blood products by the spring of 1983, we submit that the approach being taken by the government was insufficiently urgent and deliberately misleading from that point.

There was considerable discussion in the evidence heard in the B2 section in relation to the significance of "Koch's postulates" in determining the aetiology of AIDS and hence the risks which it posed to blood product recipients. We see this as a similar concept to the "conclusive proof" line adopted by the government. In his evidence, Professor Ludlam accepted that in clinical medicine one required to make many scientific assumptions.\textsuperscript{167} This was why Koch's postulates did not feature in the contemporary discussion about the appropriate response to the emerging information about AIDS.\textsuperscript{168} It was more than clear that action was necessary to protect recipients of blood products.

Meanwhile in the Scottish Home and Health department, blood transfusion matters at this time appear to have been accorded a relatively low priority. Dr Archie McIntyre was the principal medical officer with responsibility for blood transfusion matters with it being only a very small part of his

\begin{footnotesize}
\textsuperscript{163} DHF.001.5064
\textsuperscript{164} LOT.003.2862
\textsuperscript{165} LOT.003.2862 @ 5864
\textsuperscript{166} The fact that the "no conclusive proof" line was an official message is confirmed by DHF.001.5334
\textsuperscript{167} Transcript for 04/05/11 (day 19);11 (24) to 12 (2) (Professor Ludlam)
\textsuperscript{168} Transcript for 04/05/11 (day 19); 12 (3 to 6) (Professor Ludlam)
\end{footnotesize}
The SHHD took a reactive rather than proactive approach to formulating guidance on how treatment should be planned to minimise the risk of HTLV III infection.

**The decision making process about product use in the first half of the 1980s**

13. **The nature and extent of the responsibility of (a) the Scottish National Blood Transfusion Service (b) the government in Scotland and (c) doctors in the production, selection, procurement and distribution of products for the treatment of patients with bleeding disorders in Scotland in the first half of the 1980s**

**Procurement**

A system whereby the SNBTS paid for the PFC factor VIII and Health Board bought the commercial factor VIII appears to have been in operation throughout this period.¹⁷⁰

**The selection of material**

Professor Forbes gave evidence to the effect that he, as the haemophilia centre director in Glasgow, would have had no responsibility for the selection of which products would be available in the hospital.¹⁷¹ He suggested that the SNBTS would be responsible for the determination of whether commercial or NHS material would be available and he would only become aware of what product there was when he came to administer it.

This evidence contrasted with material and evidence from other sources which suggested that the selection of products over this period was very much a matter of clinical choice for the treating haemophilia clinician.¹⁷² Dr Winter made it clear in his evidence that haemophilia directors were well aware that they alone were responsible for the products used in their centres and preferred to take that responsibility and arrange what products would be available to treat their patients.¹⁷³ Dr Perry commented elsewhere that the procurement of products not produced by the SNBTS was never a matter over which the SNBTS had control and that it was the haemophilia clinicians who, in

---

¹⁶⁹ PEN.015.0330 @ 0331
¹⁷⁰ See PEN.015.0478 (14 January 1981)
¹⁷¹ Transcript for 28/04/11 (day 17); 130 (25) to 131 (7) (Professor Forbes)
¹⁷² SNB.001.5252 @ 5254
¹⁷³ Transcript for 27/04/11 (day 16); 77 (5 to 20) (Dr Mark Winter)
the early 1980s, had insisted that there be no such control by a manufacturer.\textsuperscript{174} Factor concentrates were a prescription medicine and it seems quite remarkable that such a senior haemophilia clinician as Professor Forbes would appear to have been so comfortable with the concept that product selection was left to others in this way.

14. The appropriateness of the decision not to convene an expert advisory group on AIDS until 1985 and the effect of that decision

It was noted in the agenda for a meeting of a sub-committee of the Committee for the Safety of Medicines that there were numerous bodies which were actively involved in the consideration of the AIDS problem and the development of reactive strategies. The need for cohesion in the plans adopted by these bodies and for good availability of information to them was noted. A system whereby representatives of these bodies could meet was clearly contemplated at that time.\textsuperscript{175} It was perhaps predictable that the views reached by these different bodies would differ as, as Dr Winter pointed out in his evidence, different bodies had different agendas and priorities. The Committee for the Safety of Medicines was primarily concerned with issues of safety but the haemophilia directors also required to consider efficacy and supply.\textsuperscript{176} Dr McClelland observed, accurately in our view, that treatment decisions being the responsibility of clinicians is a recurrent theme in government minutes and other documents over this period.\textsuperscript{177} This may ultimately be true but, in our submission, this does not remove the value or need for clear guidance as a framework within which appropriate clinical decision making can operate.

The risks of AIDS in various different areas is demonstrated clearly by the number of bodies taking an active interest in considering the problem. Professor Hann noted that this was a period when they could have done with a bit less democracy and a bit more guidance and that there were many views and many committees but not necessarily many decisions being taken.\textsuperscript{178} He suggested that what was needed was an expert body to come to the best possible conclusions at the time, not many bodies just reiterating the same problems that everybody knew about.\textsuperscript{179} In his view, this could only have been co-ordinated by government.\textsuperscript{180}

\textsuperscript{174} Transcript for 7/12/11 (day 74); 54 (15 to 25) (Dr Perry)
\textsuperscript{175} DHF 001.4591
\textsuperscript{176} Transcript for 27/04/11 (day 16); 68 (18 to 22) (Dr Mark Winter)
\textsuperscript{177} Transcript for 06/05/11 (day 21); 121 (3 to8) (Dr McClelland)
\textsuperscript{178} Transcript for 06/05/11 (day 21); 53 to 54 (Professor Hann)
\textsuperscript{179} Transcript for 06/05/11 (day 21); 54 (21 to 25) (Professor Hann)
\textsuperscript{180} Transcript for 06/05/11 (day 21); 55 (Professor Hann)
In response to a crisis of this potential magnitude within the NHS, we submit that it was incumbent upon the government to appoint one multi-disciplinary advisory committee to formulate and oversee the implementation of a clear and co-ordinated policy for dealing with the disease. The need for such a forum was clearly recognised in 1983 but was not acted upon until 1985.

15. The way in which the procurement of blood products was funded in Scotland in the first half of the 1980s and the extent to which that arrangement affected the procurement of blood products

Some evidence of the procurement system is considered above. It is of interest to note that, in his evidence, Professor Forbes pointed out that he would require to use whatever product was available to him as his department in Glasgow did not have any spare money to pick and choose products. In assessing the rate of infection in his centre, he pointed out that fate had determined that because they were not using huge amounts of concentrate (we assume based on these funding restrictions) that not as high a percentage of his patients were infected with HIV. It is interesting to note that the funding restrictions resulted in (a) less ability to get hold of the more expensive commercial concentrates and (b) less ability to expose patients to large amounts of concentrates, for example for home treatment and/or prophylactic regimes. This, in turn, resulted in lower rates of infection with HIV. We would submit that the avoidance of infection should have happened by design, rather than in the fortunate way described by Professor Forbes. That a safer course would also have been a cheaper one should have made doubly sure that patients were not infected.

16. The role of pharmaceutical companies in influencing product selection in the first half of the 1980s

In a letter dated 29 September 1983 to the ASTMS union, Dr Foster stated "in seeking the views of users of factor VIII (ie clinicians and patients) one should be aware that many users are associated with commercial companies (e.g. clinicians who act as paid consultant to the companies)". As regards the position of clinicians, Dr Foster was not keen to expand upon what he had said in this letter in his evidence. He did, however, state that Mr Watt had told him that Dr Jones was a paid consultant for a commercial company.

181 Transcript for 28/04/11 (day 17); 23 (24 to 25) (Professor Forbes)
182 Transcript for 28/04/11 (day 17); 118 (4 to 8) (Professor Forbes)
183 PEN.015.0101 @ 1281
184 Transcript for 11/05/11 (day 23); 26 (13 to 20) (Dr Foster)
consultant to a pharmaceutical company \(^{185}\) and that it was his understanding that there were more clinicians who were paid consultants to pharmaceutical companies in the UK. Further, he himself wondered at the time whether product choice was affected by these relationships. \(^{186}\) In our submission, however, this is a clear indication that an individual who worked within the haemophilia system was suspicious about the propriety of the conduct of UK clinicians at this time and the possibility that product choice was being influenced unethically. That he was serious about the accusation at the time is demonstrated by the fact (a) that he was prepared to be so specific about what he was talking about (the role of clinicians as paid consultants) and (b) that he was aware that what he said was being relayed to Lord Glenarthur in correspondence on behalf of the union. This letter was, in itself a response to a request from the union for a response from Dr Foster about matters raised by Lord Glenarthur in a previous link in the chain of correspondence.

Dr Winter was asked what effect the relationship between haemophilia clinicians and pharmaceutical companies had on decision making with respect to the choice of products. He suggested that regulatory processes would not have allowed the purchase of commercial products to have been done directly by haemophilia directors \(^{187}\), but had noted in his earlier evidence that the products which were used were the sole responsibility of the haemophilia director. \(^{188}\) Interestingly, in his response he said much about the symbiotic relationship and the exchange of funding from the companies to fund extra posts from the companies in return for information or training from the clinicians. \(^{189}\) This response was uncharacteristically evasive as he had been asked about the effect of the relationship on product selection. Dr McClelland expressed the view that one of the reasons for the increased demand for and use of concentrates in the 1980s was active marketing by pharmaceutical companies, including marketing directed at doctors. \(^{190}\) Professor Ludlam indicated that he had been a paid consultant to the pharmaceutical industry over the past decade or so but that he had not been in the 1980s. \(^{191}\)

We are aware of any direct evidence of any inappropriate relationship of between any haemophilia clinician in Scotland and the pharmaceutical industry over the reference period. On the whole, clinicians in Scotland in the first half of the 1980s had available to them and preferred to use SNBTS concentrates. Companies had access to the directors who sometimes saw commercial products as

---

\(^{185}\) See also SNB.001.7130

\(^{186}\) Transcript for 11/05/11 (day 23); 46 (19) to 47 (21) (Dr Foster)

\(^{187}\) Transcript for 27/04/11 (day 16); 118 (18 to 22) (Dr Mark Winter)

\(^{188}\) Transcript for 27/04/11 (day 16); 77 (18 to 20) (Dr Mark Winter)

\(^{189}\) Transcript for 27/04/11 (day 16); 118 to 119 (Dr Mark Winter)

\(^{190}\) Transcript for 06/05/11 (day 21); 170 (2 to 22) (Dr McClelland)

\(^{191}\) Transcript for 04/05/11 (day 19); 141 (11) (Professor Ludlam)
more attractive for reason of convenience and precision. The door to the companies was open when extra products were needed for some specific purpose. The ease with which clinicians could turn to companies and purchase commercial products did nothing to ease the march towards total reliance on concentrates in the early years of the 1980s. The convenience of commercial products may have, at times, seemed more attractive than considerations of safety, especially in comparison with the relatively inconvenient alternative at times of short supply (such as cryoprecipitate).

The Haemophilia Society

The Inquiry has evidence relating to the relationship between the Haemophilia Society and pharmaceutical companies, in particular the extent to which the Society received funding from such companies in the first half of the 1980s. The extent to which the Society received funding from pharmaceutical companies is a matter which was raised during the course of the Inquiry. A submission on this issue has already been submitted to the Inquiry on behalf of the Society and we adopt the terms of that letter here for the sake of brevity. In addition we would wish to draw the Inquiry’s attention to the strong terms in which Mr David Watters dismissed any assertion of influence as having been exerted over the Society by any donor. As is clear from the letter dated 9 November 2011 donations were extremely limited over this period anyway.

In a letter to the ASMTS dated 29 September 1983, Peter Foster stated that "in seeking the views of users of factor VIII (ie clinicians and patients) one should be aware that many users are associated with commercial companies (eg clinicians who act as paid consultant to the companies)." This might be taken to mean that Dr Foster was suggesting that users, including the Society, might have inappropriate relationships with pharmaceutical companies which could influence their views on advice given to patients about product use. In our submission, this cannot be an accurate interpretation of what Dr Foster meant and his use in the second set of brackets of the phrase "eg" must be taken to mean "ie". This sentence should be read in the context of the previous paragraph where Dr Foster states that the Society may not be aware of the full facts. Further, in his evidence, Dr Foster accepted that he was not aware of the nature of the relationship between the Society and pharmaceutical companies (or any other body) and so his comment was, in any event, without foundation.

---

192 PEN.018.1391 (9 November 2011)
193 Transcript for 19/01/12 (day 87); 100 (25) to 101 (3) (Mr David Watters)
194 PEN.015.0101 © 1281
195 Transcript for 11/05/11 (day 23); 48 (4 to 12) (Dr Foster)
There is no basis upon which it can be concluded that the Haemophilia Society acted with anything other than complete propriety in its dealings with pharmaceutical companies throughout. Indeed, the evidence suggests that the Society was motivated solely by attempting to achieve what it understood to be the best treatment available for its members. The source of its understanding of what the best treatment was is set out below.

Response to knowledge about the emerging risk of AIDS

17. Whether and when, in light of international and domestic knowledge about the severity of AIDS and the risks it posed to patients with bleeding disorders, further steps should have been taken to minimise the exposure of such patients to blood products and by whom such steps should have been taken

The strategic level

An advisory sub-committee of the Committee for the Safety of Medicines discussed possible reactions to AIDS in relation to licensed blood products on 13 July 1983.\textsuperscript{196} Agenda contain lists of possible responses, designed as a list of options to put to the Committee, although it is clear from the agenda that these are subject to possibly significant revisal at the meeting. The agenda does give an indication of the fact that an infectious aetiology for AIDS was thought likely by that stage.\textsuperscript{197} This was agreed upon by the sub-committee at the meeting.\textsuperscript{198} A number of proposed solutions are set out in the agenda with some preliminary commentary on the strength of each of the proposals. Withdrawal of factor VIII and IX concentrates is considered\textsuperscript{199} but "the perceived level of risk does not justify serious consideration of this solution" and this step "would involve a major rethink of UK policy for preparing blood products".\textsuperscript{200} At the meeting, this proposal was rejected on the grounds of supply.\textsuperscript{201} It is interesting to note, in our submission, that consideration is given to the option of using US blood products as sparingly as possible and modifying product licenses accordingly. This option is noted as being something which should be left to clinical judgement. There is, however, no consideration at all given to the possibility of (a) reducing exposure to concentrates to the lowest level necessary (which would have helped with the overall aim of achieving self-sufficiency anyway

\textsuperscript{196} DHF.001.4587
\textsuperscript{197} DHF 001.4587
\textsuperscript{198} MIS.001.0291 @ 0292
\textsuperscript{199} MIS.001.0291 @ 0292
\textsuperscript{200} DHF 001.4587 @ 4589
\textsuperscript{201} MIS.001.0291 @ 0292
and was in accordance with Recommendation R83(8)) and/or (b) making more cryoprecipitate available. This is despite the fact that it is acknowledged that "recipients of clotting factor concentrates are at risk". Further, the withdrawal of US preparations is considered to be impractical on grounds of supply. However, the options appear to being assessed on a national level, whilst not appearing to give any consideration to the fact that Scotland was nearer self sufficiency and therefore options such as stopping use of commercial products, ruled out here on grounds of supply, may have been more achievable. Mr Watt, at least, from Scotland attended the meeting. The fact of virtual self sufficiency in Scotland was mentioned in an SHHD memo on 6 May 1983. However, this does not appear to have resulted in action as far as strategy was concerned with regard to the continued use of commercial concentrates.

**National haemophilia treatment strategy**

In a BMJ editorial by Peter Jones entitled "Acquired immunodeficiency syndrome, hepatitis and haemophilia" dated 10 December 1983 it was pointed out that the majority of international opinion was that the risk of contracting AIDS was outweighed by the benefits of the products. However, his concern about AIDS was sufficient for him to recommend that it ‘seemed sensible’ for the time being (a) to treat severely affected young children with cryoprecipitate and (b) to consider alternative methods or raising factor VII levels (eg DDAVP, danazol or perhaps porcine material) for persons with mild haemophilia or vWD. In our submission, the level of risk was sufficient that something needed to be done to lower the pool size to which patients were exposed. He recommended that the most important precaution was to maintain a high level of surveillance of the haemophiliac population.

However, at the full meeting of haemophilia directors which had taken place on 17 October 1983 (which did not meet again until 27 September 1984) Dr Chisholm raised the issue of certain of his patients having refused commercial concentrated due to the AIDS "scare" and posed the question as

---

202 DHF 001.4587 @ 4588
203 MIS.001.0291 @ 0292
204 MIS.001.0291 @ 0292
205 SGH.002.5668
206 LIT.001.0243
207 SNB.0017517 @ 7526
to whether the directors could revert to using cryoprecipitate for home therapy. Professor Bloom responded to the effect that there was no need for this switch to occur on the basis that there was no proof that commercial concentrates were the cause of AIDS. Dr Chisholm replied that, in addition to the safety issue, there were also problems with the supply of commercial concentrate in her region but that she could get unlimited supplies of cryoprecipitate. Other directors reported the same problems. Despite this, it was agreed at the meeting that patients should not be encouraged to go over to cryoprecipitate for home therapy but should continue to receive concentrates in their usual way. No discussion took place about the possibility of reducing home therapy, either on the grounds of safety or on the grounds of supply. No consideration was given to a reduction of home therapy or a reversion to cryoprecipitate even on a temporary basis. No consideration was given to advising patients that they should use the minimum quantity of concentrates necessary on home treatment. This strategic commitment to concentrates was based on an inaccurate statement by Professor Bloom. As noted above, there was indeed strong proof by this time that AIDS was caused by a transmissible agent borne by blood and blood products. It seems likely that this poor decision at the last meeting of the directors until the autumn of 1984, by which time many of the patients with bleeding disorders who contracted HIV had become infected, formed the basis of many of those patients continuing to receive the concentrates which infected them. This decision was made against a background of two haemophilia patients having become infected in the UK and Dr Craske seeking to instigate investigations into the AIDS cases and into "suspect batches of concentrate". Such investigations indicated that there was clear knowledge of an emerging crisis. The approach taken was limited to this reactive line when a proactive one was merited.

It is interesting to note, in passing, that the resistance to the line being proposed by Dr Chisholm emanated from Professor Bloom, the then Chairman of the UKHCDO. Dr Winter was asked about why he thought that Professor Bloom had commented that there was no proven case of AIDS in the UK haemophilia population in his comments in the Haemophilia Society letter to its members in May 1983 when other evidence suggested that he really must have known as the patient was in his centre in Cardiff (this particular matter is addressed elsewhere in this submission). His response was to propose that Professor Bloom was the head of the centre and, like many of his generation, were not clinically trained. This, he suggested, may have meant that he may not have been aware of the

---

208 SNB.0017517 @ 7526
209 SNB.0017517 @ 7526
210 SNB.0017517 @ 7526
Dr Winter expanded upon this later in his evidence when he explained that there was a "sea change" in the training of haematology doctors in 1976 as from that point onwards it was no longer possible to become a consultant haematologist without having clinical training. Older doctors before this period "weren't used to looking after very sick people". It is remarkable that individuals with this training and attitude should have been allowed to make important strategic decisions or reject clinical proposals such as that made by Dr Chisholm. Senior figures who had come from this laboratory based background were deemed to be the representatives of the patients on important government advisory committees at the time of the AIDS crisis. The approach at that time, as at all times, should have been focussed on the safety of the patients. An individual based in a laboratory seems hardly likely to have been well equipped to adopt such an approach.

Further, it should be noted that there were other places in the world where haemophilia clinicians made radical changes to their prescribing practices in light of the emerging AIDS threat. Dr Oscar Ratnoff stopped using concentrates completely "even though it had practical implications".

The level of haemophilia clinicians in Scotland

A commentary on the response of haemophilia clinicians and the UKHCDO to the emerging threat of AIDS from blood products is given above. In addition to this, we have the following submissions:

In a publication dated August 1984, in a section about product prescription in the care of haemophiliacs written by Dr Charles Rizza, doctors within the NHS were told that the risk of AIDS from transfusion therapy was not clear, despite acknowledging that haemophiliacs had contracted the disease. The advice to the prescribing doctor was to carry on with the treatment regimes to which the patients had become accustomed. In his parliamentary response on 14 November 1983, Kenneth Clarke had, in an apparent attempt at reassurance, pointed out that treatment was in the

---

211 Transcript for 27/04/11 (day 16); 41 (2 to 12) (Dr Mark Winter)
212 Transcript for 27/04/11 (day 16); 165 (19) to 166 (23) (Dr Mark Winter)
213 Transcript for 27/04/11 (day 16); 21 (17) to 22 (7) (Dr Winter)
214 DHF.001.5585 @ 5594
hands of local clinicians expert in the treatment of patients with bleeding disorders.\textsuperscript{215} They were being guided (as late as 9 months after this) to carry on as if there were no risk at all.

It is clear, in our submission, that haemophilia treaters required and require to carry out a balancing exercise between the use of products for the prevention of bleeds against the risks of viral transmission and the perception about (a) the likelihood of transmitting HIV (b) the likelihood of contracting AIDS as a result and (c) the severity of the consequences of AIDS. The amount of factor concentrates being used seems, in the first half of the 1980s, to have been solely within the control of the local haemophilia director. Despite representations made by Dr Boulton to Professor Ludlam in 1982 and 1983 about the amounts of SNBTS factor VIII being used in Edinburgh exceeding supply, this continued to be a matter over which the local transfusion service had little control. Predominantly for reasons of supply, Dr McClelland suggested that a more co-ordinated national system involving peer review by haemophilia directors of and guidance relating to the products used by their colleagues be introduced.\textsuperscript{216} Dr Boulton (formerly a haemophilia director himself) had found it necessary to apologise for his impertinence in making a treatment suggestion to Professor Ludlam in the past.\textsuperscript{217} We submit that such a co-ordinated approach to the use of products would necessarily have combined questions of efficacy, safety and supply and would have meant that a more consistent, considered and safe approach to the use of concentrates could have been achieved throughout Scotland.

The Inquiry heard evidence that in Edinburgh and elsewhere in Scotland a batch dedication system was introduced.\textsuperscript{218} The existence of this system minimised the batch exposure of individual patients. Batches were given to specified groups of patients based alphabetically on their surnames. The existence of this system indicates a clear knowledge of the risk of HIV transmission from batches of factor VIII concentrate (predominantly of SNBTS origin). However, there is no evidence of measures being taken to reduce exposure to the volume of concentrate and, in this regard, the system represents a failure to minimise the risk appropriately. Further, given that haemophilia is a hereditary disease affecting almost exclusively males, patients from the same family who lived in the same area received treatment at the same centre. The allocation of batches to individuals based on surname would also maximise the chances that, if there were an infected batch, members of the

\textsuperscript{215} DHF.001.5064  
\textsuperscript{216} SNB.001.5194 (2 February 1983)  
\textsuperscript{217} SNB.001.5331 (29 December 1982)  
\textsuperscript{218} Transcript for 04/05/11 (day 19); 114 (11 to 15) (Professor Ludlam)
same family would all be exposed to that infected batch. Professor Ludlam told us that this system
came in both Edinburgh and Glasgow, it would appear from about 1984. When pushed, he
suggested that it was probably in late 1984 or early 1985. Given that most, if not all, of the
patients who became infected with HIV in Scotland were infected by this time and the fact that heat
treated SNBTS factor VIII concentrate became available from December 1984, this measure came
rather too late in any event. In any event, Dr Boulton confirmed that the system did not work very
well in practice.

The Inquiry received a statement in the B2 section from Professor Prentice who was responsible for
the treatment of haemophilia patients at the GRI until February 1983, when he left to work in
Leeds. In his statement, he describes the advances in the treatment of haemophiliacs, in particular
the development of cryoprecipitate and factor VIII concentrates. He states that factor VIII
concentrate was mandatory in the treatment of haemophiliacs and that there was no alternative.
Though his period in Glasgow was coming to an end at the time of principal interest to the Inquiry in
this section, we find that this is illustrative of the "concentrates first, questions later" attitude
prevalent at the time amongst haemophilia clinicians. In particular, on the very same page, Professor
Prentice extols the virtues and advantages afforded by cryoprecipitate. It represented at least one
alternative to factor VIII concentrate therapy.

The Inquiry has access to certain documentary evidence that suggests that there were certain
professional tensions between Professor Ludlam and Dr Boulton regarding the consumption of
factor concentrates in the south east region. We would submit that this evidence demonstrates
that Dr Boulton, previously a haemophilia director in England but employed then by the transfusion
services in Edinburgh, had misgivings about the amounts of concentrate which were being used on
patients there. These concerns clearly arise in part out of considerations of supply but also in part, it
would appear when one considers this correspondence along with that sent to Professor Bloom, out
of his fears for the safety of patients who are exposed to so much concentrate.

219 Transcript for 03/05/2011 (day 18); 95 (2 to 21) (Professor Ludlam)
220 Transcript for 04/05/11 (day 19); 114 (11 to 15) (Professor Ludlam)
221 Transcript for 12/05/11 (day 24); 30 (16) to 31 (3) (Dr Boulton)
222 PEN.015.0045
223 PEN.015.0045 @ 0047
224 SNB.001.5207 and SNB.001.5221
Conclusion

As is noted above, the WHO conference in Geneva in November 1983 had considered the possibility of (a) concentrate use being limited to essential situations only\textsuperscript{225} and (b) reducing the number of donors to which a patient is exposed\textsuperscript{226} in light of the emerging AIDS threat. In our submission, the ongoing commitment to the use of (considered in more detail in connection with self-sufficiency below) factor concentrates was an inappropriate response to the emerging threat of AIDS.

Haemophilia B patients

As noted above, the HIV infection rate amongst haemophilia B patients in Scotland (and elsewhere) appears to have been considerably less than the infection rate amongst haemophilia A patients. The position of the two haemophilia B patients requires some separate consideration. The haemophilia B patient infected in Glasgow who gave evidence called "David" was infected in 1985, therefore after the widely publicised infection of a number of haemophilia A patients including the Edinburgh cohort who were infected by SNBTS factor VIII concentrate and the availability of an SNBTS factor VIII concentrate (from December 1984). The PFC was also working on the production of a heat treated factor IX product at that time.

The issue of alternative treatments for haemophilia B patients is a more difficult one than for haemophilia A patients. This is because the perception appears to be that there is no alternative treatment. In his evidence the reasons for this were explored with Professor Ludlam. He commented on the possible use of cryoprecipitate in haemophilia B patients by saying "it [cryoprecipitate] does not contain very much factor IX". Cryoprecipitate does contain some factor IX and can be haemophilia B patients have received cryoprecipitate as part of their treatment.\textsuperscript{227}

Recommended treatment for patients with haemophilia B was covered in the AIDS advisory document dated 14 December 1984.\textsuperscript{228} This document was drafted in light of the knowledge that patients in England and Scotland had been infected with HIV. The recommendation for haemophilia

\textsuperscript{225} SNF.001.2575 @ 2592
\textsuperscript{226} SNF.001.2575 @ 2591
\textsuperscript{227} See statement 1 of patient PI010JP @ paragraph 4
\textsuperscript{228} SGF.001.2388
B sufferers is so vague as to hardly constitute guidance at all. It (a) recommends fresh frozen plasma or NHS concentrate for mild patients (b) recommends continuing with NHS factor IX for moderate and severe patients, but qualifies this recommendation to the point of removing its force by saying that individual directors will have to make up their own minds for individual patients and (c) gives non-committal advice about the relative safety of the available commercial heated factor IX, stating that virologists recommend it whilst at the same time stating that they cannot give any firm recommendation at all. Interestingly, unlike the detail given for the proposed arrival of NHS heat treated factor VIII, no advice is given about the current heat treatment programme for NHS factor IX.

In his evidence Professor Ludlam was asked about the passage in his statement that in the aftermath of the infection with HIV of a haemophilia B patient in England, certain centres opted to switch treatment to the then available heat treated commercial factor IX product. He indicated that in Edinburgh patients continued to be treated with the unheated SNBTS factor IX product on the basis that (a) factor IX was manufactured in a way which may have excluded the virus and (b) the immune systems of haemophilia B patients seemed to be less abnormal than the haemophilia A patients (although he accepted that the reason for this was not quite clear even now as they were also infected with hepatitis C). His confidence in the likelihood of unheated factor IX being free from the virus seems limited. Further, his comment should be seen in light of the fact that, in the aftermath of the infection of the Edinburgh cohort patients, the batch of factor IX made from the same plasma was withdrawn from use. Given his own concession, it appears that the immune function difference could hardly be reliable enough to form the basis of any sound judgement, in particular after February 1985 when the English patient with haemophilia B was known to have been infected.

In our submission, it was imperative over the period between the infection of haemophilia A patients in Scotland from SNBTS concentrates in late 1984 and the introduction of heat treated factor IX that the patients who were on treatment programmes with factor IX concentrates be reviewed and their exposure to concentrates reduced to the minimum necessary. This should, in our submission, have included cessation of home treatment and/or prophylactic treatment and advice given on lifestyle for what was envisaged would be a short, though crucial period. We note that the

---

229 SGF.001.2388 @ 2390
230 SGF.001.2388 @ 2389
231 Transcript for 04/05/11 (day 19); 74 (16) to 75 (1) (Professor Ludlam)
232 PEN.012.1384 @ 1286 (8 November 1984)
witness "David" was infected during this period. Further, it appears that he was receiving prophylactic treatment at home with non-heat treated factor IX in the first half of 1985, when that treatment regime came to an end. He commented that he "continued it [that regime] until he thought it was no longer necessary". The regime had been started due to problems he had experienced with his knees. He is a moderate patient. He received no warnings about the prophylactic regime. The only other haemophilia B patient who is listed in the HIV spreadsheets produced by the UKHCDO is patient G11 in the GRI spreadsheet, a severe haemophilia B sufferer. Interestingly, that patient also seems to have been infected after the infection of the haemophilia A patients in Edinburgh as his last negative test appears to have been on 15 October 1985 and first positive test on 15 July 1986. These patients should, at the very least, have been informed of the infection of patients with HIV amongst the haemophilia A community.

The public health element of HIV in patients with bleeding disorders

It was clear from the evidence of Professor Lever that it was believed to be the case from early on in the emergence of HIV that it was sexually transmissible. He also referred to the spouse of a haemophiliac becoming infected. Other than the public health risks posed by the risk of bleeding incidents on the part of haemophiliacs who may be infected with HIV (which, in our submission, are highly significant in themselves) the knowledge that any such infected patients could transmit the disease sexually should, in our submission, have created a far greater degree of urgency about doing all that was possible to prevent them contracting the disease in the first place. In his evidence, Professor Ludlam pointed out that his predecessor, Dr Davies, did not use commercial concentrates on the basis that he did not want to expose his patients to "novel" viruses from abroad. Patients with bleeding disorders were, however, so exposed without much apparent consideration being given to the fact that they were effectively a medium through which novel viruses could be spread throughout the Scottish population. We are not aware of any evidence of secondary infection by patients infected with HIV in Scotland. However, this state of affairs appears to be the result of luck rather than design on the part of those responsible for their treatment. Those responsible for the minimisation of the risks of sexual transmission at the treatment level were in the first place the

233 Transcript for 09/07/11 (day 30); 106 (14 to 17) ("David") - reference to negative HTLV III test in January 1985
234 Transcript for 09/07/11 (day 30); 102 (12 to 14) ("David")
235 Transcript for 09/07/11 (day 30); 104 (12 to 15) ("David")
236 Transcript for 18/05/11 (day 27); 35 (6 to 9) and 37 (7 to 8) (Professor Lever)
237 Transcript for 18/05/11 (day 27); 36 (17 to 19) (Professor Lever)
238 Transcript for 04/05/11 (day 19); 125 (10 to 12) (Professor Ludlam)
haemophilia clinicians who had the power to minimise the chances of infection and also the
government, in their capacity as protectors of the health of the public.

**Practical considerations**

18. The way in which projections were made for the estimated amount of blood
products which would be needed for the treatment within Scotland of patients
with bleeding disorders in the first half of the 1980s, the accuracy of that system
and whether the system gave rise to any unnecessary exposure of patients to the
risk of infection with HIV

We are aware of relatively little (if any) evidence available to the Inquiry on the subject of any
national co-ordination or management of the likely projected amounts of blood products which
would be required for the treatment of patients with bleeding disorders in any given year over this
period. In our submission, it was essential to (a) monitoring of the amounts of concentrates being
administered to patients in light of international guidance that exposures should be limited to the
minimum amount necessary and (b) the achievement of national self-sufficiency in blood products
for there to be a central system where usage controlled and projections made accordingly to meet
future demand.

19. Whether it would have been feasible, in the first half of the 1980s, to switch
patients receiving treatment with factor concentrates to treatment with products
made from smaller donor pools, like cryoprecipitate, including whether such a
change was (or should have been) contemplated

The Inquiry has heard evidence that cryoprecipitate was made everywhere.239 In our submission, the
commitment in Scotland over this was made to factor concentrates produced centrally at the PFC in
Edinburgh.

Professor Forbes explained in his evidence that cryoprecipitate fell out of favour (from 1980) due to
the "volume, the number of donations needed, the method of making it up, the time involved and so

---

239 Transcript for 10/05/11 (day 22); 77 (9 to 10) (Dr Foster)
Nevertheless, he suggested that he could get access to it in Glasgow when he wanted as his department had a good relationship with the local blood transfusion service. It is interesting to note that the available SNBTS concentrate took around half an hour to dissolve and so the advantage, as far as practicality was concerned, may not have been as great as one might think. In our submission, the evidence suggests that cryoprecipitate fell out of favour primarily for reasons of practicality and convenience, primarily for clinicians. It was still available but not favoured on this basis. Further, as Professor Ludlam described in his evidence, the rise in the preference for home treatment made cryoprecipitate less attractive due to problems with storage, preparation for use and possible reactions in a home environment (thought use of cryoprecipitate at home was not impossible, as described by Professor Forbes and as accepted by Professor Ludlam). This move came despite warnings to the contrary from Professor Cash who had said at a joint meeting in January 1981 that clinicians should bear in mind the role which cryoprecipitate had to play in the treatment of haemophiliacs. In his evidence he expanded upon this by saying that from a supply perspective, the shift from cryoprecipitate to concentrates meant that a lot more plasma needed to be sourced effectively to "stand still", pushing the goal of self sufficiency even further away. The response from the clinicians was, in Professor Cash's own words, that it "went down like a load of lead".

In January 1983 an editorial in the prestigious New England Journal of Medicine suggested that cryoprecipitate should be used in preference to factor concentrates. This was despite the fact that the concentrate therapy had proved to be very successful and "even though we may not have enough evidence to demand such a radical change". In response to questions asked about this editorial, Dr Winter pointed out that when a move back to cryoprecipitate was contemplated, there were problems of supply and it was unrealistic to expect that it could be used at home. In this we see the point encapsulated very neatly. The casual attitude taken to the emergence of AIDS in later 1982 until the spring of 1983 when cases started to emerge in the UK meant that no proper risk assessment was performed in relation to the short term advantages of concentrate use against the longer term infection risks associated with concentrates on which there was near total reliance. As

240 Transcript for 28/04/11 (day 17); 78 (12 to 15) (Professor Forbes)
241 Transcript for 28/04/11 (day 17); 78 (17 to 20) (Professor Forbes)
242 Transcript for 05/05/11 (day 20); 17 (5 to 6) (Dr Pettigrew)
243 Transcript for 03/05/2011 (day 18); 34 (2) to 38 (10) (Professor Ludlam)
244 Transcript for 03/05/2011 (day 18); 38 (8 to 10) (Professor Ludlam)
245 SNB.001.5055 @ 5056 (30 January 1981)
246 Transcript for 13/05/11 (day 25); 113 (16) to 114 (4) (Professor Cash)
247 Transcript for 13/05/11 (day 25); 112 (20 to 23) (Professor Cash)
248 LIT.001.0040 @ 0041 (13 January 1983)
249 Transcript for 27/04/11 (day 16); 25 (18) to 26 (10) (Dr Winter)
Dr McClelland realised in his evidence, it would have been possible to revert to cryoprecipitate completely had there been a clinical demand for that move but it would have taken some time to achieve. No consideration had been given to the likely need for the move, even gradually, at an early enough stage to enable the switch to be made. When "moving back to cryoprecipitate" was contemplated in England, they were told that there was not enough. What was necessary was a realisation (a) that AIDS could be transmitted through blood and blood products (b) that evidence of AIDS in the UK had been available from late 1981 (c) that little could be and was being done in the blood collection system in the UK to minimise the risk of a positive donor donating and (d) that the system had become geared towards and dependent on the use of concentrates (and large amounts of it at that) to the extent that a switch back to cryoprecipitate could not happen instantaneously. As the editorial points out what was needed was a decision that the switch was required even in the absence of irrefutable evidence that a total switch was necessary. A clinical need for cryoprecipitate and a change of treatment philosophy could and should have been identified and supported by the early part of 1983.

The position in Scotland was that cryoprecipitate was readily available in the west of Scotland, as Professor Forbes described. In the east of Scotland, cryoprecipitate had been the product used in the treatment of the majority of patients when Professor Ludlam arrived in 1980, with a few patients only on home treatment with concentrates. This fell out of favour due to Professor Ludlam's preference for concentrate therapy and his view that cryoprecipitate was unsuitable for home treatment, a programme onto which more patients had been put as the decade progressed. By 2 February 1984, it appears that a policy had emerged in Scotland that less cryoprecipitate would be used in the treatment of haemophilia A patients, with a proposal being put forward at a joint meeting that the production could be reduced. Professor Ludlam and Dr Hann pointed out at that time that cryoprecipitate was the preferred treatment for children in light of the emerging AIDS risk. In our submission, on the basis of the information outlined above about the risks of AIDS to haemophiliacs, the wrong attitude was being adopted to the use of cryoprecipitate in 1983/84. It was deemed to be an appropriate product for the treatment of children to protect them from the risk of AIDS. The same approach, in our submission, could and should have been applied to the treatment of all haemophilia A patients.

250 Transcript for 03/05/2011 (day 18); 44 (17 to 21) (Professor Ludlam)
251 Transcript for 03/05/2011 (day 18); 37 (20 to 22) (Professor Ludlam)
252 SNB.001.5252 @ 5253
The reasons why cryoprecipitate was really only being used in the treatment of children with haemophilia A over this period would appear to be (a) the limitations on the amount of cryoprecipitate available and hence the requirement to restrict its use to one defined group and (b) the pre-existing commitment to concentrates, including the existence of home treatment regimes.

As far as (a) is concerned, one requires to consider the issue of why it was that there was such a limited supply of cryoprecipitate available in 1983/84. Though there were problems with the purity of cryoprecipitate and therefore its propensity to provoke reactions, Professor Ludlam conformed that there were direct ways of making it but that proposals to try to develop better cryoprecipitate products in the west of Scotland appear to have failed due to lack of resources.253 As far as (b) is concerned, we would submit that considerations of safety should have outweighed considerations of practicality.

Dr McClelland pointed out that in Edinburgh the main treatment had been with cryoprecipitate under the Dr Howard Davies regime prior to 1980.254 He accepted that it would have been feasible to revert to a cryoprecipitate based treatment regime of there had been a clinical demand for it at any time in the early 1980s. This would have required new facilities from the CSA but he accepted that this would have required only "a fairly modest investment".255 The clinical demand never came. The important thing is that, had it come, it could have been met.

**The production of freeze dried cryoprecipitate**

The possible production of freeze dried cryoprecipitate for the treatment of haemophilia A patients appears to have been in contemplation at the time of a joint meeting on 4 March 1981. Professor Cash had been asked to look into this as a possible project and represented to the meeting that such a product could be used for home treatment was used extensively in Belgium.256 By the time of a further joint meeting on 21 January 1983, the project had been abandoned given the fact that the plasma freeze drying plant Law Hospital had been closed.257 The future of FDC was uncertain due to the aim of developing a concentrate with a reduced risk of hepatitis at that time. The reasons for the plant closure at Law Hospital have not, to our knowledge, been fully explored by the Inquiry, nor have the potential advantages of this product in light of the AIDS crisis. The subject was addressed in

---

253 Transcript for 03/05/2011 (day 18); 104 (5 to 14) (Professor Ludlam)
254 Transcript for 06/05/11 (day 21); 153 (11 to 14) (Dr McClelland)
255 Transcript for 06/05/11 (day 21); 158 (7 to 11) and 158 (24) to 159 (4) (Dr McClelland)
256 SNB.001.5064 @ 5065 - 5066
257 SNB.001.5160 @ 5162 - 5163
the evidence of Dr Peter Foster, however. He confirmed that in the west of Scotland the entire process of producing cryoprecipitate was carried out at Law Hospital.²⁵⁸ The freeze dried product had undergone a successful clinical trial in the west of Scotland, it was an effective product with potential for being scaled up.²⁵⁹ Dr Foster pointed out that the cost associated with Law Hospital contributed to the decision to close it but it was also due to issues which the Medicines Inspectorate had with the product. However, he was of the view that if there had been a demand from the haemophilia clinicians for the freeze dried product, then the Inspectorate would have reviewed these requirements.²⁶⁰ However, by this time, there was no such clinical interest in anything other than concentrates, the demand for which went up and up.²⁶¹

We would submit that the evidence which is available is indicative of the general commitment to factor concentrates which was almost total by 1983. In our view, this commitment did not balance sufficiently the risk of viral transmission against the therapeutic and social advantages of the factor concentrates. There was no contingency plan which allowed for a switch to lower risk products in the event of the emergence of a predictable outbreak of virus associated with blood products. This, in our view, represented substandard planning.

**Home treatment with factor concentrates**

20. The number of patients with bleeding disorders in Scotland on home treatment with factor concentrates in the first half of the 1980s

21. The extent to which the advantages of home treatment, if any, outweighed the risks of contracting HIV infection from the concentrates being used at home in the first half of the 1980s

In response to these two issues, we note that demand for concentrate in Edinburgh rose sharply after 1980 as Professor Ludlam wanted more to be able to treat people on home therapy.²⁶² The link between concentrates and home therapy is exemplified by the fact that, in evidence, Professor Ludlam, generally an advocate of domestically produced products, stated that he would have sought more commercial concentrates from his local health authority in order to get more patients onto

---
²⁵⁸ Transcript for 10/05/11 (day 22); 22 (25) to 23 (1) (Dr Peter Foster)
²⁵⁹ PEN.015.0045 @ 0047 (Professor Prentice statement)
²⁶⁰ Transcript for 10/05/11 (day 22); 65 (10) to 66 (1) (Dr Peter Foster)
²⁶¹ Transcript for 10/05/11 (day 22); 43 (22) to 44 (4) (Dr Peter Foster)
²⁶² Transcript for 03/05/2011 (day 18); 68 (13 to 15) (Professor Ludlam)
home therapy, had it not been for the fact that he had inherited a group of patients who had never been exposed to commercial concentrates under his predecessor, Dr Davies.\textsuperscript{263} His desire to get patients onto home treatment was such that he would have been prepared to expose his patients to treatment with commercial product, known to carry higher risks of hepatitis due to the blood donation system from which they had been created.

The advantages of home treatment appear to include (a) convenience for patients and (b) lesser pressure on hospitals to provide facilities and staff for administering treatment and (c) the likelihood that a patient, recognising the sensation that a bleed was starting, would be able to administer treatment to stop the bleed more quickly than would be the case if hospital attendance were required. It was hoped that early treatment, in children in particular, would have a long term advantage for the condition of their joints.\textsuperscript{264} It appeared to be the case from the evidence of Professor Forbes, that large number of patients had been put onto home treatment in the latter half of the 1970s during the so-called "golden age" after the widespread introduction of concentrates and before the viral contamination problems and that the commitment to that type of therapy had stemmed from that period.\textsuperscript{265} He made it clear that home treatment (and prophylaxis for that matter) was started against a background of there being few concerns about the safety of the concentrates or large exposure to them.\textsuperscript{266} Home treatment programmes were started in Edinburgh under the regime of Dr Davies from the 1970s.\textsuperscript{267}

Dr Winter was asked about an article he had written on how one would cope if the supply of factor VIII were to be interrupted. He explained that the article had been based on a real event where there was a transient shortage in his centre of concentrates. His response was (a) to postpone non-essential surgery (b) look at treatment regimes and (c) moderate the amounts used by patients on home treatment.\textsuperscript{268} This would appear to suggest that, in his experience at least, more concentrate than was necessary was being used by his patients, in particular as a result of home treatment. Further, Dr Boulton appears to have suggested to Professor Bloom in May 1983 that the deferral of home treatment programmes would be a method whereby reliance on commercial concentrates in

\textsuperscript{263} Transcript for 03/05/11 (day 18); 72 (7 to 17) (Professor Ludlam)
\textsuperscript{264} Transcript for 05/05/11 (day 20); 15 (22) to 16 (2) (Dr Pettigrew)
\textsuperscript{265} Transcript for 28/04/11 (day 17); 58 (Dr Forbes)
\textsuperscript{266} Transcript for 28/04/11 (day 17); 61 (14 to 19) (Dr Forbes)
\textsuperscript{267} SNB.007.2254
\textsuperscript{268} Transcript for 26/04/11 (day 15); 53 (22) to 54 (7) (Dr Winter)
England might be reduced.\textsuperscript{269} This also seems to mean home treatment uses up more concentrate than treatment in the hospital would.

Further, much evidence was heard by the Inquiry that in the early 1980s it was deemed inappropriate for patients to be able to use cryoprecipitate if on home treatment programmes. It is, therefore, perhaps not surprising that the advent of home treatment in centres like Edinburgh resulted in patients (a) being committed to concentrate rather than cryoprecipitate treatment and (b) self administering unnecessarily large amounts of concentrate at home. Though offering certain therapeutic advantages (the timing aspect as recognised above), it is submitted that the rise of home treatment programmes was based on expediency rather than a proper long terms assessment of cost and benefit to the patients. As far as cost is concerned, for example, it seems that the cost savings in the hospital may have been outweighed by the increased usage and expense of the concentrates required by patients on home treatment. Dr Winter gave some evidence regarding the cost of clinical care as against the cost of concentrate therapy per patient. The latter expense he said “could be extremely high.”\textsuperscript{270} As far as advantage to the patients is concerned, our submission on the need to minimise concentrate therapy in the interests of reducing the risks of viral transmission is set out elsewhere. In the editorial in the New England Journal of Medicine in January 1983, it was pointed out that the emerging threat of AIDS required a different attitude to be taken towards the dependence on concentrates and a reversion to cryoprecipitate therapy and a revision of home treatment programmes.\textsuperscript{271} In light of the emerging evidence in the first part of 1983, we would submit that this would have been the most cautious and therefore the preferable option in Scotland as well.

It is also worthy of note that the view that cryoprecipitate could not be used for home treatment was not unanimously held by the haemophilia clinicians who gave evidence. Professor Forbes made it clear that certain of his patients used cryoprecipitate at home.\textsuperscript{272}

\textsuperscript{269} That this line was taken is indicated in the reply from Professor Bloom which is SNF.001.3711 (23 May 1983)
\textsuperscript{270} Transcript for 26/04/11 (day 15); 65 (1 to 6) (Dr Winter)
\textsuperscript{271} LIT.001.0040 @ 0041 (13 January 1983)
\textsuperscript{272} Transcript for 28/04/11 (day 17); 83 (8 to 16) and 101 (42 to 17) (Professor Forbes)
There may have been certain advantages in home treatment for patients who lived a long way from a haemophilia centre. However, it should not, in our submission, be seen as essential. Professor Forbes described there being an "open access policy" at the GRI. Professor Ludlam operated a system in Edinburgh whereby patients could be brought to the centre at the RIE by ambulance (sometimes from far away) and the centre was available 24 hours.

Under reference to a document from 11 October 1974 which seemed to predict that home treatment would result in a reduction of the number of patients crippled and an improvement the quality of life, Professor Forbes expressed the views that thought that may have been thought at the time, this was not acceptable in the long term.

It is clear that the apparent desire for home treatment not only promoted for the convenience of the patients but also had advantages for the health service, which, in our submission, must have played a part in why these regimes were instituted and expended so quickly in the late 1970s and early 1980s. Professor Ludlam confirmed that home treatment relieved pressure on nursing staff, ambulance staff and doctors who no longer needed to see in-patients every morning. In Yorkhill, patients were not regularly seen in the hospital at all under the directorship of Dr Willoughby, according to Dr Pettigrew. Dr Pettigrew had no recollection of discussing with Dr Willoughby regarding the risks of home treatment. She was unable to give a detailed account about her knowledge of the risks (in particular of whether the risks were of hepatitis B or NANB hepatitis) and the extent to which these were discussed with the parents.

Prophylactic treatment with factor concentrates

22. The number of patients with bleeding disorders in Scotland on prophylactic treatment with factor concentrates in the first half of the 1980s

---

273 Transcript for 03/05/2011 (day 18); 66 (9) to 67 (13) (Professor Ludlam)
274 Transcript for 03/05/2011 (day 18); 67 (18 to 19) (Professor Ludlam)
275 DHF.002.3161
276 Transcript for 28/04/11 (day 17); 37 (8 to 13) (Professor Forbes)
277 Transcript for 04/05/11 (day 19); 126 (12 to 20) (Professor Ludlam)
278 Transcript for 05/05/11 (day 20); 4 (17 to 20) and 21 (2 to 10) (Dr Pettigrew)
279 Transcript for 05/05/11 (day 20); 20 (1 to 4) (Dr Pettigrew)
23. The extent to which the advantages of prophylactic treatment, if any, outweighed the risks of contracting HIV infection from the concentrates in the first half of the 1980s

In response to these two issues, we note that the evidence would tend to suggest that prophylactic treatment with factor concentrates was instituted on the basis of the perception that it would prevent spontaneous cerebral bleeding and death amongst patients with bleeding disorders. Further, it was hoped that a reduction in the number of spontaneous bleeds in severe patients would be good for the long term prospects of children's joints. Dr Mark Winter explained that it aimed to prevent spontaneous bleeding in severely affected patients by raising their factor levels to the point where, though susceptible to traumatic bleeds, their susceptibility to dangerous spontaneous bleeding might be reduced to the level of a more moderate patient with some natural factor occurring in the blood. He also pointed out that (a) to achieve this regular treatment with concentrates was necessary and (b) that prophylaxis was a European treatment regime which had not until very recently bleed widely practised in the US. The prophylactic regimes (based on the Swedish model) did not really get underway until the 1980s. They were clearly contemplated before then as there was some discussion of them (and some reluctance expressed about them) at a meeting of the UKHCDO on 13 January 1977. Professor Forbes noted that the reluctance stemmed from the "huge amount of exposure to plasma products" that the programmes would entail. Professor Hann suggested that prophylactic therapy required around three times as much concentrate than on demand therapy.

A study by Rizza and Spooner studied the treatment of patients with bleeding disorders predominantly in the period 1976 to 1980. The authors noted that there had been an increase in use of factor VIII concentrates over this period. They concluded that there was a near normal median expectation of life in severe haemophiliacs and a greater than average mean life expectancy in mild haemophiliacs, though bleeding (and in particular cerebral bleeding) represented the main cause of death in the haemophiliac population. There is no mention in the article of widespread use of prophylactic treatment in the UK by 1980 and, indeed, in projecting future trends, the authors refer to the possibility of an even further increased requirement for factor concentrates in the future in

280 Transcript for 05/05/11 (day 20); 15 (6 to 12) (Dr Pettigrew)
281 Transcript for 26/04/11 (day 15); 74 (1 to 18) (Dr Winter)
282 Transcript for 26/04/11 (day 15); 74 (25) to 75 (4) (Dr Winter)
283 SNB.001.7117 @ 7126
284 Transcript for 26/04/11 (day 15); 57 (1 to 2) (Dr Winter)
285 Transcript for 06/05/11 (day 21); 11 (22) to 12 (6) (Professor Hann)
286 LIT.001.0234
the event of "the widespread use of prophylactic treatment". In his evidence, Professor Ludlam pointed out that deaths from haemorrhage diminished significantly in patients with bleeding disorders with the introduction of fresh frozen plasma and, in particular, cryoprecipitate. The introduction of concentrates resulted in a small additional life expectancy.

In our submission, this tends to suggest that the levels at which factor concentrates were being used in the treatment of patients with bleeding disorders by 1980, at which time there was no widespread prophylaxis, meant that life expectancy, even for severe patients, had reached near normal levels. Dr Winter attributed the fact that cerebral bleeds are now very much less common than they used to be to (a) better education and (b) the availability of earlier treatment. He did not mention prophylaxis as the reason, despite making these comments directly after this evidence on the evolution of prophylactic treatment.

Yorkhill

The UKHCDO statistical material available to the Inquiry makes it clear that large amounts of concentrate were used in the treatment of the children there in the late 1970s and early 1980s. In particular, there was a greater reliance than in other centres on commercial concentrates as part of a prophylactic regime. Dr Willoughby who was in charge of haemophilia care there over that period intimated to a meeting of the UKHCDO on 30 September 1980 that "it was clear that using factor VIII concentrate on children would give the possibility of non-crippled adults". Professor Hann confirmed that Dr Willoughby was "ahead of his time" in that he was very interested in prophylaxis. This interest is what required him to rely on a supply of commercial concentrates, as well as issues with the purity and potency of the SNBTS concentrates. This preference for prophylaxis led to a requirement to rely on dangerous commercial concentrates at Yorkhill and as we submit below was misguided.

Conclusion

Prophylactic treatment regimes should never have been started in Scotland on the basis of a proper balance between the value of such treatment and the potential risk of viral transmission from such

---

287 LIT.001.0234 @ 0238
288 Transcript for 04/05/11 (day 19); 123 (13 to 22) (Professor Ludlam)
289 Transcript for 26/04/11 (day 15); 77 (12 to 13) (Dr Winter)
290 SNB.001.7296 @ 7301
291 Transcript for 06/05/11 (day 21); 28 to 29 (Professor Hann)
massive use of concentrates which was well known by the time they were instituted. Further, prophylaxis should have been stopped in 1983 based on (a) the limited information that it was actually benefitting the patients and (b) the existing knowledge at that time that there was a risk from AIDS, a fatal disease. Not stopping the concentrates completely for severe patients but minimising exposure to them would have constituted a better balance between the risks and benefits of concentrate therapy.

**Patient involvement in the decision making process as regards product use**

24. The extent to which the opinions of patients with bleeding disorders were or should have been taken into account in making decisions about their treatment with blood products in the first half of the 1980s

The duty of the doctor, or any professional, must at some point be to do something which is unpopular but which is in his patient's interests. Under reference to the 1975 World in Action programme, Dr Winter spoke of the reluctance which patients would have had to stopping treatment with concentrates in light of variable information and variable opinions from doctors (he was referring at that stage to the hepatitis risk from concentrates, which he had placed at 100%292) given the lifestyle advantages which they had enjoyed as a result of concentrate therapy.293 This was all the more likely given his evidence on the potential drawbacks of alternative treatments like cryoprecipitate which included possible reactions, the need to go to hospital and the inaccuracy of the factor VIII dose.294 He did, however, accept that if patients had starker, clearer information they might have modified their use of factor VIII, at least in the home setting.295 In our submission, the likely reluctance on the part of the patient who saw and understood only the immediate advantages of concentrate therapy was inevitable. The fact that bad news about concentrate therapy was likely to be received unwillingly imposed an even greater burden on the doctor to be full and frank with their patients about the emerging threat of AIDS when it became known.

Professor Ludlam commented on efforts made by Dr Oscar Ratnoff in the USA to switch his patients from concentrate therapy back to cryoprecipitate. He pointed to the significance of the fact that only 5 out of the 90 patients offered this option by Dr Ratnoff accepted the proposal.296 We would refute

---

292 Transcript for 26/04/11 (day 15); 84 (2 to 17) and 92 (4 to 9) (Dr Winter)
293 Transcript for 26/04/11 (day 15); 94 (22) to 96 (1) (Dr Winter)
294 Transcript for 26/04/11 (day 15); 78 to 81 (Dr Winter)
295 Transcript for 27/04/11 (day 16); 145 (24) to 146 (3) (Dr Mark Winter)
296 Transcript for 04/05/11 (day 19); 29 (15) to 30 (10) (Professor Ludlam)
the suggestion that this data is of any relevance other than to indicate that a renowned haemophilia clinician saw fit to make this switch and also to offer the option to his patients. The decisions taken by the American patients are of no relevance to the likely response to such a similar suggestion made by a clinician in Scotland. Anyhow, the precise nature of the information given to the patients by Dr Ratnoff as to why the switch would be advantageous is unknown.

The continued use of imported blood products in Scotland in the first half of the 1980s

25. Whether Scotland could and should have been self sufficient in blood products in the first half of the 1980s and, if so, when

General

The question of when Scotland could have achieved self sufficiency is a difficult one to answer. It is dependent, in the first place, upon determining whether one is asking the question on the basis of the then existing treatment regimes or whether one would have recommended different regimes to have been adopted. For example, if one had adopted a more domestic approach to product use at Yorkhill, that would have placed greater strain on the production of domestic concentrates. That may have been eased to an extent if one were to advocate the removal of prophylactic or home treatment regimes. If one advocated a greater use of cryoprecipitate and a lesser reliance on concentrates, that would also have an effect.

In a government Memo dated 6 May 1983, it was suggested that Scotland was virtually self sufficient in factor VIII. This was disputed by Professor Forbes who said that he did not think that Scotland was ever self sufficient in quality factor VIII at that time. The qualification which he added about quality appears to suggest that it was due to concerns about the quality of the domestic concentrates that the goal of self sufficiency was not achieved. Dr McClelland gave some detailed evidence on the concept of self sufficiency over this period. In our submission, what is striking is the lack of evidence about contemporaneous discussions between the producers of the domestic product and the users about demand and awareness of what types of treatment programmes could be satisfied with domestic products. Dr McClelland stated that the SNBTS would never have been

297 SGH.002.6764
298 Transcript for 28/04/11 (day 17); 13 (4 to 6) (Professor Forbes)
confident at this time of meeting "open ended" demand.\textsuperscript{299} The constant demand for more concentrates meant that the target was always moving upwards over this period.\textsuperscript{300} This was also the experience of Dr Foster.\textsuperscript{301} He pointed out that the use of factor VIII in Scotland doubled in 1980.\textsuperscript{302} In our submission, the constantly increasing use of concentrates over this period was (a) contrary to the increasing risk of contracting a fatal disease from those concentrates and (b) due to the fact that clinicians always knew that they had the option to purchase commercial products if the SNBTS could not satisfy their demands. This was a recipe for disaster. What was needed was a clear policy that foreign products would not be used and that concentrate use would be curtailed both for reasons of safety and so that demand could be met from locally produced products. Further, Dr Foster made it clear that it was not predicted how the success of concentrates would breed further demand.\textsuperscript{303} This suggests poor co-ordination between the producers and the clinicians to square demand and supply.

In a Memo from Dr Perry to others at the PFC dated 18 November 1983 he provided an estimation of the current stocks (based primarily on material held at RTCs or in production at the PFC rather than elsewhere) and balanced them against expected demand.\textsuperscript{304} He pointed out that it appeared that the current stocks might indicate that demand would be less than supply, meaning that some of the stock which had been produced would go out of date. This may be taken as an indication that Scotland was self-sufficient at that stage, if that term is understood as meaning that supply outstripped demand. However, this does not mean that the demand was for 100\% of the products used to be met by SNBTS concentrates on the basis that other products were still being used. Further, as Dr Perry points out, this would soon be complicated by the fact that any declaration of self-sufficiency would require to be re-assessed once new products were released, such as heat treated products. What is striking is (a) the relatively unsophisticated way in which current stocks are calculated (with no consideration of home therapy stocks or "peripheral" blood banks) and (b) the similarly rough and ready method of calculation of demand (based on an assumption that the current year’s demand would be this same as that of the previous year) and (c) the apparently nonchalant mention of the possibility of over-stocking resulting in products going out of date, which presumably would have resulted in enormous wasted expenditure. In our submission, this Memo is

\textsuperscript{299} Transcript for 06/05/11 (day 21); 145 (12 to 15) (Dr McClelland)
\textsuperscript{300} Transcript for 06/05/11 (day 21); 144 (24 to 25) (Dr McClelland)
\textsuperscript{301} Transcript for 10/05/11 (day 22); 43 (22) to 44 (4) (Dr Peter Foster)
\textsuperscript{302} Transcript for 10/05/11 (day 22); 52 (7 to 10) (Dr Peter Foster)
\textsuperscript{303} Transcript for 10/05/11 (day 22); 37 (6 to 12) (Dr Peter Foster)
\textsuperscript{304} SNB.007.3984
illustrative of what appears to be an unstructured system for (a) matching supply and demand and (b) achieving the stated goal of self sufficiency in blood products in Scotland.

At a joint meeting on 2 February 1984, it was noted that over the last 5 years stock levels of PFC factor VIII concentrate held by RTDs indicated that a surplus amount of factor VIII may have been produced by the PFC beyond the usage in Scotland. There was discussion of the possibility of surpluses being given to centres in England. Dr Cash raised the query of whether commercial product was required at all in light of production levels.\(^305\) This is a clear indication that by this time, Scotland could and should in light of international guidance and the apparent commitment to self sufficiency in the UK) have been self sufficient in factor VIII concentrate.

It is interesting to note that, by 1990, the meaning of self sufficiency appears to have changed from all products used being produced in Scotland to meeting all products asked for by the clinicians from domestic supply (irrespective of the amount of foreign products used in accordance with their preference). This was spoken to by Dr Foster, who indicated that this change in definition was something that Professor Cash had not been happy about on the basis that it would make it impossible to predict how much domestic products would be needed as this would depend on how much foreign product was being used.\(^306\)

**Plasmapheresis**

There is one further matter which we would wish to note in connection with the achievability of self-sufficiency, namely plasmapheresis. Greater use of this technique would have been likely to have assisted in the achievement of self-sufficiency in Scotland. Dr Foster spoke to the fact that plasmapheresis would have produced more plasma which would have been better for self sufficiency on the basis that it was the lack of plasma which created there being a target which was always moving away.\(^307\) Mr David Watters gave evidence to the effect that he recalled there having been efforts on the part of the Haemophilia Society to raise the advantages of plasmapheresis with the Department of Health. He recalled that these requests fell on deaf ears.\(^308\) Given the fact that the drive for plasma was the reason why self-sufficiency was never achieved, we would submit that greater efforts should have been made to maximising plasma yield by the use of plasmapheresis in Scotland, as was the case in certain other countries.

---

\(^{305}\) SNB.001.5252 @ 5253  
\(^{306}\) Transcript for 10/05/11 (day 22); 31 to 33 (Dr Peter Foster)  
\(^{307}\) Transcript for 10/05/11 (day 22); 71 (14) (Dr Foster)  
\(^{308}\) Transcript for 19/01/12 (day 87); 116 (4 to 9) (Mr David Watters)
26. Who was responsible for achieving self sufficiency in blood products in Scotland in the first half of the 1980s?

At a joint meeting of the SNBTS and haemophilia centre directors on 30 January 1981, attended also by representatives from the SHHD, it was "agreed" that self sufficiency must be the aim for Scotland.\textsuperscript{309} This agreement seems to indicate that it was within the power of these bodies, in meeting together, to make such a decision. However, it does appear that little attention is given to the way in which the bodies would operate to achieve that mutually agreed aim. No consideration is given to the possibility of the haemophilia directors continuing to use imported products, irrespective of the availability of domestic products. Despite the recognition for the need for "good planning" to achieve this aim, little by way of planning seems to be put in place as to how the aim will be achieved, nor whose responsibility the achievement of the aim would be.

Professor Forbes resisted any suggestion that there had been any steer given by the SHHD towards implementing a policy of self sufficiency in Scotland.\textsuperscript{310} When asked, Dr McClelland had no idea from whom any stated policy regarding self sufficiency would have emanated.\textsuperscript{311} He also anticipated that a formal direction from the government in the form of a letter from the Chief Medical Officer to this effect would have been taken seriously but that there was no tradition of such formal directions being given.\textsuperscript{312} Dr McClelland was also of the view that to the extent that any concerns were raised by the government about the use of commercial products, these concerns were mostly to do with funding, rather than to do with safety.\textsuperscript{313} There was a concern that, given the investment in the PFC, purchasing commercial material was, in effect, "paying twice". Dr Perry could not identify any definitive moment at which the SHHD had declared that self sufficiency was to be the rule until the late 1980s.\textsuperscript{314} He stated that any notion of self sufficiency was always subordinate to the concept of clinical freedom of the clinicians to prescribe what product they wanted, apparently without restriction.\textsuperscript{315}

In the minutes of the SNBTS directors meeting on 8 December 1983, it was noted that Professor Cash would include the issue of Yorkhill being the only hospital in Scotland which appeared to

\begin{itemize}
\item \textsuperscript{309} SNB.001.5064 @ 5065, para 6
\item \textsuperscript{310} Transcript for 28/04/11 (day 17); 82 (20 to 23) (Professor Forbes)
\item \textsuperscript{311} Transcript for 06/05/11 (day 21);104 (20) (Dr McClelland)
\item \textsuperscript{312} Transcript for 06/05/11 (day 21); 114 (8 to 21) (Dr McClelland)
\item \textsuperscript{313} Transcript for 06/05/11 (day 21); 103 (7 to 10) and 115 (6 to 11) (Dr McClelland)
\item \textsuperscript{314} Transcript for 13/05/11 (day 25); 10 (1 to 16) (Dr Perry)
\item \textsuperscript{315} Transcript for 13/05/11 (day 25); 1 (22) to 2 (2) (Dr Perry)
\end{itemize}
continue to use substantial quantities of commercial products in a report he was compiling on planning for self sufficiency. This would seem to suggest that he had some responsibility in this area, though there is no detail of the purpose or the addressee of the report. Given that it was being planned for, it does not seem that it had been achieved by that point. It was noted that Yorkhill appeared to be the only hospital in Scotland still using significant amounts of commercial material at that time.316

At the joint meeting on 2 February 1984, Dr Bell pointed out that self sufficiency for Scotland was the national policy but that the SHHD would not intervene in what was prescribed. He urged that it was not "sensible" for commercial material to be purchased when domestically produced material was available.317 This suggests that the clinicians were free to prescribe what they wanted. In circumstances where doctors were accorded this freedom and no decision was taken by the government to impose self sufficiency, it seems hardly surprising that commercial products continued to be used. In our submission, there was little point in the government adopting such a national policy in light of the lack of measures taken to ensure that the policy goal was achieved. As is clear from the minute, Professor Ludlam (unlike Dr Macdonald in the west) took the view that the higher purity commercial material was needed for certain of his patients. Dr McClelland confirmed in his evidence that Professor Ludlam was responsible for the purchase of commercial products in Edinburgh.318 Dr Macdonald had indicated that he was happy with the purity and quality of the SNBTS products in 1983 but Professor Ludlam had been purchasing more commercial product at that time as well.319 Professor Ludlam told the Inquiry that one of patients was on home treatment with commercial concentrates as "he [Professor Ludlam] was lent on quite heavily" by the patient whose brother was also a haemophiliac and was on commercial home treatment.320 If such clinical and financial freedom were to continue to be accorded to the consultants to allow divergences in practices like this to emerge, it seems in our submission, that the governments' stated commitment to self sufficiency (which it would appear could have been achieved by February 1984 at the latest) was merely notional.

We are unaware of any evidence about there having been a clear allocation of responsibility for the achievement of self sufficiency in Scotland. Dr Perry was of the view that, despite its notional support for the concept of self sufficiency in Scotland and the fact that it was always far more likely

316 SNF.001.0178 @ 0180
317 SNB.001.5252 @ 5254
318 Transcript for 06/05/11 (day 21); 98 (6 to 15) (Dr McClelland)
319 SNB.001.5160 @ 5161 - 5162
320 Transcript for 04/05/11 (day 19); 88 (Professor Ludlam)
to have been achieved here than in England, the SHHD had no real power to make a unilateral declaration restricting use to domestic concentrates. This is because this would have been a licensing issue which would have had to have been decided on a UK basis. 321 Even if theoretically possible he did not think that SHHD would ever have taken a different view on such a matter to the DHSS. 322 In our submission, there was no impediment to Scotland, with its separate licensing regime, taking the view that, in the interests of public safety and in light of the achievability of self sufficiency, the practice of using commercial products would cease. Further, it did not need to take a different position to the DHSS whose stated policy had been to support self sufficiency throughout this period. The fact of the SHHD’s adherence to the national position failed to take account of the separate production and blood transfusion system which operated in Scotland and its greater proximity to self sufficiency in blood products, to the point of undermining the advantages of having such a separate system.

27. The reasons why imported products continued to be used in Scotland in the first half of the 1980s

General

As it commented on above, it appears clear that there were divergences in clinical practice regarding the use of commercial concentrates in Scotland over this period. One of the given reasons for this appears to have been the higher purity 323, greater accuracy and superior user-friendliness of the commercial product, according to some clinicians. In the context of the relative user-friendliness of the packaging of the commercial products, Dr Foster pointed out that the imports were made with greater budgets but, importantly in our view, he pointed out that the PFC were reliant on clinicians pointing out what they wanted from the products which they were producing. He indicated that they would have tried to oblige but that such approaches did not happen. 324 It is hardly surprising that was being done by the producers of the domestic product to address these concerns of the clinicians of they did not know about them. The complete freedom of the clinicians to obtain commercial products when the domestic product was not quite suitable was not conducive to such a dialogue, nor to the achievement of self sufficiency.

321 Transcript for 13/05/11 (day 25); 12 (13 to 17) (Dr Perry)
322 Transcript for 13/05/11 (day 25); 13 (25) to 14 (3) (Dr Perry)
323 SNB.001.5252 @ 5254
324 Transcript for 10/05/11 (day 22); 36 (21 to 23) (Dr Peter Foster)
Dr Foster addressed the criticism of the domestic concentrates over this period that it took longer to dissolve. He suggested that this may simply have been because it was not being warmed up enough (as per the instructions) after being taken out of the fridge.\footnote{Transcript for 10/05/11 (day 22); 103 (16 to 22) (Dr Foster)} This may not actually, therefore, have been much of an issue.

\textbf{Yorkhill}

\textbf{The background to the treatment regime}

The statistical information concerning product usage available to the Inquiry demonstrates that Yorkhill was heavily reliant on commercial concentrates in the treatment of its young patients. As noted above, this appears to be connected to their treatment with prophylaxis.

The statistical material which we have relating to twenty-one of the boys infected at Yorkhill gives some indication as to the timing of their infection. The information is incomplete (mainly due to the lack of last negative tests for all of the boys) and not entirely accurate (as for some of the boys first positive tests were not performed, it would appear, until quite late in the decade) but we think that certain relevant conclusions can be drawn. None of the twenty one boys was definitely infected after the start of 1983. Ten were definitely infected before the start of 1983. Another six were definitely infected by the middle of 1983. For the other five, the precise time of infection is hard to define either due to the lack of a last negative test or the significant time lapse between last negative and first positive tests. The balance of the evidence would seem to suggest that most of the boys were infected before evidence emerged of the threat of AIDS from blood products was generally accepted by haemophilia and other clinicians, which Dr Winter put at December 1982.

However, we would submit that this is not definitive of the issue of whether it was acceptable for the children to have continued to be treated with commercial products. None of the children treated there was definitely infected before 1 January 1980 (this being the earliest first negative test to which we have access). The Inquiry has access to details of first negative tests for 12 of the 21 boys. For the other 9, there is no negative test and we only know the date of the first positive test. For the 12 for whom we do have the details of a last negative test, only 2 have their last negative test in 1980, 6 have their last negative test in 1981 and the remaining 5 have their last negative test in 1982 (one as late as November 1982).
The evidence which we have would, therefore, tend to suggest that the infection of boys at Yorkhill probably did not start until around 1981 at the earliest. Even by 1980, in our submission, reliance on commercial concentrates in such high quantities as were being used at Yorkhill was, in our submission, entirely inappropriate in light of the well known infection risks from US products. That the risks of these products were well known is illustrated clearly by the contents of the 1975 World in Action documentary. That the risks from those products were predominantly bound up with infection with hepatitis is neither here nor there. The low standards at blood donation sessions, the payment of donors and the enormous pool sizes would increase the risk not only of hepatitis infection but of transmitting any infectious agent, including HIV. Numerous English haemophilia clinicians have given evidence to the Inquiry that they looked at Scotland's relative self sufficiency over this period with some jealousy, indicative of the fact that their forced reliance on commercial products was not their preferred option due to the known risks associated with imported concentrates. One should also observe that between 1975 and the date of infection of the boys at Yorkhill in the early 1980s there had been significant advances in the understanding of the possible severity of NANB hepatitis, in particular in papers published in the Lancet in the late 1970s. This is addressed more fully in our submission in the C3A section. For present purposes, we submit that increased knowledge of potential severity of NANB hepatitis should have made reliance on commercial products even less attractive.

The reasons why this treatment regime was selected

It is difficult to know with precision why it was that Yorkhill used so much commercial concentrate in the late 1970s and early 1980s, in particular why that product appears to have been predominantly Factorate, produced by Armour. This is predominantly because the Inquiry does not have access to testimony from members of staff who can answer this important questions, in particular Dr Willoughby who was the centre directors at Yorkhill over this period.

Professor Forbes was asked about this and he suggested that the reason for the commitment to commercial concentrates. He answered that concentrates might be more suitable for young children due to problems with the amount of volume they could handle. He did not say that this was a reason for using specifically commercial concentrates. Further he suggested that the perception may have been that commercial concentrate was more effective or efficient than the NHS concentrate at

326 Transcript for 28/04/11 (day 17); 21 (21) to 22 (4) (Professor Forbes)
that time.\textsuperscript{327} Such issues did not appear to trouble others in Scotland who used predominantly NHS materials. Further, at the UKHCDO meeting on AIDS held on 13 May 1983, it was considered circumspect for clinicians who had already reserved a stock of NHS concentrate for use for mild patients and children under 4 to continue with that policy which had already been implemented by certain clinicians in order to protect the these patients against the hepatitis risk from imported concentrates.\textsuperscript{328} Domestic concentrates had therefore been specifically reserved for young children in some centres. Further, Professor Ludlam indicated at a later meeting that he could not agree to the discontinuation of the production of cryoprecipitate on the basis that he preferred to use it in the treatment of children. Interestingly, Professor Hann (by then the director at Yorkhill) agreed.\textsuperscript{329} Cryoprecipitate was less convenient to administer and contained unpredictable amounts of factor VIII. The fact that clinicians in Scotland favoured cryoprecipitate in the treatment of children over this period suggests that it was far from necessary for children to be treated with concentrates and, indeed, even before the HIV crisis emerged, it was considered by some to be unsafe to do so. In his evidence, Professor Ludlam confirmed that he was able to treat babies and young children in Edinburgh using only NHS material.\textsuperscript{330} The suggestion that the preference for commercial concentrates was necessary in order to meet the need for greater precision or to deal with fluid tolerance issues cannot be accepted. Any such suggestion indicates an unreasonable preference for convenience over patient safety.

As it noted above, Dr Willoughby had expressed an interest in the prophylactic treatment of the boys at Yorkhill. As observed above, such regimes require very large amounts of concentrate to be used. The prophylactic regime must have played a significant part in the reliance at Yorkhill on commercial concentrates on the basis that the PFC would have been unable at the relevant time (from the late 1970s to the end of Dr Willoughby’s tenure) to provide enough material for the hospital to be self sufficient with such demand. Dr Pettigrew explained that the commercial concentrates were more user friendly and that the boxes contained the equipment one needed, making them more attractive for home treatment.\textsuperscript{331} Dr Willoughby had explained to Dr Pettigrew on her appointment (in 1976/77) that he used commercial concentrates as he could not get sufficient guarantees from the SNBTS that his home treatment regimes (which one assumes to cover prophylaxis) could be covered by domestic concentrates.\textsuperscript{332} These considerations ranked

\textsuperscript{327} Transcript for 28/04/11 (day 17); 23 (16 to 19) (Professor Forbes)  
\textsuperscript{328} DHF.001.4384  
\textsuperscript{329} SNB.001.5252 @ 5253 (see above)  
\textsuperscript{330} Transcript for 03/05/2011 (day 18); 77 (Professor Ludlam)  
\textsuperscript{331} Transcript for 05/05/11 (day 20); 17 (14) and (17 to 20) (Dr Pettigrew)  
\textsuperscript{332} Transcript for 05/05/11 (day 20); 18 (9 to 23) (Dr Pettigrew)
convenience above safety. Further, there is no evidence that the capacity of the SNBTS to meet Dr Willoughby’s demands was kept under review. Once the commitment to commercial products was decided upon, that continued to be the supply source into the 1980s. It is interesting to note that Dr Pettigrew recalled that, if not on home treatment, boys tended to be treated with cryoprecipitate. The UKHDCD tables for the use of products at Yorkhill (at page 566 of the preliminary report) seem to show however that miniscule percentages of cryoprecipitate were used in the treatment of the boys in the early years of the 1980s.

It was suggested elsewhere in the evidence that the amount of factor VIII in the commercial concentrates was standardised and that the amount on the domestic concentrates was variable. However, as Dr McClelland pointed out, although the amount of factor VIII in the domestic concentrates was variable, it was printed on the and so all that was required was some arithmetic of numbers which were different to work out how much was needed. This minor practical inconvenience should not have outweighed the safety advantages of the domestic concentrates.

Conclusions

At the first joint meeting which he attended on 2 February 1984, Dr Hann pointed out that he had inherited a large amount of commercial concentrate at Yorkhill. He planned to dispose of it, despite the fact that it was obviously expensive. In light of this decision, it appears questionable as to whether the previous regime, which relied heavily on commercial products as can be seen from the statistical material available to the Inquiry, was a necessary or even a reasonable one. Although it cannot be submitted that the treatment regime at Yorkhill under the Willoughby directorship should have been altered due to the emerging risk of AIDS (as the relevant information did not emerge until too late for many of the infections there to have been avoided), we would submit that the practices adopted at Yorkhill were both unnecessary and also unsafe. One might argue that had there not been reliance on commercial concentrates in Yorkhill there would not necessarily have been any more PFC concentrates for them. In assessing this, one must remember that there were relatively few patients at Yorkhill and so the demand may not have been impossible to meet. It was suggested by Counsel to the Inquiry and the Chairman that the 21 infections constituted 35% of the total number of patients there at that time, meaning that there would only have been 60 patients. Further, given the fact that they were children, they would have required relatively small amounts of

---

333 Transcript for 06/05/11 (day 21); 171 (14) to 172 (13) (Dr McClelland)
334 SNB.001.5252 @ 5254
335 Transcript for 28/04/11 (day 17); 21 (7 to 8) (evidence of Professor Forbes)
concentrate each, in particular if they were not being treated prophylactically as appeared to be the norm over this period in most other centres in the UK.

It is interesting to note that only one of the patients in Edinburgh appears to have seroconverted before over the same period as the seroconversions of the children infected at Yorkhill (patient E22 on Professor Ludlam's statistics list). We know that patient was one of the few in Edinburgh who did receive commercial product and the product he did receive was Armour Factorate, which was the product predominantly used at Yorkhill. This shows, in our submission, that had the Yorkhill children been using PFC concentrate as opposed to commercial concentrate it is likely that they would not have been infected. We would argue, consistent with the practices adopted for some children by a number of clinicians in the country, that treatment with cryoprecipitate (for the youngest children at least) would have been preferable and would have lessened the risk of HIV infection even further.

Regional variations in the types of products used in the treatment of patients with bleeding disorders in Scotland

28. The reasons why different blood products were used in different parts of Scotland and the consequences of such a divergence on the number of patients infected with HIV in the various regions of Scotland

29. Whether a centralised system for the selection and procurement of blood products in Scotland over this period could and should have been instituted

In response to these two issues, we recognise that where blood products are concerned there is a requirement to strike a balance between clinical decision making and policy decisions. If, however, clinical decision is unrestrained then the result is that one centre such as Yorkhill becomes almost entirely dependent on commercial concentrate and another such as Edinburgh does its best to avoid it. How can these two positions be reconciled? At least one of these centres must have been wrong.

It appears that the PFC made some attempt in the early 1980s to anticipate the demand for blood products in Scotland based on the rough amount of surplus stock in some limited locations in Scotland. As is addressed above (under reference to the contents of document SNB.007.3984) the systems in place for matching supply and demand of blood products seem from this to be a fairly
unsophisticated one. It is submitted that a more organised central system would enable full account to be taken of the needs of the clinicians and the production capacities of the producers.

The divergent attitudes illustrated are addressed elsewhere in this submission. Better co-ordination and a more centralised approach to the sharing of information and decision making would, in our submission, have resulted in a system which is likely to have been more consistent and safer for patients.

**The impact of a more cautious approach to product use**

30. Whether infections of patients with bleeding disorders in Scotland with HIV could and should have been avoided

The Inquiry had access to material from countries where different treatment regimes were adopted than was the case in Scotland. For example, in Belgium predominantly cryoprecipitate was used rather than factor concentrates, mostly due to the fact that there were simply no concentrates available. As was covered in the evidence of Professor Ludlam, despite a high rate of HIV in the general Belgian community (and hence a likelihood of there being a high prevalence of the disease in the donor population) there were relatively few HIV infections in patients with bleeding disorders.336

In our submission, this evidence suggests that greater use of cryoprecipitate in the first half of the 1980s would have reduced the number of HIV infections in the blood disorder community.

Professor Cash gave evidence to the effect that the amount of virus, or viral load, to which one is exposed will have an effect on the likelihood of the recipient being infected with HIV.337 Professor Lever, an infectious diseases expert, confirmed that the more one is exposed to HIV the more likely one is to get infected.338 He appeared to confirm this in more detail that HIV has a notoriously high particle to infectivity ratio, meaning that one could be exposed to a high number of particles of the virus before coming across one that was infective.339 He confirmed the theory that the more virus a patient was exposed to the more likely it would be for the patient to become infected in response to material out to him about the infection of the Edinburgh cohort from the preliminary report.340

---

336 Transcript for 04/05/11 (day 19); 63 (2 to 17) (Professor Ludlam)
337 Transcript for 13/05/11 (day 25); 82 (5 to 7) (Professor Cash)
338 Transcript for 17/05/11 (day 26); 62 (2 to 6) (Professor Lever)
339 Transcript for 17/05/11 (day 26); 62 (17) to 63 (1) (Professor Lever)
340 Transcript for 17/05/11 (day 26); 115 (15) to 116 (25) (Professor Lever)
Studies of the Edinburgh Cohort confirm the proposition that the greater the exposure to infective material results the greater the likelihood of seroconversion.\textsuperscript{341}

In our submission, greater efforts to reduce the exposure of patients to lower numbers of donors and hence a lower viral load would have reduced the chances of them becoming infected with HIV. Less use of concentrates, less reliance on home treatment and prophylactic treatment regimes and a greater emphasis on the use of small pool products such as cryoprecipitate would, in our view, in all likelihood have reduced the infection rate amongst Scottish haemophiliacs. In addition the avoidance of regimes involving heavy exposure to commercial concentrates, in particular at Yorkhill in response to the generally heightened risk of viral infection from those products based on their pool size and the make-up of their donor pools would, have substantially lessened the number of infections.

The use of less concentrates would have exposed patients to considerably less risk with the result that it is likely that infections would not have occurred on an individual level. Further, as far as the likely infectivity of the domestic concentrates is concerned, we submit that the use of less concentrates would also have been likely to have had a beneficial effect on a more general level. It is clear from the evidence discussed above that over this period the ever increasing demand for concentrates resulted in the SNBTS and the PFC being under pressure to collect more and more plasma and produce more and more concentrate. The restriction of concentrate use to the minimum level necessary to prevent serious bleeds would have resulted in self sufficiency being achieved in Scotland and more freedom on the part of the transfusion directors to implement more cautious screening measures to exclude donors at a risk of transmitting HTLV III and to do so earlier. Therefore, we submit that the use of concentrates at a more modest level would have had the result of significantly reducing the risk of infection on both an individual and general level. Such an approach was clearly merited, on the basis of past evidence of viral transmission and the future risk of further such transmission. Such an approach would have prevented infection and saved lives.

31. Whether the way in which NHS treatment was managed over this period was in the best interests of patients with bleeding disorders in Scotland

Our position on this matter has been covered in our submissions in response to the various issues which we have raised above. In summary:

\textsuperscript{341} SNB.008.3434 (3 August 1985) and LIT.001.0895 @ 0897 (28 May 1988)
• In the first half of the 1980s, there was an over-reliance in Scotland on the use of concentrates, in particular factor VIII concentrate, in the treatment of patients with blood disorders

• Treatment programmes had become and further became based on considerations of convenience rather than considerations of safety, despite knowledge about the risks of viral transmission from large pool products

• There is no evidence that clinicians scaled back the use of prophylactic or home treatment as the contaminated blood disaster unfolded in the first half of the 1980s, or advised patients of the increased risk that they now faced. In our submission, self sufficiency could have been achieved in Scotland over this period and infection rates could have been significantly reduced if clinicians had restricted the use of concentrated clotting factors to life-threatening situations.

In a commentary on the AIDS crisis in 2007, Dr Evatt pointed out that the crisis shows how when faced with incomplete scientific data experts tend to resort to existing paradigms rather than accepting new hypotheses. In his evidence in this section, Professor Ludlam commented that medicine was a statistical business and that usually the best people were the most cautious. He gave this answer in the context of the reaching of conclusions about the likelihood of HIV being transmitted by blood products from available statistical information. In our submission, the caution which should have been exercised over this period was caution with respect to patient safety, rather than caution with respect to achieving scientific certainty. The paradigms to which clinicians should be expected to resort are, in our submission, those most consistent with the maximising the safety of their patients.

Recommendations for the future

32. What lessons can be learned from and what recommendations for the future arise out of the Inquiry’s consideration of the evidence in the B2 section?

342 PEN.012.0179 @ 0181
343 Transcript for 04/05/11 (day 19); 98 (12 to 13) (Professor Ludlam)
As Dr Evatt pointed out in a commentary on the AIDS crisis in a 2007 publication "AIDS will not be the last human plague". Professor Ludlam pointed out in his evidence that haemophilia A and B were treated almost exclusively nowadays in Scotland with recombinant products, though 25% of children developed inhibitors to these and it was not well understood why this happens. Patients with inhibitors continue to be treated with human plasma derived products. Those with rarer bleeding disorders (who tend to bleed less frequently) are still treated with products derived from human plasma. So considerations of viral exposure continue to be relevant today.

1. Clear direction should be given to general practitioners and those involved in primary care, as well as a consistent approach be adopted in the haemophilia centres in Scotland, that all patients with factor levels up to 50% should be offered registration at and advice and treatment from a specialist haemophilia centre. It should be borne in mind that Professor Ludlam did point out that gene therapy now also had a role to play in the diagnosis of haemophilia.
2. There is a need to break down the rigidity of the barriers between compartments of the medical profession within the NHS, in particular to make information sharing more able to ensure that decisions regarding patient care are taken on a fully informed basis. A clearly structured, efficient multi-disciplinary approach to the treatment of patients with bleeding disorders is likely to result in the best outcome for them.
3. There should be less autonomy given to the individual haemophilia centres and a more co-ordinated approach between them taken, recognising that patients with bleeding disorders are treated outwith the haemophilia centres and in primary care for their bleeding disorders.
4. There should be greater patient involvement in strategic decision making in haemophilia care in Scotland. The co-ordinated approach advocated at (2) above should be taken by a Scottish Haemophilia Council on which there should be appropriate patient representation in decision making about haemophilia care. Such a body should also have be responsible for the compilation of frequently updated guidelines for the assistance of all medical staff (not just haemophilia doctors) in the treatment of patients with bleeding disorders.
5. The lessons of past infectious epidemics amongst the community of patients with bleeding disorders must be learned, in particular that (a) the risk of such outbreaks may not be apparent as diseases may develop latently (b) a cautious approach must be taken to product...
use to minimise the threat to the recipients of blood products and (c) that alternatives to factor concentrates of human origin must be available as a contingency option in response to such catastrophic events.

6. We submit that the training of doctors in haematology must be focussed insofar as it relates to the treatment of people with bleeding disorders not just on the management of bleeding episodes but also on the risks of spreading infectious diseases.

SUBMISSIONS ON ISSUES RAISED BY OTHER PARTIES

The submissions which we have made above details our position in response to the issues raised by other parties to the Inquiry, other than one matter raised in the issues list submitted by Inquiry Counsel, namely:

The quality of information and advice concerning the relationship between AIDS and blood products available to those with haemophilia and those responsible for their treatment in Scotland from...(c) the Haemophilia Society in the period 1982 to 1985

The scope of the issue

At the outset, we would wish to make an observation about the ambit of this issue. The wording used by Inquiry Counsel would suggest that the Inquiry should assess the quality of information and advice concerning the relationship between AIDS and blood products available to those responsible for the treatment of haemophiliacs from the Haemophilia Society. It is our position, that there is no evidence that the Haemophilia Society could or should have been in a position to provide any such information or advice to haemophilia clinicians in Scotland between 1982 and 1985. Indeed, as will be examined in more detail below, the relationship in fact worked very much the other way around with the Society being entirely dependent on medical advice predominantly, but not exclusively, from haemophilia clinicians. Therefore, we would submit that the Inquiry cannot and indeed should not address the quality of information and advice concerning the relationship between AIDS and blood products available to those responsible for the treatment of haemophiliacs from the Haemophilia Society.

The role of the Haemophilia Society over this period
The role of the Haemophilia Society was outlined in a submission made by the Society to the Inquiry dated 1 November 2011, the terms of which we adopt here for the sake of brevity. In summary, we would make the following observations.

- During the course of this period, the Haemophilia Society did not count amongst its membership all patients with bleeding disorders in the United Kingdom, or Scotland. Therefore, it would have been wrong to assume that information about treatment, including the risks of treatment was disseminated to all patients with bleeding disorders in the United Kingdom. The Society's documentation may have found its way to patients through haemophilia centres. However, only a minority of centres took a regular copy of the Society's "Bulletin" over this period. In any event, the Society, still a relatively small organisation in the first half of the 1980s, could in any way have absolved doctors of the responsibility to keep their patients informed about their treatment. As was pointed out by Mr David Watters in his evidence, there were limitations on funding over this period and so there were limitations on what could realistically be achieved.

- In the aftermath of the AIDS crisis, efforts were made by the Society to reform the way that it medical advisory panel worked. As was stated in evidence by Mr David Watters, this was due to the fact that it was felt that the full information about the risks had not been shared with the Society during the crisis.

- In its communications with its membership, the Society tried to make it clear that any advice should be considered as subordinate to advice from an individual patient's haemophilia clinician. As was pointed out in the evidence of Mr David Watters, the general nature of the advice provided in any guidance or information documentation emanating from the Society would have made it quite inappropriate for use to explain important matters pertaining to an individual's case to that individual.

- Information which the Society had about the relationship between blood products and AIDS derived exclusively from doctors. The Society's understanding about the safety of products was formed solely on the basis of advice received from doctors. This came predominantly from haemophilia clinicians on the Society's Medical Advisory Panel but also from other doctors. The Society relied upon the currency and accuracy of information given to them and

---

348 PEN.018.1251
349 Transcript for 19/01/12 (day 87); 49 (13 to 24) (Mr David Watters)
350 Transcript for 19/01/12 (day 87); 18 (21 to 25) (Mr David Watters)
351 Transcript for 19/01/12 (day 87); 124 (10 to 18) (Mr David Watters)
352 DHF.001.4767
353 Transcript for 19/01/12 (day 87); 9 (11 to 20) (Mr David Watters)
354 Transcript for 19/01/12 (day 87); 29 (22) to 30 (1) (Mr David Watters)
would tend to follow the advice of these doctors, in whom they place their trust on behalf of the membership. The Society’s policies as regards the connection between AIDS and blood products were formulated on the basis of information and advice from its medical advisors.

- We have made certain submissions above about the Haemophilia Society letter to its members containing the advice of the then Chairman of the UKHCDO, Professor Arthur Bloom, on the risk of AIDS from blood products. This is also addressed in the Society’s letter of 1 November 2011. The Inquiry heard from Mr Watters that the letter was drafted in its entirety by Professor Bloom. In his evidence, Dr Mark Winter suggested that the purpose of the letter had been to reassure the audience and that Professor Bloom may have been asked to write a letter in reassuring terms. The Inquiry has now heard evidence that makes that suggestion untenable. Of course, the circumstances in which Professor Bloom was asked to give his advice to the membership are unknown to Dr Winter. The purpose of the request from the Society was, as was always expected of the medical advisors to the Society, that Professor Bloom be honest about the current information and give an honest assessment of the current risks. The reassuring tone was taken as an honest expression of position. It was on the basis of advice such as this that the Society had continued to support the continued use of commercial concentrates (and concentrates in general) in the UK.

JTD

---

355 Transcript for 19/01/12 (day 87); 61 (22 to 23) (Mr David Watters)
356 Transcript for 27/04/11 (day 16); 121 (21 to 25) and 139 (10 to 12) (Dr Mark Winter)