

Thursday, 3 December 2020

(10.00 am)

SIR BRIAN LANGSTAFF: Good morning, professor.

THE WITNESS: Good morning, Sir Brian.

SIR BRIAN LANGSTAFF: Good morning, Ms Richards.

Let me just say a word or two before we start

for those who may not have been with us earlier this week, the people who are watching this remotely. It's a number which changes day by day, professor, and some people, I suspect, may not have been watching so far. But just to describe to them where we are, we --

that is Miss Richards and myself -- are in London in the hearing room in Fleetbank House. There are four members of counsel team sitting facing me. There are three members of the Inquiry staff in the room, and there is one person whose job it is to make sure we see the right documents at the right time.

Professor, you're in Edinburgh. You're in a room on your own in your solicitor's offices with your solicitor and counsel watching from other rooms or remote. That's correct, isn't it?

THE WITNESS: That's correct, yes.

SIR BRIAN LANGSTAFF: You've been sworn on the first day.

This is the third day of your evidence. Thank you for your endurance. And let us begin.

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PROFESSOR CHRISTOPHER LUDLAM

Questions by MS RICHARDS (continued)

MS RICHARDS: Professor Ludlam, I was asking you when we finished yesterday about the meeting in December of 1984, and I just have a small number of further questions relating to that meeting.

I understand your evidence to be that every patient in Scotland was invited to the meeting. So that would include, presumably, patients with mild and moderate haemophilia A, as well as severe haemophilia A, patients with haemophilia B, and patients with von Willebrand's disease?

A. Well, it was my understanding that that's what had happened, and that was what the proposal was that I discussed with Dr Forbes from Glasgow.

In retrospect, I think there may have been a misunderstanding. I am not sure how many patients were invited from outwith south-east Scotland. Most of the patients who came I recognised, and, you know, they came with their partners. There may have been -- I think there may have been a few people I didn't recognise and who may have come from elsewhere. I can't -- I certainly wouldn't say all patients in Scotland. But all patients with all degrees of severity of these bleeding disorders were invited.

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THE WITNESS: Before we begin, I wonder if I could go back to some evidence that I was giving yesterday in relation to what the patients knew about the developing AIDS situation in 1983 and '84?

Yesterday evening, I was reflecting on this, and I remembered that about a week ago I was given sight of Rule 9 witness statements from my registrars, Dr Robert Carr and Dr John Tucker, and both these addressed this issue, and I thought it might be helpful to the Inquiry if I brought it to their attention.

MS RICHARDS: Thank you, professor. We do indeed have the statements of Dr Tucker and Dr Carr.

A. Thank you.

MS RICHARDS: And they have been read and will no doubt be considered further.

SIR BRIAN LANGSTAFF: I should add that, although obviously what is heard orally and particularly visually on screen may have more immediate impact, every piece of evidence that we have in written form in answer to a request is read and forms part of the body of evidence. Just because somebody isn't called doesn't mean to say their evidence is not important.

A. I understand that. Thank you.

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Q. At least from Edinburgh you were able to say that?

A. Edinburgh and south-east Scotland, yes.

Q. In terms of the clinicians who were present, it was yourself and Dr Forbes?

A. And Dr McClelland from blood transfusion.

Q. We know from the evidence you've given previously and the evidence you gave yesterday that, in terms of your Edinburgh patients, you'd sent off, I think by that stage, perhaps somewhere between 50 and 70 samples to Dr Tedder -- at least that's what your Penrose evidence suggests -- and you'd received back 16 HTLV-III positive results.

Do you know whether any of the patients in other centres, including Glasgow, whether tests had been undertaken in relation to those patients by the time of this meeting?

A. I think some samples had been sent from Glasgow and to Professor Gallo in the States. I don't know when the results of those were received. But that's -- but when they send -- if and when they sent samples to Dr Tedder, I'm afraid I don't know.

Q. At the meeting on 19 December, how did you seek to ensure that patients understood clearly what was being said, and how did you ascertain that they had properly understood what was being said?

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1 A. Well, Dr Forbes, myself and Dr McClelland gave short
2 presentations I didn't think were too complicated but
3 set out all that we knew at the time. There was then
4 a period of discussion for quite a long time answering
5 questions from the audience, and the topics were
6 developed in the responses. We were very open about
7 the situation, about the testing, and particularly
8 that we had results that we would be happy to share
9 with the patients if they would like them. We
10 emphasised the importance of safety precautions. And
11 so I think, if you like, through the responses in the
12 discussion, it seemed to me that they had understood
13 the situation and what we were trying to convey.

14 The discussion, as I say, went on for about
15 three-quarters of an hour or so, and when no more
16 questions, then we -- or Dr Forbes, who was chairing
17 the meeting, closed the meeting.

18 Q. Did any patient in the course of the main part of the
19 meeting ask the question "Have I been infected? Am
20 one of those" --

21 A. No.

22 Q. Did any patients come up to you or Dr Forbes
23 afterwards and ask that question?

24 A. I don't think so, no.

25 Q. The Inquiry has heard some evidence of which you're

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1 A. Yes, and there were follow-up articles in Scottish
2 newspapers, I think perhaps on the 21st. They had
3 picked it up from the Yorkshire Post.

4 SIR BRIAN LANGSTAFF: Thank you.

5 MS RICHARDS: Yes, we may have the Yorkshire Post --

6 A. -- (overspeaking) -- well established in the public
7 press what had happened, and there were consequences
8 for the Haemophilia Centre and the patients because of
9 that.

10 Q. Professor, what do you mean by "consequences for the
11 Haemophilia Centre and the patients"?

12 A. Well, we, I think -- we would have the first patients
13 in Scotland who were known to be anti-HTLV-III
14 positive, at least publicly, and that was in the
15 newspapers, and that led to great concern immediately
16 in the hospital because we were suddenly seen as the
17 ward that had AIDS patients in it, which we didn't.
18 We had people who tested positive for the presumed
19 virus.

20 But the effect of that was that, for example,
21 there was a reluctance of some -- not people in the
22 haemophilia team, but general hospital staff, actually
23 to provide their usual services for the patients. For
24 example, patients in a hospital bed, the porters would
25 be very reluctant or refuse to take them down on

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1 aware, although I'm not going to go into the details
2 of any individual case, professor, but some evidence
3 that at least some who attended the meeting may have
4 left believing that what was said didn't really apply
5 to them because they would have been told if they were
6 HTLV-III positive. Do you understand or accept that
7 that is a situation that could have arisen?

8 A. I was very surprised that that has been said
9 because -- because of the response that I got
10 thereafter from the vast majority of patients who got
11 in touch with me or with the haemophilia sister and
12 came and wanted to discuss the situation further. But
13 the first occurred two days later, and I saw someone
14 shortly before Christmas. Most of them took a little
15 while, perhaps a month or two, before they came
16 because we had pointed out the -- at the meeting some
17 of the difficulties, I think, in interpreting the
18 results of the test.

19 SIR BRIAN LANGSTAFF: May I just ask, was the Yorkshire
20 Post article published?

21 A. Yes, it was published the following day.

22 SIR BRIAN LANGSTAFF: Published the following day?

23 A. The following day --

24 SIR BRIAN LANGSTAFF: And that article was to the effect,
25 was it, that a number of people had tested positive?

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1 a trolley down to the X-ray department. So there were
2 all these immediate consequences of this information
3 coming out.

4 Q. Sir, we do have The Scotsman article of the
5 21 December 1984, and there is, in fact, one question
6 that may be useful to ask Professor Ludlam about that.
7 It's HSOC0016028. I should say, we do have the
8 Yorkshire Post article somewhere as well, but I don't
9 have the reference for that to hand. This is
10 The Scotsman, 21 December 1984. "AIDS virus found in
11 infirmary blood supply".

12 If we pick it up at the second and third
13 columns, it says:

14 "Dr Christopher Ludlam, a consultant
15 haematologist, who is director of the Haemophilia
16 Centre said antibodies to AIDS had been found in his
17 patients' blood but that did not mean that they would
18 necessarily contract the disease. He said all the
19 patients were clinically well, and he estimated that
20 the chance of their actually developing AIDS is 1 in
21 2,000. He added, however, that not enough is known
22 about the natural history of the virus to be able to
23 say when the patients might be considered to be safe
24 from the threat of disease."

25 Then it goes on to talk about a Bournemouth

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1 incident.

2 Is that a correct assessment or description of

3 what you said, and where did the 1 in 2,000 figure

4 derive from?

5 **A.** I don't know where the 1 in 2,000 came from. I don't

6 recall The Scotsman contacting me about this, and

7 I wouldn't have put the estimate at 1 in 2,000. As

8 you know, I would have put it less than that, or

9 a greater risk than that, as I was saying yesterday.

10 **MS RICHARDS:** Sir, for your information, for your note, I

11 won't put it up on screen, but the Yorkshire Post

12 article is at PRSE0004577.

13 **SIR BRIAN LANGSTAFF:** Thank you.

14 **MS RICHARDS:** In terms of the reaction of those who were

15 at the meeting, what can you recall about the mood of

16 those who were there when they had this information

17 explained to them?

18 **A.** There was surprise and disappointment, and they were

19 perplexed and upset. That's my memory. I'm sorry,

20 with the passage of time, the detail -- the feeling

21 I have that I'm left with for the -- it was

22 a difficult meeting to -- but it was all handled in

23 a very calm way.

24 **Q.** Now, you spoke yesterday about the letter which was

25 sent after the meeting to patients, inviting them to

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1 should make an appointment to see me in person."

2 Then you refer to the AIDS information sheet

3 which we do have a copy of.

4 Does it follow from that that this was a letter

5 that again went to every single patient, including

6 those who were mild, von Willebrand's, those who had

7 not yet been tested?

8 **A.** Yes. Everyone on our register.

9 **Q.** And then if we go to paragraph 268, please, Soumik,

10 which is page 99. You'll see the way in which you put

11 it in paragraph 268:

12 "All registered patients and parents were

13 written to and sent the information sheet. There was

14 an accompanying letter which encouraged patients to

15 make an appointment if they would like further

16 information or discuss their individual situation."

17 Now, there's potentially a difference between

18 a letter which says, "Do make an appointment if you

19 want further information or to come and speak to us"

20 and a letter which talks in terms of about there being

21 an available test result.

22 Doing the best you can, given that we don't

23 have the letter, are you able to assist us any further

24 with what this letter actually said to patients?

25 **A.** I can't add further than the statements you've got.

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1 a consultation, which we don't at least currently have

2 a copy of.

3 Where -- in terms of the individual letters

4 that were sent to patients, would those be placed on

5 the patient's records?

6 **A.** No, I don't think so.

7 **Q.** Where would those letters be?

8 **A.** I'm afraid copies wouldn't have been, I think, put

9 because it was a sort of duplicated letter. We learnt

10 subsequently, when we came to send out information,

11 for example, about variant CJD, which was a similar,

12 if you like, notification, we put copies of absolutely

13 everything that we sent to the patients in the case

14 notes. But we didn't put -- nor did we put in the

15 case notes, I think, the letter of invitation to the

16 meeting on the 19th.

17 **Q.** Can I ask you to look at two passages in your witness

18 statement. I just want to try and get a sense of what

19 the letter might have said. WITN3428001, please,

20 Soumik. Page 95.

21 If we look at paragraph 253, we pick it up six

22 lines down. You say:

23 "Subsequently, all patients were written to

24 letting them know that a result might be available,

25 and that if they wished to know the result, they

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1 But in the information sheet that accompanied the

2 letter, I think there's reference made to

3 anti-HTLV-III results being available or could be

4 measured.

5 **Q.** We'll just have a look at that. There are various

6 references for it. Can we try PRSE0002785. Is this

7 the information sheet, professor?

8 **A.** That's it, yes.

9 **Q.** So we can see it sets out the opportunity to contact

10 the director. "What is AIDS? Where did it come

11 from?" If we go down the page, "Who does it affect?"

12 and reference to blood-borne transmission. "Why does

13 immunity alter?" And then if we go over the page, "How

14 does it affect patients?" That's a description of

15 what may happen in relation to the syndrome. "What's

16 the virus?"

17 It says here -- We'll just pause there. I

18 think this may be what you were referring to,

19 professor -- correct me if I'm wrong -- four or five

20 lines in:

21 "These tests are now available and will be

22 carried out on your routine visit to your centre."

23 Now, that doesn't seem to be an invitation for

24 patients to come in and find out their test results.

25 It seems to be telling patients that if they want to

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1 be tested, they can be.
 2 A. Yes, but it makes it clear that there is a test.
 3 Q. Yes. In terms of the process, then, for telling
 4 patients their individual diagnosis, your witness
 5 statement suggests, I think, that the majority of
 6 patients contacted the Centre over the next one to
 7 three months; is that right?
 8 A. That's correct, yes.
 9 Q. And was there any delay in patients then being seen,
 10 or did you make particular arrangements to see any
 11 patients who contacted you for a result as soon as
 12 possible?
 13 A. I saw them pretty promptly. They were seen -- as
 14 I say, mostly outwith the clinic time. They were put
 15 in my diary as a, if you like, a visitor to come and
 16 see me at a time that was mutually convenient by my
 17 secretary.
 18 Q. Now, in terms of sheer numbers, the majority of your
 19 patients hadn't, as a matter of fact, been tested by
 20 the time of 19 December 1984, I think. If you sent
 21 50-70 results off to Dr Tedder; you had 200 or so
 22 patients, I think, at the time.
 23 A. Yeah.
 24 Q. So what happened in relation to the remaining majority
 25 of patients for whom you didn't have test results as

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1 They'll have received the information sheet but
 2 I would have talked a bit about the test and its
 3 implications, obviously, before testing them.
 4 Q. So your account, I think, in your statement is that
 5 the majority of patients did make appointments. Do
 6 you mean by that the majority of the patients who you
 7 knew to be HTLV-III positive or the majority of your
 8 200 or so patients?
 9 A. I believe the majority of those who were anti-HTLV-III
 10 positive came. A large number of other patients who
 11 came, but there were also quite a lot of people who
 12 were -- had mild bleeding disorders, and who only
 13 visited the Centre perhaps once a year. There were
 14 fewer of that group of patients who came, and they
 15 would be probably reviewed subsequently.
 16 Q. Do you recall whether there were delays in getting
 17 those further test results back? Were you using
 18 Dr Tedder's facility again or a different one by this
 19 time?
 20 A. Initially, the samples went to Dr Tedder. As you will
 21 have gathered, he was receiving a large number of
 22 requests. In fact, he and Philip Mortimer at National
 23 Institute of Biological Standards and Control were
 24 I think the only two laboratories initially able to do
 25 the test. Our local virologists, Dr Peutherer and

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1 at the end of '84?
 2 A. When patients came up to see me or see someone else in
 3 the Centre, we would discuss the result if we had it.
 4 If we -- and we would say that it's -- if I can put it
 5 this way -- a provisional result for all sorts of
 6 reasons I'm happy to go into, but we, on most
 7 occasions, offered a second sample, a second sample at
 8 the time that they came up to see us, to send off
 9 to -- to confirm the first, because we didn't want to
 10 rely upon a single result, again for all sorts of
 11 reasons that I could go into if it would be helpful.
 12 So all patients, or at least particularly all
 13 positive patients, had a second test.
 14 Q. Patients who were coming to see you who hadn't been in
 15 the group who had stored samples sent off to Dr Tedder
 16 and so needed to be tested for the first time, what
 17 were the arrangements that were made for their
 18 testing?
 19 A. Well, as they came and asked about testing, we didn't
 20 have a result from a stored sample. I would explain
 21 that, and offer to take blood and send it to Dr Tedder
 22 for testing.
 23 Q. Can you -- I'm sorry.
 24 A. I was going to say after telling them a bit about the
 25 test, because they may not have been at the meeting.

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1 Dr Peter Simmonds, who were initially primarily
 2 interested in hepatitis B, and they were working with
 3 the Blood Transfusion Service over its arrangements
 4 for screening patients, they were very much in touch
 5 with us because they did the hepatitis B testing,
 6 routine testing for us, and so they very quickly set
 7 up anti-HTLV-III testing in Edinburgh. It perhaps
 8 became available sometime, I think, in the spring of
 9 1985.
 10 Q. You also sent a letter to GPs, which we'll just have
 11 a look at briefly. It's WITN3428010. So this is just
 12 one example, I think we've seen others which are in
 13 identical format just with a different GP name,
 14 31st January:
 15 "You will be aware from both the medical and
 16 popular press that patients with haemophilia are at
 17 risk of developing AIDS as a result of the
 18 transmission of the HTLV-III virus ..."
 19 Then you give some information about that. You
 20 suggest that it's important that the same precautions
 21 are observed as for hepatitis B positive patients?
 22 Then in your second paragraph you say:
 23 "I write to let you know I have circularised
 24 your patient with an information sheet about AIDS."
 25 You then set out what the chief recommendations

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1 are. If we go on, please, top the next page, Soumik.
2 You then say in the penultimate paragraph, you talk
3 about the concentrates now being heat treated, you say
4 it's:

5 "... obviously an anxious time for your
6 patient. If you would like to discuss any of the
7 points I have raised further, I would be delighted to
8 hear from you by telephone or by letter."

9 Did you get any response from GPs asking for
10 clarification as to whether their patients were
11 infected, because this letter would have left that
12 position open?

13 A. I don't think I did, actually. No. I don't remember
14 any GPs phoning up or writing.

15 Q. In terms of providing --

16 A. Sorry, could I just add to that? That may be because
17 the Haemophilia Centre really provided also a general
18 practitioner service as well as a treatment for
19 bleeding disorders service. But patients, if they had
20 a health concern that I might take to my general
21 practitioner, they -- the patients with haemophilia
22 would tend to bring it to the Haemophilia Centre,
23 because it might be that their symptom is related to a
24 bleed, and that might not be appreciated by a general
25 practitioner. So the general practitioners would

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1 cover a very large geographical area and quite
2 a number of patients live in quite small communities,
3 and there was quite a lot of concern, very
4 understandable concern, that if the general
5 practitioners knew of their -- of the patient's
6 anti-HTLV-III status, that might leak out in the rural
7 community. So it was difficult, and we had patients
8 from the islands in Scotland where, you know, the
9 number of patients is small, and they're almost
10 identified as individuals with haemophilia. So it was
11 a very difficult area and we took it patient by
12 patient, GP by GP.

13 GPs were very understanding and very helpful,
14 and I think the arrangements worked pretty well most
15 of the time.

16 Q. How confident are you that there was a letter sent to
17 patients after the 19th December meeting, rather than
18 just the sending of the circular, the information
19 sheet?

20 A. Well, I would have, I'm sure, sent out a letter
21 with it, because it was an information sheet, and
22 I was trying to convey other things, as well. I think
23 Glasgow sent out a letter with a -- it was going to be
24 originally the same information sheet, and I thought
25 the same one had been actually sent out in -- from

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1 certainly know that their patient had haemophilia but
2 they might not see them very often because we provided
3 much of the acute general practitioner service, if
4 I can put it like that.

5 Q. Did there come a point, either in relation to
6 individual patients or in relation to patients en
7 masse, where you did inform GPs of individual
8 patients' HTLV-III results?

9 A. Certainly not en masse. We discussed with each
10 patient individually about whether or not we should
11 let the general practitioner know. In general, I was
12 keen that the GPs knew, but not if this was going to
13 compromise anything for the patient, and it -- when
14 patients, after discussion, if they said they were
15 prepared for me to let the GP know, then I would
16 usually phone the GP -- I wouldn't write, I would
17 phone -- and discuss the situation with the doctor,
18 and we would come to some arrangement. The letters
19 often were sent out marked "Strictly confidential".

20 Whatever -- they tended to be rather individual
21 arrangements, actually, for each of the positive
22 patients. So there were a relatively small number, so
23 we could cope with that, if I could put it that way,
24 on an individual basis.

25 There were -- as I was explaining on Monday, we

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1 Glasgow, but I subsequently discovered that it had
2 been modified slightly.

3 Q. Again, I'm not going to ask you about individual
4 cases. Your statement suggests that there were two
5 patients who, after two years, still didn't know their
6 result because they hadn't made -- they hadn't
7 responded to any proactive -- any invitation to
8 proactively contact the Centre; is that correct? Then
9 you said there was a very small number of patients who
10 positively declined to know the result.

11 A. That's also correct, yes.

12 Q. So, again, I want to be very careful about not dealing
13 with specific individuals but, in terms of the time
14 period, then, that would give us, would it,
15 approximately 1987 for the two who you said hadn't --
16 sorry, I'm looking at your statement, professor, it
17 might be easier to put it on the screen. WITN3428001,
18 page 104. I'm just looking at paragraphs 292 and 293,
19 the bottom half of the page, the last two sentences of
20 paragraph 292, you say after two years -- you refer to
21 there being two individuals who hadn't inquired about
22 their anti-body status. So there would be two
23 patients who were finding out for the first time in
24 around 1987. Is that broadly accurate?

25 A. Yes, I think one was the end of 1986 and one was

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1 early, very early in January 1987.
 2 **Q.** Then in paragraph 293 you said:
 3 "... a very small number of patients who ...
 4 when asked if they would like to know the result were
 5 adamant that they did not wish to know."
 6 Again, without talking about individuals or
 7 revealing any information about individuals, are you
 8 able to assist us with the time frame over which the
 9 patients who fall within the category you've described
 10 on page 293 ultimately became aware or were told their
 11 HTLV-III status, or were they never told by you?
 12 **A.** I can't remember when they eventually heard. It was
 13 a very difficult situation, because I -- the two
 14 patients -- if I can go back to say that the two
 15 patients who we were talking about a moment ago who
 16 didn't know until end of 1986, early 1987, were both
 17 individuals who had been at the meeting, I remembered
 18 that. The -- moving forward to the 293 paragraph, and
 19 the ones who didn't want to know, the one -- one of
 20 the people I have in mind wasn't at the meeting and so
 21 I made a point of seeing him at an appropriate time,
 22 and asking him if he would like to know, letting him
 23 know that, you know, we had the test available, and
 24 I was quite surprised he didn't want to know, and
 25 I was surprised.

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1 He was working away from Edinburgh --
 2 **Q.** Professor, I'm going to stop you there because I just
 3 want to be very careful that nothing is said that
 4 could identify individuals.
 5 **A.** I understand that.
 6 **Q.** Can I just ask you this: do you have a sense of the
 7 point in time at which, whoever they might have been,
 8 the last of your patients who had been infected was
 9 informed? Do you have any sense of how long that was?
 10 If you can't answer that without looking at individual
 11 case records, then I won't press you. But do you have
 12 an idea?
 13 **A.** If you'd asked me a few years ago, I would have known
 14 exactly. I don't want to speculate. If you want to
 15 know, and if I had access to the records, I could of
 16 course help you.
 17 **Q.** No, I won't ask you further about that, professor.
 18 Can I ask you to look at a letter from June
 19 1985. It's at MACK0002601_001, please.
 20 This is a letter which you sent on 25 June 1985
 21 to the committee on the safety of medicines, it's in
 22 relation to an identified batch of SNBTS Factor VIII.
 23 You say that you're writing formally to record, it
 24 would appear, the above batch transfused during the
 25 spring of last year to patients may have contained the

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1 I tried to encourage him, because I thought he
 2 really ought to know, but I was very clear with him
 3 about the precautions he had to take to prevent the
 4 possibility of infecting other people, if he was
 5 positive. I said we were giving the same advice to
 6 everybody. It was of particular concern to me because
 7 I saw that there was the possibility that he could,
 8 for reasons I don't want to go into at the moment,
 9 unless you press me -- that other people could be at
 10 risk. Not big risk but I was just a bit concerned.
 11 I would have felt more comfortable if he had
 12 known, but I suspect he must have thought he might
 13 well be positive by the way I was being so emphatic,
 14 much more emphatic, if you like, than I had been with
 15 him a year or two, or with all patients, previously,
 16 when one said, "Look, if you cut yourself or blood
 17 gets spilt, be careful with it, mop it up yourself
 18 rather than let other people do it", and so on. So
 19 the tenor of my advice had changed.
 20 But he was a bright, intelligent young man, who
 21 didn't want to know. I'd made the offer and we made
 22 several attempts. He was, if you like, offered
 23 a result, the opportunity to know the result on other
 24 occasions. We tried to visit him at home, but we got
 25 no response to that.

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1 HTLV-III virus:
 2 "Most of our patients were negative for
 3 anti-HTLV-III before the Spring of last year and
 4 during the succeeding ... months a number of patients
 5 developed antibodies ..."
 6 You explained you've examined the transfusion
 7 records and:
 8 "... the above batch would appear to be the one
 9 that was most likely to have caused the infection."
 10 Then you say this:
 11 "I send you the names of the individual
 12 haemophiliac infected in very strict confidence. No
 13 doubt you will wish to undertake your own enquiry but
 14 I would be grateful if the list of patients concerned
 15 was not passed to any other organisation without my
 16 personal consent. Although some of the patients
 17 realise they have received a contaminated batch and
 18 know that they have developed anti-HTLV-III, other
 19 patients do not know of this and do not wish to know."
 20 Now, professor, I understand the basis for what
 21 you're setting out in the first paragraph. Why were
 22 you sending the Committee on the Safety of Medicines
 23 the names of your individual patients who tested
 24 positive for HTLV-III?
 25 **A.** I can't recall, and looked at from -- at the moment,

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1 I can't understand why I did so. I can't recall
 2 whether I had had a discussion -- perhaps a phone
 3 discussion with the CSM, and they had asked for the
 4 names. I am sorry, I can't -- I agree, looked at just
 5 now, it would not seem to be an essential piece of
 6 information.

7 **Q.** It must have been done without, at the very least, the
 8 consent and knowledge of the patients who didn't know
 9 that they were infected. Did you take any steps
 10 before sending this letter to speak to the patients
 11 who did know, and explain to them that you were going
 12 to be sending this data to a third party body and ask
 13 for their agreement?

14 **A.** I don't think so, no.

15 **Q.** In terms of testing family members for HTLV-III, what
 16 arrangements were made for testing spouses, partners,
 17 or others who might be at risk?

18 **A.** We offered testing for partners. We were keen that
 19 partners were tested. Other family members, we didn't
 20 routinely recommend testing, but if individuals were
 21 particularly keen to be tested, then we discussed that
 22 with them and would offer them the test if they still
 23 wanted it after we'd had the discussion.

24 **Q.** You had some stored samples of family members. Did
 25 you test those for HTLV-III, without -- either with

25

1 of those members of your family who've kindly donated
 2 samples."

3 Then you ask them to put their details and sign
 4 below.

5 Now, this is a letter being sent in respect of
 6 testing for hepatitis. Is there any reason why you
 7 didn't use this same methodology in relation to
 8 testing for HTLV-III?

9 **A.** No, we didn't. We'd have done it on an individual
 10 basis to talk to them before testing them.

11 **Q.** Why was it that the Centre held frozen blood samples
 12 of family members?

13 **A.** This was a study -- samples were collected originally
 14 as part of an assessment of genetic test for tracing
 15 families -- tracking haemophilia within families.
 16 There was a-- there were a series of techniques for
 17 doing this. The gene had been identified in 1983 and
 18 1984, and it became possible to track the gene through
 19 the family, not by, if I can put it this way,
 20 detecting the gene itself, but in detecting markers
 21 near the gene.

22 At that stage, we couldn't identify the
 23 individual mutation, the individual variation in the
 24 gene that was causing the haemophilia. That's what we
 25 do nowadays. We can identify the abnormal gene, what

27

1 the patient's knowledge and consent or without it --
 2 sorry, with the relative's knowledge or consent or
 3 without it?

4 **A.** I don't think so, no.

5 **Q.** Can we look at WITN3428007. This is a letter
 6 27 January 1986. This is a blank one. But I think
 7 the Inquiry has seen at least one example of one which
 8 has patient names on. It talks about hepatitis in the
 9 first paragraph. So it's 27 January 86. Second
 10 paragraph, it says, second line:
 11 "Very occasionally, hepatitis is transmitted to
 12 other members of the family. We believe this to be
 13 a very rare occurrence. We would, however, like to
 14 investigate local families to find out how commonly
 15 this occurs."

16 Then you say in the next paragraph:
 17 "You may remember you very kindly arranged for
 18 some members of your family to come to the Haemophilia
 19 Centre a while ago to let us have a blood sample.
 20 We've kept this sample in the deep freeze, and I write
 21 to ask if you would be agreeable to us testing this
 22 for evidence of previous infection by hepatitis virus.
 23 This will save members of your family coming up to the
 24 Haemophilia Centre again. Before testing the samples
 25 from our deep freeze, I should like to seek approval

26

1 the abnormality is, and we can track that very simply
 2 by gene sequencing through the family.

3 In those days, we could only track markers
 4 close to the Factor VIII gene. There was one, I think
 5 it was published about '85, called ST14, which had
 6 quite a number of different variants, if I can put it
 7 that way. And its usefulness depended upon knowing
 8 the frequency of these variants within the population
 9 of people and relatives of people who had haemophilia.
 10 And so we were working with colleagues at the genetics
 11 unit at the Western General Hospital to look at the
 12 utility of this ST14 gene probe, and to do that we
 13 needed samples from relatives.

14 **Q.** That might explain why you'd have samples from those
 15 who are genetic relatives, but it wouldn't explain the
 16 holding of samples of those who were spouses or
 17 partners, would it?

18 **A.** Yes, it would, because one needs to know the frequency
 19 in -- of the different variants, if I can put it that
 20 way, in partners who might have children, and then can
 21 assess the value of it in being able to track through
 22 the family. You need to have a population -- an
 23 assessment within the population.

24 **Q.** Do you know what steps had been taken to ensure that
 25 relatives or partners or spouses who were providing

28

(7) Pages 25 - 28

1 a blood sample, that they knew it was going to be kept
2 in a freeze for potential future usage?

3 A. I think we would have made it clear that the sample
4 would be going to another laboratory, but maybe it was
5 our laboratory; we were working with a statistician at
6 the Western. The sample needs to be separated and
7 prepared, and the DNA extracted and frozen. So it was
8 part of the processing of the sample.

9 Q. What was the hepatitis testing that you were seeking
10 by letters such as this to undertake in early 1986?

11 A. As I think the Inquiry knows, the blood transfusion
12 was -- had a very active programme on viruses
13 transmitted by blood. And they had a project in the
14 early and mid-1980s, about 1983, '84, '85, where they
15 thought they had developed a marker for non-A, non-B
16 hepatitis. And it was because of that that we were --
17 wrote this letter. As it turned out, it wasn't
18 a reliable marker of non-A, non-B hepatitis, so the
19 project was not continued.

20 Q. I want to just explore with you next,
21 Professor Ludlam, a little more about the numbers
22 infected and the dates of infection, in terms of
23 HTLV-III. And I think we can do that most usefully by
24 reference to the data in the Penrose report.
25 Soumik, it's PRSE0007002. And if you could

29

1 Then it says:
2 "There are now thought to have been at least
3 two batches of contaminated Factor VIII responsible
4 for infections in the group. It appears that two or
5 three HIV infected donors who were not intravenous
6 drug users or heterosexual males contributed to the
7 plasma pools."
8 Then the next paragraph:
9 "One individual (E22 in the table below) is
10 known to have been infected by Armour Factor VIII
11 between 16 March and 1 December 1981, (the dates of
12 the last sample testing negative and the first testing
13 positive). One, E16, had samples that tested positive
14 in '83. One, E19, tested positive in November 1986,
15 having tested negative in January '85. Two, E17 and
16 20, were under 16 at the time of their first positive
17 sample."
18 So before we look at the table on the next
19 page, my understanding from this, professor, and
20 I just want you to confirm whether this is correct, or
21 correct me if this is wrong, 23 patients, all severe
22 haemophilia A, 2 of them children, and 18 of them
23 infected through a single batch of SNBTS product. And
24 then we will look at the other five in a moment. Is
25 that correct?

31

1 go -- Soumik, it's numbered page 94, and
2 electronically it might be about 105 or so.
3 So we can see, picking it up at the bottom of
4 the page, we saw from correspondence yesterday that
5 initially there was a cohort, a group of 16 patients
6 identified through your work with Dr Tedder as
7 HTLV-III positive. And then if we pick up the story
8 here, you say, or the report states:
9 "Professor Ludlam stated that 23 haemophilia
10 patients were infected with HIV as a result of
11 treatment at the Edinburgh centre. All 23 patients
12 had severe haemophilia A. Eighteen of the 23 patients
13 had received treatment with material from a single
14 batch of SNBTS product during the relevant period and
15 comprised the Edinburgh cohort."
16 If we look at footnote 272, we can see we get
17 the numbers of the Edinburgh cohort; 18:
18 "Five patients had received treatment with
19 other SNBTS and commercial products."
20 If we go over the page and pick it up at
21 paragraph 3.278, it says this:
22 "It was originally thought that all members of
23 the Edinburgh cohort were infected between March and
24 May 1984, after exposure to a single common batch of
25 Scottish Factor VIII concentrate."

30

1 A. Yes. I think one of the patients who became positive
2 was treated at another Haemophilia Centre.
3 And that information became available later,
4 and it may be why this is 18 rather than 17, which had
5 been a figure also reported. But overall, what you
6 have stated is correct.

7 Q. Well, one of the questions that I've been asked to ask
8 you, professor, by others, is to explain how the 16 of
9 the cohort became 18. Other than your belief that one
10 may have been treated at another Centre, do you know
11 what it was that subsequently suggested that there
12 were 18 patients who had been infected by this one
13 particular batch?

14 A. I have kept all the raw data that I received in
15 relation to this episode, so it would be possible to
16 go back and examine it. But I suspect the rise from
17 16 to 18, one was a patient treated at another
18 Haemophilia Centre, and one is someone who hadn't been
19 tested in the -- initially, early in 1985.

20 Q. If we look at the next page, please, Soumik, we can
21 see the table.
22 So we have there in table 316 the 23 patients.
23 If we look at E19, we can see the date of the last
24 negative result is given as 1 January 85; the first
25 positive result, 17 November 1986. That's a period

32

1 when a patient should presumably have been receiving
2 heat-treated product capable of eradicating HTLV-III.
3 Again, without telling us anything about
4 individuals, are you able to tell us anything about
5 the circumstances of that seroconversion and what the
6 responsible product was?

7 **A.** I'm sorry, I can't, and I don't know whether they were
8 a member of the cohort, whether they had received the
9 implicated batch. I'm sorry, my memory is such --
10 I would have known but I'm sorry, I can't help you
11 further.

12 **Q.** The footnote on the previous page tells us that E19 is
13 not a member of the cohort.

14 **A.** Oh, right. Um ... I'm sorry, I assume that this is
15 accurate. I'm a little bit surprised that I don't
16 remember but the records may be available and
17 obviously could be looked at. I did go through very
18 carefully the records of all these patients, for the
19 Penrose Inquiry, with Dr Hay, Professor Hay, because
20 he was providing lists of patients, some of whom had
21 moved into the area, some of whom had left. So I'm
22 sorry, I can't help you further at the moment.

23 **Q.** What had been the arrangements in Edinburgh for
24 ensuring, once you found out that there had been
25 certainly one infected batch, and this material

33

1 exercise, at a slightly difficult time of year,
2 because it was the run-up to Christmas, but it was
3 a high priority and that's what happened.

4 **Q.** Can we look at one further document, HCDO0000132_042.
5 So this is a document, it appears to be dated
6 19 December 1986, at the very bottom of the page.
7 Just look at the bottom, please. Thanks, and if we
8 could go back to the top, please, sorry, Soumik?

9 We can see it is Edinburgh, we've obviously
10 redacted the details of the patient. Date of last
11 anti-HIV negative test, January 1983; date of first
12 anti-HIV positive test, June 1984. Then if we go down
13 the page to the next bit of handwriting, we can see,
14 I think it says -- I don't know if this is your
15 handwriting or somebody else's, professor:

16 "The patient was originally classified as HIV
17 negative by Dr Tedder (by RIA) but ELISA positive when
18 tested subsequently. Therefore the 1984 results were
19 false negatives and he is not therefore a 1984-86
20 seroconversion (he received the 'infected' batch of
21 NHS VIII in 1984)."

22 Is this an additional cohort member or is this
23 a cohort member that's part of the 18?

24 **A.** I struggled. You kindly sent this to me a little
25 while ago and I took a little while to understand it.

35

1 suggests that there were a small number of other
2 infected batches, but what were the arrangements in
3 relation to those of your patients who might have had,
4 on home therapy programmes, had unheated products at
5 home that they were using? What were the arrangements
6 for ensuring that that ceased and that heated products
7 took their place?

8 **A.** Immediately after the 10 December meeting that we were
9 considering yesterday, and I came back to Edinburgh,
10 and the decision had been made to use heat-treated NHS
11 concentrate, the blood transfusion had already heat
12 treated some of their product, and we immediately got
13 in touch with all the patients who had stocks at home
14 and asked them to bring them back immediately and we
15 would give them replacement heat-treated therapy. So
16 it was within days of the meeting on 10 December.

17 **Q.** Are you confident that every patient who did have
18 a supply of unheated products at home, did bring it
19 into the Centre and have it exchanged?

20 **A.** I think I am pretty confident, because we were very
21 keen to get the unheated material back, and the
22 haemophilia sister -- we were keen to see this. It
23 was only a relatively small number of people, it was
24 40 or 50 people who we got in touch with and organised
25 this for. It was a little bit of a logistical

34

1 I think there's an error in this text. This is my
2 handwriting. The fourth line, I think, should read
3 "Therefore the 1983 result was a false negative". In
4 other words, he was positive in 1983 and, therefore,
5 he was not a seroconverter but he had received the
6 batch, the batch that we knew -- we thought was
7 infected.

8 **Q.** It may be, I'm not going to take the time asking you
9 to do this now, professor, but it may be of assistance
10 if you have a look at these dates and have a look,
11 perhaps after we finish today, at table 3.16 and see
12 whether you can ascertain whether this is a patient
13 who features on table 3.16 and, if so, where. But
14 I won't take up time doing that now.

15 If we go to -- sorry, actually, before we leave
16 this document, if we just go to the top of the page
17 again. Is this a document that's being sent to Oxford
18 or elsewhere?

19 **A.** I think this -- it looks like it's for somewhere
20 elsewhere, and the only elsewhere would be Oxford.

21 **Q.** Certainly, we've seen -- I've seen forms from other
22 centres in the same format. What did your patients
23 know at this time about the information that you were
24 providing to Oxford about them?

25 **A.** I can't remember. Patients were aware of the Oxford

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1 database and that their details were held on it, and
2 that was the system by which they were able to get
3 a haemophilia card.
4 I'm sorry, I can't remember whether we told
5 positively, or prospectively, if I can put it that
6 way, told patients that we were sending the data to
7 Oxford. I should explain that the Oxford data was
8 held in the Oxford Haemophilia Centre, it was
9 processed on Oxford NHS computers, so it was all held
10 confidentially within the National Health Service
11 arrangements.

12 Q. Could we look at paragraph 39 of your witness
13 statement, Professor Ludlam, WITN3428001.

14 It's page 13, please, Soumik.

15 You say this -- sorry, I'll wait until it comes
16 on the screen. You say this in paragraph 39, picking
17 it up in the third paragraph:

18 "My active programme for monitoring the safety
19 of blood products allowed early recognition of the
20 exposure of patients to HTLV-III towards the end of
21 1984 and the almost immediate introduction of heat
22 treatment in Scotland ..."

23 Then you refer to the national recommendation,
24 which is presumably the Elstree 10 December meeting.

25 "As a result there were no further infections

37

1 other -- there may have been another explanation.
2 They may not have received the batches that I've just
3 been referring to. I am sorry, I can't be more
4 helpful than that.

5 Q. What did you mean in that -- in the earlier sentence
6 when you said, "My active programme for monitoring the
7 safety of blood products allowed early recognition of
8 exposure"? What was the active programme that you're
9 referring to there? What did it comprise?

10 A. That was the hepatitis B regular assessment. The
11 regular storage of samples, so that if new infections
12 arose, we could assess patients at the time or
13 retrospectively, or prospectively, and it was
14 extremely useful. For example, in 1992, it became
15 evident that viral inactivated concentrates would
16 transmit hepatitis A. That was very surprising,
17 because the dogma was that hepatitis A was hardly ever
18 transmitted by blood or blood products, for a variety
19 of reasons that I could go into, if you wish and,
20 therefore, suddenly, for people with haemophilia, to
21 find themselves being infected from concentrates by
22 hepatitis A, was quite unexpected and unusual. It
23 caused a lot of interest and concern.

24 As a result of this, when it was initially
25 published, we got out the deep freeze of the latest

39

1 by clotting factor concentrates with HTLV-III in
2 Scotland."

3 Just dealing with that last sentence, first of
4 all, we've already looked at table 3.16 at the case of
5 a patient who appears to have seroconverted in 1985 or
6 1986, so what's the basis for your statement there
7 that there were no further infections by clotting
8 factor concentrates in Scotland?

9 A. The basis of saying there were no further infections
10 was because we were following up all patients who
11 received clotting factor concentrates with regular
12 anti-HTLV-III testing. That was explained to
13 patients, and everyone agreed, and there were -- we
14 discovered or the blood transfusion discovered
15 subsequently that there -- I can't remember exactly
16 how many, but at least two donations had gone into
17 manufacture of different batches of Factor VIII, and
18 had been given to different patients by the time this
19 was discovered, and none of the patients
20 seroconverted. We wrote that up, Dr Robert Cuthbert
21 published that. I can give you the reference if it
22 would be helpful, but I think it is in my statement.

23 The patient we were talking about earlier that
24 appeared to seroconvert in 1985 -- I'm sorry, I can't
25 remember the details -- I assume there was some

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1 samples from the patients, and tested them for
2 anti-bodied hepatitis A, it's perhaps well known,
3 quite a lot of people will have antibodies or are
4 exposed to hepatitis A, or used to be, through
5 community spread, and had antibodies.

6 The frequency of antibody positivity within the
7 community, in fact, over the years has declined, but
8 we were able to test the -- these frozen samples,
9 stored samples, and people who didn't have antibody
10 hepatitis A we got in touch with straight away and
11 offered them the hepatitis A vaccine.

12 The importance of this is that, if
13 an individual has liver disease, for example non-A,
14 non-B hepatitis, and they then get hepatitis A on top
15 of that, they may well end up with more severe liver
16 problems.

17 Q. Professor, the purpose of my question was to try to
18 see what it was about the programme of monitoring the
19 safety of blood products which allowed for early
20 recognition of exposure to patients in late 1984. Do
21 I understand that what you're there referring to is
22 the fact that you had stored samples and were
23 therefore able to send them off to Dr Tedder?

24 A. Yes.

25 Q. At the point in time at which you decided that you

40

1 would avail yourself of Dr Tedder's testing
 2 facilities, why didn't you make contact with the
 3 patients whose samples you wanted to send and ask them
 4 if they wanted to be tested and seek their consent?
 5 **A.** At that stage, it didn't seem a particular issue. We
 6 thought of HTLV-III like other viruses, like the
 7 hepatitis B, and, as we considered earlier, it has
 8 many similarities in its epidemiology to hepatitis B.
 9 So it didn't, sort of, seem all that much of an issue,
 10 and we thought it important to know the situation in
 11 the patients. So that's why the samples were sent
 12 off, it was not until the implications of being
 13 positive, but in all sorts of ways became clear to us,
 14 and all the consequences over the succeeding months
 15 and years that led to a different approach to helping
 16 patients who might be HTLV-III positive.
 17 **MS RICHARDS:** Okay. Sir, I can see the time. Shall we
 18 take the break now?
 19 **SIR BRIAN LANGSTAFF:** Yes, but just on the general theme
 20 that we've been discussing, I'd like to take you back
 21 to one document where something caught my eye.
 22 It's PRSE0002785, Soumik.
 23 This is the information sheet, which did or
 24 didn't go round with a letter from you -- you think it
 25 probably did -- to patients, and later to GPs. Second

41

1 **SIR BRIAN LANGSTAFF:** Well, it's -- I'm just -- I'm trying
 2 to understand. 10% is really quite a precise figure,
 3 and it's -- the question arose: 10% of what? How was
 4 it measured? And you've given some indication of
 5 that. And the -- about half the patients in England,
 6 that's a broad estimate, from what you'd heard from
 7 south of the border, presumably.
 8 **A.** I think -- no, that's the result of the paper that was
 9 in --
 10 **SIR BRIAN LANGSTAFF:** In The Lancet?
 11 **A.** -- in The Lancet was 34% or something.
 12 **SIR BRIAN LANGSTAFF:** And that's about half?
 13 **A.** Well, I'm sorry, I can't remember -- I'd obviously
 14 heard from other people at the meeting on 10 December
 15 about their populations of patients because some of
 16 those will have been tested.
 17 **SIR BRIAN LANGSTAFF:** Yes, I see.
 18 **A.** It was -- I'm sorry, they are approximate. I have
 19 said about half.
 20 **SIR BRIAN LANGSTAFF:** Yes, I fully appreciate that. If it
 21 was The Lancet paper, it will have been about a third.
 22 So, obviously, you could have had information from
 23 somewhere else about that, and I appreciate you can't
 24 now remember what that might have been.
 25 Can you tell me, as far as Glasgow is

43

1 page, please, paragraph 6, the last sentence. Now,
 2 this was sent out, as I understand it, in late
 3 December 1984, am I right?
 4 **A.** No, I think January 1985.
 5 **SIR BRIAN LANGSTAFF:** Thank you. So about half the
 6 patients in England, and about 10% in Scotland, have
 7 had exposure and are HTLV-III Ab-positive.
 8 Had you actually by then sent off even 10% of
 9 the samples which you had in respect of all your
 10 patients?
 11 **A.** By this stage, we had results from the majority of
 12 patients who were concentrate users, from my
 13 recollection.
 14 **SIR BRIAN LANGSTAFF:** In the whole of Scotland?
 15 **A.** Um ... I knew the results from Glasgow because I was
 16 in touch, as you see, with my colleague, Dr Forbes.
 17 Glasgow serves the west of Scotland, which is about
 18 half the population. South-east Scotland serves about
 19 a million and a half. The centres in Dundee,
 20 Aberdeen, Inverness also traditionally, and were at
 21 that time, had been SNBTS almost exclusive in their
 22 use of PFC material. So I based it on the basis of
 23 local population plus knowledge, because Glasgow had
 24 also published their -- some of their data.
 25 Does that help?

42

1 concerned, did the Centres there have a greater
 2 experience of using factor concentrate made
 3 commercially?
 4 **A.** They -- at York Hill Hospital in the mid-1970s, the
 5 haematologist there was very keen to try and get
 6 prophylaxis, I think it was, in children, certainly
 7 get them on to home treatment and prophylaxis. And
 8 the only way he could do that, I understand, was to
 9 use commercial concentrates, or they were certainly
 10 used for that.
 11 **SIR BRIAN LANGSTAFF:** Yes, that --
 12 **A.** They may have --
 13 **SIR BRIAN LANGSTAFF:** Was that Dr Willoughby?
 14 **A.** That was Dr Willoughby, yes.
 15 **SIR BRIAN LANGSTAFF:** So how did the results, the
 16 percentage in Glasgow, compare with the percentage in
 17 Edinburgh and the other Centres which had used
 18 predominantly, or maybe in some cases exclusively,
 19 SNBTS reduced concentrate?
 20 **A.** My recollection is that the patients who had used
 21 exclusively, or virtually exclusively, SNBTS PFC
 22 Factor VIII had a very low positivity rate for HIV.
 23 But the -- those that had received commercial had
 24 a higher rate.
 25 **SIR BRIAN LANGSTAFF:** And just pursuing that for one

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1 moment, was that a surprise to you, or was it what you
2 might have expected from your general understanding of
3 the transmissibility of the viruses through the
4 different forms of concentrate?

5 **A.** No, that was not a surprise to me.

6 **SIR BRIAN LANGSTAFF:** Thank you very much. We'll take
7 a break now until 5 to 12.

8 **A.** Thank you.

9 (11.28 am)

(A short break)

11 (11.55 am)

12 **MS RICHARDS:** Professor Ludlam, I just wanted to ask you
13 next about any non-bleeding disorder patients you may
14 have had who were infected through blood or blood
15 products without --

16 **A.** Did you want to discuss the -- sorry to interrupt --
17 the question I was posed about the report you wanted
18 me to look at in relation to table 3.16?

19 **Q.** If you're in a position to do so now, then absolutely.

20 **A.** I'm happy to do so, but I don't want to interrupt.
21 I'm happy to discuss it later. Whichever you like.

22 **Q.** We can do it now.

23 The document was HCDO0000132_42. Then we had
24 table 3.16 in the Penrose report. Soumik, could we
25 put it up side by side. It will make it easier for

45

1 why it's appeared here.

2 I'm reasonably confident these results in 3.16
3 were carefully looked at, and I think this is a
4 seroconverter, and despite what it says on the form
5 saying it is not, that they did receive the implicated
6 batch, maybe this is the, if I can put it that way,
7 18th patient.

8 **Q.** And patient E7 was treated in the Penrose report as
9 forming part of the Edinburgh cohort?

10 **A.** Yes.

11 **Q.** Thank you. Thank you for that clarification.

12 **A.** That's the best I can do at the moment.

13 **Q.** So I just wanted to ask you, without going into the
14 details of any individual's case, the extent to which
15 you had other patients, not bleeding disorder
16 patients, who were infected with HIV through blood or
17 blood products. The Inquiry knows of one, and you
18 have responded to -- you've seen details of the
19 individual statement and responded to it, who was a
20 patient with leukaemia and AIDS from transfused
21 products in 1983.

22 **A.** Yeah.

23 **Q.** Did you have any other patients, to your knowledge?

24 **A.** Yes, I did. Could I ask for the document to be taken
25 down? The table 3.16. It's still on my screen.

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1 others to follow the relevant page of the Penrose
2 report, which is PRSE0007002. Page 107, I think. The
3 other one, HCDO0000132_042.

4 **A.** I can see the table. If it's possible to have the
5 first page of the document that ends in 042.

6 **Q.** Soumik, we've lost the table now. It's the table we
7 want that's next to the document on the left-hand
8 side.

9 **A.** If it won't go, it doesn't matter. In fact, have the
10 table --

11 **SIR BRIAN LANGSTAFF:** We may as well do it a document at a
12 time because it might be easier.

13 **MS RICHARDS:** Shall we start, then, with the table,
14 professor?

15 **A.** Yes, I think that will be most helpful.

16 **MS RICHARDS:** Soumik, if we have PRSE0007002, page 107
17 again.

18 You should have the table now,
19 Professor Ludlam.

20 **A.** Thank you. This -- the sheet you showed me I think
21 relates to E7. The dates are the same. And I've had
22 some difficulty with the text below on the form, but
23 I think my interpretation is that the sample on
24 26 June for this patient was originally a negative
25 result and was actually a positive result, and that's

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1 **Q.** Yes, we've finished with that. Thank you, Soumik.

2 **A.** Yes, I had one other patient who became infected from
3 a transfusion.

4 **Q.** And do you recall what year that was?

5 **A.** When they became infected, or when I first saw them?

6 **Q.** The latter, but if you're able to provide both pieces
7 of information, so much the better.

8 **A.** I think I probably saw them in 1986, around then.

9 They were referred to me because they had -- am I at
10 liberty to ...?

11 **Q.** I think it might be wiser not to go into details about
12 the individual.

13 **A.** I can say they were referred to me because they had
14 evidence of immune deficiency, and they had been
15 actually around quite a number of other physicians
16 before they reached me, and they were sent to me as an
17 unexplained case of immune deficiency. No-one had
18 thought what -- could identify what the cause was.
19 And as part of haematological practice, we saw
20 patients with immune deficiency from time to time,
21 before the days of HIV. And so this patient was
22 referred to me, and it became clear to me very quickly
23 that this person has become infected from the blood
24 transfusion.

25 **Q.** Do you know the year in which the infection took

48

1 place?

2 A. I would be guessing, but I think about 1983 or '84.

3 Q. You've told us of your understanding that Scottish

4 concentrates were safer than commercial concentrates.

5 Would it be fair to say that in 1983 and 1984 you

6 viewed AIDS as a US problem, and therefore something

7 affecting only commercial concentrates?

8 A. I would have seen it predominantly as a problem in the

9 US. I would have seen that in countries where AIDS

10 was occurring in the non-haemophilic population, the

11 general population, there was a possibility the blood

12 supply could become infected.

13 But I suppose in 1983 and the first part of

14 1984, it was very much seen as a problem emanating

15 from the United States. The Inquiry will be aware of

16 the survey that Professor Bloom did around Haemophilia

17 Centres in Europe. He was really a leader in

18 exploring some of the implications of potential spread

19 of HIV, or HTLV-III in those days, by blood products,

20 as is well established. It didn't appear that there

21 were cases of AIDS in, for example, Germany, that was

22 a large user of American concentrates.

23 Q. When you were -- I'm sorry.

24 A. Yes. No, I'm finished, thank you.

25 Q. When you were considering the safety of the Scottish

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1 place. For the benefit of the transcript, was that an

2 agreement?

3 A. Yes.

4 Q. And am I right in understanding that Dr McClelland had

5 an office on the same corridor as you, or certainly

6 physically fairly close?

7 A. Yes.

8 Q. Do you recall whether there were, in the first part of

9 the 1980s, particularly perhaps in 1983 or 1984, any

10 discussions between SNBTS and Haemophilia Centre

11 Directors about the extent to which the donor

12 population for the area had risk factors, or was

13 regarded as safe?

14 A. I know that Dr McClelland was very active in

15 considering, if I can put it this way, the at-risk

16 donors and was very active in developing information

17 to give -- make available to donors, to try and

18 exclude those in the high risk group.

19 I don't recall any discussion or any suggestion

20 that the high risks groups were -- any evidence they

21 were infected.

22 Q. Did you know -- again, '83, '84, did you know whether

23 blood was being collected from prisons in Scotland?

24 A. No. I had no details of where the blood transfusion

25 held its donor sessions.

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1 product, what, if any, consideration did you give to

2 the extent of the IV drug problem in the area in which

3 you were practising?

4 A. I don't think that featured very highly. It certainly

5 obviously wasn't known about that there was HIV in the

6 Edinburgh drug users. That didn't come known until,

7 I think, quite late in 1985 and was a bit of a shock.

8 So it wasn't known at that time that there was

9 infection, and I don't think there was -- not that I'd

10 heard of, anyway -- any evidence of clinical AIDS in

11 the drug users as far as I recall. I'm sorry, I've

12 forgotten Roy Robertson's, as I think the Inquiry is

13 aware -- also because he had tested his patients

14 repeatedly for viral infections, there were samples in

15 the virology deep freezes, and it was almost certain

16 that they would be tested for seroconversion times.

17 I'm sorry, I forget. I think it was fairly late.

18 I think they were -- it might have been 1984 that the

19 virus was found to have got into the population, but

20 I'm not certain.

21 Q. I think it's fair to say that in Scotland there was

22 a fairly close working relationship between the

23 Scottish Haemophilia Centre Directors and SNBTS.

24 You've referred to it in your statement, and we've

25 seen samples of some of the regular meetings that took

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1 Q. Would it follow from your answer you also didn't know

2 whether or not blood was collected from military

3 institutions or US military stations in Scotland?

4 A. That's correct. I didn't know.

5 Q. Just wanted to come back to the question of

6 hepatitis B, which you already touched on in your

7 evidence by reference to the outbreak in 1969, 1970,

8 in the dialysis unit.

9 Do you know from your work in Edinburgh

10 whether, in the first part of the '70s or your work

11 there in the '80s, what, if any, steps were taken in

12 Edinburgh to consider whether there were lessons to be

13 learnt from that outbreak for the delivery of care by

14 the Haemophilia Centre?

15 A. Well, I think it was -- I don't know how much it was

16 as a result of that outbreak, but maybe it was -- that

17 hepatitis B in particular, but also non-A, non-B,

18 could be spread to staff, as we were thinking, and

19 also relatives.

20 Q. Did that affect the -- the approach that was taken to

21 treatment decisions at all, to your knowledge?

22 A. Um ... I'm sorry, I don't ... I can't think so at the

23 moment.

24 Q. We know from a paper that was published in 1983 that

25 you coauthored -- I'm not going to go into the details

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1 of it -- that there continued to be hepatitis B
 2 infections in particular amongst severe haemophiliacs
 3 in the 1970s.

4 **A.** Yes, that's correct.

5 **Q.** Once you arrived back in Edinburgh as director in
 6 1980, to what extent was hepatitis B an issue? To
 7 what extent were there infections of patients with
 8 hepatitis B in the course of the 1980s?

9 **A.** It was pretty rare. I can think of one episode that
 10 occurred and that we were able to deal with very
 11 rapidly. It was, of course, at a time when the
 12 hepatitis B vaccine was becoming available, and that
 13 was licensed in the early 1980s. It was prepared from
 14 hepatitis B positive individuals from the States, many
 15 of whom were gay men who were actually very good,
 16 regular blood donors and were happy and keen to donate
 17 their positive -- hepatitis B positive blood for the
 18 vaccine.

19 These were obviously the individuals who were
 20 also at risk of HIV, and although the hepatitis
 21 vaccine was licensed and had undergone three viral
 22 inactivation steps in its manufacture, there was still
 23 some uncertainty about its safety when HTLV-III became
 24 a problem in New York. For that reason, there was
 25 some reluctance to use it.

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1 illness, either in the short or long-term, as a result
 2 of hepatitis B?

3 **A.** There were two individuals, two patients, who were
 4 chronic carriers of hepatitis B. One was in Edinburgh
 5 for a few years and then went to live elsewhere in the
 6 country. I don't know where the other individual
 7 lives at present. He may still be in Edinburgh or
 8 registered -- I obviously don't know.

9 **Q.** I'm going to move on to a separate topic now,
 10 Professor Ludlam, which is to ask you about UKHCDO in
 11 the 1980s and, in particular, the role of the
 12 Reference Centre Directors.

13 So we can take the document down, thank you,
 14 Soumik.

15 You'll appreciate, Professor Ludlam, there
 16 aren't very many Reference Centre Directors from the
 17 1980s whom I can ask these questions of. What was the
 18 purpose, broadly, in the 1980s of the Reference Centre
 19 Director meetings?

20 **A.** It was -- UKHCDO was set up, as the Inquiry will be
 21 aware, in 1969, as a group of interested physicians
 22 who looked after people with haemophilia. It was
 23 quite a large group of people, because in those days
 24 haemophilia was treated in very many local district
 25 general hospitals, because they were close to where

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1 I, in fact, was persuaded by a colleague who
 2 came from NIH to see me over dinner. I was discussing
 3 this with him, and he said -- he agreed it was an
 4 anxiety, but he thought it was safe, and he'd
 5 recommended it for a member of his family. On that
 6 basis, I thought, okay, it probably is all right, and
 7 I was prepared to have it. If I was going to offer it
 8 to other people, I thought I'd better have it myself,
 9 so I had it. It's actually a very potent vaccine and
 10 has been perfectly safe, and we vaccinated those who
 11 were at risk.

12 **Q.** In relation to the episode that you recall, there
 13 being an episode of hepatitis B, can we look at one
 14 document to see whether we can -- we're talking about
 15 the same one. LOTH0000005_73, please, Soumik.

16 This is a letter of 10 May, if we just go down
 17 to the bottom of the page, 1984, to Dr McClelland from
 18 you, and I am just picking it up in the last sentence:
 19 "Our recent cases of hepatitis B infection and
 20 two Christmas Disease patients ..."

21 Is referred to by you there.

22 Is that the outbreak or occurrence that you're
 23 referring to, or were there further ones?

24 **A.** No, that is the one I was referring to.

25 **Q.** Did any of your patients go on to suffer serious

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1 the patient -- or closest to where the patients lived,
 2 and when they were getting -- needing hospital
 3 treatment with cryoprecipitate then, if they could go
 4 to their local hospital, then that was much more
 5 convenient.

6 So there were a lot of haematologists, mostly
 7 haematologists, treating people with haemophilia and
 8 then there were a group, a small group, of
 9 haematologists who had a particular interest in
 10 haemophilia. They tended to be, not exclusively, from
 11 the larger centres, and it was their full time
 12 responsibility, whereas in my case I had large numbers
 13 of lymphoma and leukaemia patients to look after and
 14 all sorts of patients to see around the hospital.

15 The group of people, like those from the Oxford
 16 centre and London centres were full time in looking
 17 after people with haemophilia. They formed this
 18 Reference Centre group, and I think they were called
 19 Reference Centres because they were so designated,
 20 I think, by the DoH and, in fact, they were described,
 21 I think, as supra-regional centres and they may have
 22 got financial support because of that. But, if you
 23 like, they formed the steering group for UKHCDO, this
 24 informal grouping of physicians that developed in the
 25 1970s and went on to become a much bigger organisation

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1 and a more formal organisation in particularly the
2 1990s.

3 **Q.** So what was the objective of the Reference Centre
4 Director meetings?

5 **A.** The objective was to consider topics for improving
6 haemophilia care in the UK.

7 **Q.** I'm going to look with you in a few minutes at some of
8 the Reference Centre Director meetings from the
9 critical years, late '82 through to late '84, in terms
10 of HIV, but before we do that, how frequently,
11 broadly, did the Reference Centre Directors usually
12 meet?

13 **A.** As you're aware, I was invited to join in early 1980.
14 I don't recall how frequently they met before then
15 but, after 1980, it was every few months, it might
16 have been three or four times a year, perhaps three
17 times a year, and then there was the meeting, the
18 Annual General Meeting for everybody, so there would
19 be at least four meetings most years.

20 **Q.** What would happen to the minutes of the meetings of
21 the Reference Centre Directors, whoever took them,
22 Dr Rizza, or whoever it may have been? Were those
23 minutes provided, as far as you're aware, to the
24 broader population of Haemophilia Centre Directors or
25 were the minutes simply for the use of the Reference

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1 particularly some of the difficulties and stresses of
2 providing a service in London.

3 **Q.** What, in general, was the purpose of the attendance,
4 on those occasions where they did attend, of
5 a Department of Health representative at the Reference
6 Centre Director meetings?

7 **A.** They were an important individual to provide
8 communication between the DoH and the Reference Centre
9 Directors and, as you'll have seen from the minutes,
10 there were different people who came, they usually
11 came for several years. Some were very helpful in
12 providing us with a departmental view about particular
13 situations, and I hope that they were equally helpful
14 back at the DoH in providing our view. There were
15 other individuals who were, if I can put it, less
16 communicative, less helpful, and it was difficult to
17 feel that we had a rapport with the DoH through them.
18 But there were certainly other individuals who were
19 very helpful and provided good rapport.

20 **Q.** Then, in terms of the bigger annual meeting, which
21 took place involving -- or to which were invited all
22 Haemophilia Centre Directors, we've heard some
23 evidence from directors at smaller centres to suggest
24 that those annual general meetings weren't much of
25 a forum for different perspectives or the perspectives

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1 Centre Directors?

2 **A.** I think they were for the use of the Reference Centre
3 Directors.

4 **Q.** What were the arrangements, again, as far as you can
5 recall, from the 1980s, early 1990s, for the selection
6 of the chair of the UKHCDO?

7 **A.** As far as I recall, and looking at some of the
8 minutes, I see it says the chairman was elected.
9 Certainly, when I was -- started as chairman
10 immediately prior to, there was an election, there was
11 more than one candidate besides myself that stood, and
12 there was an election. There was a ballot.

13 I can't remember how we elected the chairman
14 prior to that. It's now a more formal process than
15 a ballot.

16 **Q.** In the first half of the 1980s the chairmanship was
17 under Professor Bloom. To what extent did his voice
18 dominate Reference Centre discussions in the first
19 half of the 1980s?

20 **A.** I don't think his voice dominated, his views
21 dominated. He was very keen to hear what other
22 people's views were, and they were actually very
23 interesting meetings to attend because you learnt --
24 I learnt of the sort of spectrum of difficulties in
25 other places in providing haemophilia care,

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1 of smaller centres to be presented. Do you have any
2 observations on that?

3 **A.** They were mainly forums for giving information, for
4 providing information to members. There were perhaps
5 50 or 70 people at a meeting.

6 There was always opportunity to ask questions,
7 to raise topics, but there was quite a full agenda to
8 get through, and so -- and they were one-day meetings
9 and, you know, people had travelled sometimes quite
10 long distances to get there, and so it might have had
11 to start at ten o'clock rather than nine o'clock. But
12 they weren't meetings where there could be a detailed
13 discussion of issues because of the large number of
14 people in the room.

15 Of course, the people who came, as I was
16 suggesting earlier, came from a variety of
17 different-sized Haemophilia Centres and there's
18 a proportion, if you like, of their workload from
19 small associate centres that might just have two or
20 three patients through to other individuals, who
21 actually were looking after a lot of patients, and
22 eventually they became designated as Comprehensive
23 Care Centres. So there's a big spectrum and,
24 therefore, the doctors attending had very different
25 needs, if I can put it that way, for information.

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1 Q. Did you have any involvement with, or knowledge of,
2 any attempts to secure sponsorship or funding, for
3 example for the AGM or anything else, from
4 pharmaceutical companies?

5 A. Not at that stage. You're asking about the early
6 mid-1980s. I -- my recollection is there was no
7 pharmaceutical presence at the gatherings. I think
8 there may have been one or two meetings in 1980s,
9 possibly '79, because I was invited to the 1979 AGM,
10 and I think there may have been an associate --
11 associated educational day with that, we would have
12 stayed overnight.

13 But in the 1990s and thereafter the AGM was
14 often accompanied by an educational day, and that
15 involved extra expense, we would bring -- invite
16 speakers from elsewhere, often from abroad, to get
17 a broader perspective on haemophilia. They were
18 costly to run and so -- and the relevant
19 pharmaceutical companies were keen to have
20 an opportunity to meet with haemophilia directors. So
21 there was the opportunity for the pharmaceutical
22 companies to send representatives to set up a small
23 table in a room, a big room, with tables, one for each
24 company.

25 The pharmaceutical representatives didn't come

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1 Directors, through their activities and the
2 information they provided at the annual general
3 meeting, were influencing how haemophilia care was
4 provided. If you like, it was an informal mechanism,
5 part of developing people's knowledge. And, in
6 a sense, it was UKHCDO's interest in promoting good
7 haemophilia care that led to the full investigation of
8 the Bournemouth hepatitis outbreak and the tremendous
9 detailed epidemiology that Dr Craske did. That was
10 unique in the world. Nothing like that had ever been
11 done before.

12 But out of that came an awareness, an acute
13 awareness, of the vulnerability of certain groups of
14 patients to hepatitis. And so that stimulated the
15 formation of Hepatitis Working Party, and it -- there
16 was no other working party like it, as far as I know,
17 in the world -- was trying to grapple with some of the
18 issues of hepatitis, its investigation, and trying to
19 puzzle out the best way to help the situation.

20 And it was through their annual reports which
21 were made available to the general membership that, if
22 you like, information, latest information that was
23 being discerned was promulgated amongst physicians.
24 It was before the days of Internet and mass
25 communication, so this was a good way of developing

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1 to the annual general meeting. But that was for
2 members of UKHCDO and their invited guests, and their
3 invited guests included representatives of all the
4 Departments of Health, the Haemophilia Society, the
5 various professional specialist groups, the nurses,
6 the physiotherapists, the social workers, and
7 representatives of blood transfusion authorities were
8 regular invitees, and many of them sent
9 representatives.

10 Q. To what extent, when you joined in 1980 the Reference
11 Centre Director group and in the years that followed
12 after that, did the Reference Centre Director group
13 regard its role as including the giving of advice or
14 guidance or instruction to the broader members of the
15 organisation?

16 A. That was not, I think, an original function of the
17 Reference Centre Directors. Giving advice and
18 guidelines, if I can perhaps call them guidelines, was
19 something that emerged in the 1990s. And in the
20 1980s, 1970s, professional societies, if I can put it
21 that way, of like-minded, like-interested physicians,
22 like hepatologists or dermatologists, they wouldn't be
23 issuing guidelines. As I say, that didn't really
24 start to even be thought about until the 1990s.

25 But with the -- I suppose the Reference Centre

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1 good haemophilia care.

2 Q. I'm going to ask you to look at a handful of documents
3 relating to the UKHCDO's and in particular Reference
4 Centre Directors' response to the AIDS crisis and ask
5 for your observations. So if we start with
6 CBLA0001619, please.

7 This is September 1982. This is the bigger
8 meeting of Haemophilia Centre Directors that had been
9 not long before this, a few days or so before this, a
10 meeting of Reference Centre Directors, but I just want
11 to pick up the picture here if I may. And you were on
12 the list of attendees, professor.

13 If we go, please, Soumik, to the bottom of
14 page 9 to start with. We can see at the bottom of the
15 page we get a report from working party chairman, and
16 under the heading "hepatitis", we get a report from
17 Dr Craske.

18 I won't go into the detail of that, but if we
19 go over the next page, we can see that he talks about
20 the possibilities of -- or a study being undertaken
21 and the possibilities of further studies. He talks
22 about the hepatitis B vaccine.

23 Then at the bottom of the page, under the
24 heading "Acquired immune deficiency syndrome", it
25 says:

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1 "The Reference Centre Directors had asked
2 Dr Craske to look into the report from the US of this
3 syndrome, mainly in homosexuals, but including three
4 haemophiliacs."
5 Then there's this sentence:
6 "It appeared that there was a remote
7 possibility that commercial blood products had been
8 involved."
9 Do you know whether you saw these minutes at
10 the time and this characterisation of the potential
11 causal link?
12 A. I don't. I think it reflects that, I suppose, there
13 were three -- by that stage, there were three cases of
14 AIDS that had been reported in July of that year, and
15 therefore there was the possibility that they had
16 acquired it from blood products -- from concentrate
17 because they didn't apparently have other known risk
18 factors.
19 I didn't write the minutes, clearly. It was
20 presumably wanting to concentrate on the word
21 "remote"?
22 Q. Yes.
23 A. I think it was clearly a possibility, and at that
24 time, it was -- there was puzzlement. I can't defend
25 the word "remote". I think it would be better to say

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1 minutes.
2 Q. If we go to the next page we can see that these are
3 headed "Draft" -- we don't have a further copy,
4 professor, which is why I'm showing you the draft --
5 "Minutes of The 16th Meeting of Reference Centre
6 Directors", 14 February 1983. We can see that you
7 were present.
8 If we could go to page 5, please, Soumik.
9 You'll see there under the heading "The AIDS
10 syndrome", we see Professor Bloom recording that
11 there's going to be a discussion at the Stockholm
12 meeting at the World Federation of Haemophilia,
13 reports from the US indicating that the incidence was
14 higher than at first thought, a summary of information
15 from Dr Craske, approximately ten cases of AIDS now
16 thought to have occurred in non-haemophiliacs in the
17 UK, London, Glasgow, Manchester. Then it talks about
18 the draft form, a lengthy discussion regarding the
19 form, and documents which Dr Craske has obtained,
20 which are going to be circulated.
21 Then, if we just go down a bit:
22 "It was agreed that Dr Craske should draw up
23 a new form for the reporting of cases and to arrange
24 for this to be circulated to all Haemophilia Centre
25 Directors with appropriate notes ..."

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1 there was a possibility that commercial products had
2 been involved.
3 Q. We will move on to the next Reference Centre Director
4 meeting chronologically which was 14 February 1983.
5 It's HCDO0000411.
6 Before we look at the minutes themselves,
7 you'll just see that this is a letter dated 9 May
8 being sent by Ms Spooner, sent to all present at the
9 meeting. In relation to a meeting held some months
10 before on 14 February 1983, it seems rather a long
11 period of time, particularly at quite a critical time,
12 for there to be -- before the minutes are being sent
13 out.
14 I'm not expecting you to be able to comment on
15 this particular set of minutes, but can you recall
16 whether long periods of time typically elapsed before
17 minutes were received by the directors?
18 A. I'm sorry, I can't help you. I don't recall there
19 being a long time. There were quite full minutes.
20 Ms Spooner was a very busy person, if I can put it
21 that way. She was the hub of the correspondence that
22 came in for Haemophilia Centre Directors and the
23 database in Oxford. So she was very busy, very
24 dedicated, very hard working. But I don't recall how
25 long normally it was before we got copies of the draft

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1 Then a suggestion of inviting an immunologist
2 to join the hepatitis working party.
3 This is the middle of February 1993, I'm not
4 going to go back over any of the material we've
5 looked at already, in particular yesterday, about what
6 was known by this time and what wasn't known at this
7 time in relation to AIDS.
8 What's being agreed here is simply the sending
9 out of a form and inviting directors to report cases
10 back to Dr Craske. There's no discussion here about
11 treatment policies, no discussions about what, if any,
12 information to provide to patients. Do you consider
13 that the Reference Centre Directors' response at this
14 stage was an adequate one?
15 A. It's an important and a good question, and you see by
16 my delay in responding. I think it reflects that
17 this, if you like, arrangement for further inquiry,
18 rather than action, in terms of what might be
19 considered to do about the threat, I think reflects
20 the uncertainty as about what was happening. What
21 was -- why were patients with haemophilia, a small
22 number in the States, being so diagnosed, and what was
23 the cause?
24 General puzzlement, I think that's what this is
25 reflecting, trying to gather up some more information

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1 to try to help think further about what the difficulty
 2 might be.
 3 **Q.** Do you, in relation to the last sentence that we
 4 looked at there, maybe I'll check this from the
 5 Hepatitis Working Party minutes in due course but do
 6 you know whether an immunologist did join the
 7 Hepatitis Working Party?
 8 **A.** I -- if they did, I'm sorry, I've forgotten their
 9 name. I don't think an immunologist -- the minutes
 10 are with the Inquiry. Whilst I appreciate on the list
 11 of attendees it doesn't say what their specialty is,
 12 but most of the attendees, if I can put it this way,
 13 were well-known haemophilia treaters, so if there were
 14 individuals who weren't haemophilia treaters then that
 15 putting -- initiating inquiry. For example,
 16 Dr Trowell was an Oxford-based hepatologist, and she
 17 was certainly a member of the working party at one
 18 stage.
 19 **Q.** There was then a special meeting of Reference Centre
 20 Directors on the 13th May 1983.
 21 So, Soumik, could we have HCDO0000003_008,
 22 please.
 23 We can see "Minutes of Special Meeting of
 24 Haemophilia Reference Centre Directors", 13 May, list
 25 of attendees, you're there, Dr Walford from the

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1 To answer your question, I'm afraid I have no
 2 memory, unless you can jog it in some way just now, of
 3 the actual meeting itself.
 4 **Q.** If we go over to the second page, we can see what was
 5 discussed from the minutes. So the first page is
 6 a further discussion about Dr Craske's reporting
 7 system, if I can characterise it in those terms. Then
 8 the second paragraph says:
 9 "The steps to be taken should a patient develop
 10 the features of the full-blown condition were
 11 discussed. It was agreed there was insufficient
 12 information available from the US experience to
 13 warrant changing the type of concentrate used in any
 14 particular patient. Moreover, once the condition is
 15 fully developed it seems to be irreversible so that
 16 there would seem to be no clinical benefit to be
 17 gained from changing to another type ..."
 18 That appears to be a discussion about a very
 19 specific situation: what you do in relation to the
 20 treatment of a patient who develops full-blown AIDS?
 21 Is that a fair reading?
 22 **A.** Yes.
 23 **Q.** Then we see the third paragraph, so it is now looking
 24 at questions of treatment, and it says this:
 25 "With regard to general policy to be followed

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1 Department of Health is there. If we just look at the
 2 opening lines below the list, we see Professor Bloom
 3 briefly outlining the background to the meeting and
 4 its purpose, refers to recent publicity in the press
 5 about AIDS, anxiety to haemophiliacs and their medical
 6 attendants:
 7 "... clearly a need for Haemophilia Centre
 8 Directors to discuss what should be done in regard to
 9 the surveillance and reporting of suspected cases and
 10 the management of patients."
 11 Then there is a reference to one haemophiliac
 12 who is suspected of suffering from AIDS, which
 13 certainly we understand at this stage to be the
 14 Cardiff case, professor.
 15 This was a special meeting, it was called for
 16 a particular purpose. What, if anything, do you
 17 recall about it?
 18 **A.** If I could say before answering that, I notice that
 19 Dr Walford from the Department of Health, you could
 20 see the top of the letter at the form again --
 21 **Q.** Yes.
 22 **A.** That's Diane Walford. I'm pleased to see that she was
 23 there. She was someone who took an active interest in
 24 UKHCDO activities and was a useful contact at the
 25 Department of Health.

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1 in the use of Factor VIII concentrates, it was noted
 2 that many directors have up until now reserved
 3 a supply of NHS concentrates for children and mildly
 4 affected haemophiliacs and it was considered that it
 5 would be circumspect to continue with that policy. It
 6 was also agreed that there was, as yet, insufficient
 7 evidence to warrant restriction of the use of imported
 8 concentrates in other patients in view of the immense
 9 benefits of therapy."
 10 It goes on to say that the situation would be
 11 kept under review.
 12 The decision that appears to emerge from these
 13 minutes is just, if you're already reserving NHS
 14 concentrate for those two categories, children and
 15 mildly affected haemophiliacs, continue to do so. Is
 16 that, again, a fair reading of the minutes?
 17 **A.** I think that is a fair reading, and I think that the
 18 policy that this is referring to emanates from the
 19 experience and the work of the hepatitis working
 20 party, and particularly -- I'm sorry to go back to
 21 the -- well, I'm not sorry to go back, but I go back
 22 to the Bournemouth episode that a lot was learnt about
 23 risks.
 24 So this was -- this policy and this paragraph
 25 was what was considered good, desirable, where

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1 possible, treatment of these --

2 **Q.** And --

3 **A.** -- these groups.

4 **Q.** And it would appear from the minutes, assuming them to

5 be a reasonably accurate summary, that there was no

6 discussion of the question of what to tell patients,

7 if anything, about risks, or alternative forms of

8 treatment.

9 As far as you can recall, was that question

10 addressed by the Reference Centre Directors at any

11 point before the December '84 Elstree meeting?

12 **A.** Um ... as you see by my hesitation, I'm having

13 difficulty recalling. It's difficult to recall

14 something if it didn't happen, if I can put it that

15 way.

16 I can't at the moment recall discussion at the

17 Reference Centre Director meetings. The Haemophilia

18 Society had a medical advisory panel, and I think

19 Professor Tuddenham said that he was a member of it,

20 so he might be able to help you with what information

21 was given to the Haemophilia Society.

22 I don't know anything about their meetings at

23 that time, or what was said by the people on the

24 medical advisory panel to the Haemophilia Society, and

25 through it, obviously, and through the literature that

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1 questions about that I wanted to invite your

2 perspective on. It's HCDO0000270_004.

3 This is a letter of 24 June 1983 sent by

4 Professor Bloom and Dr Rizza, and we can see from the

5 text it refers to the special meeting, the minutes of

6 which we've just looked at. And then it sets out

7 recommendations:

8 "At the above mentioned meeting on May 13, the

9 following general recommendations were agreed.

10 "1. For mildly affected patients with

11 haemophilia A or von Willebrand's and minor lesions,

12 treatment with DDAVP should be considered. Because of

13 the increased risk of transmitting hepatitis by means

14 of large pool concentrates in such patients, this is,

15 in any case, the usual practice of many directors.

16 "2. For treatment of children and mildly

17 affected patients, or patients unexposed to imported

18 concentrates, many directors already reserve supplies

19 of NHS concentrates (cryoprecipitate or freeze-dried),

20 and it would be circumspect to continue this policy."

21 Then there are a couple of further points in

22 relation -- further down the page -- about

23 haemophilia B and hepatitis-reduced concentrate

24 trials.

25 Looking at these two, what's described as

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1 we discussed or made reference to yesterday. But as

2 far as the Reference Centre were concerned, I can't at

3 the moment recall discussion about what should be said

4 to patients, perhaps because we were aware that the

5 Haemophilia Society was being kept informed by its

6 advisory -- medical advisory panel. But I don't

7 think -- don't recall any discussion about -- can

8 I put it this way -- going out to proactively speaking

9 to patients about AIDS.

10 Had we received the Council of Europe report

11 that you showed me yesterday, then that clearly made

12 some recommendations that at least we would have

13 considered, and had we considered them, we might well

14 have agreed with them. But as I indicated yesterday,

15 I certainly never saw them, and I think if they'd been

16 made available to Professor Bloom, he was -- he was

17 good at sharing information, as some of the

18 correspondence that the Inquiry has about his

19 activities in 1983, 1984. He was a good communicator

20 with people. He shared information. He made

21 enquiries. He led the discussions well at the

22 meetings.

23 **Q.** We'll have a look at the letter that was put together

24 following this special meeting to send to Haemophilia

25 Centre Directors because I just have a couple of

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1 general recommendations, the first falls short,

2 doesn't it, of being a positive recommendation? It's

3 inviting recipients to consider the use of DDAVP and

4 observes it's the usual practice of many directors.

5 But it doesn't actually go so far as to say, "This is

6 what we think should be done."

7 **A.** Well, I think it's quite well worded, actually. DDAVP

8 should be considered.

9 DDAVP is contraindicated in some patients with

10 von Willebrand disease; can cause particular problems.

11 I can go into those if you want.

12 And there's -- not all patients with

13 von Willebrand disease respond well haemostatically,

14 if I can put it that way, to desmopressin. And mild

15 haemophilia is a very broad spectrum disorder, and the

16 response varies quite markedly between individuals.

17 But as I mentioned yesterday or the day before, within

18 one individual, the response is quite consistent. So

19 DDAVP should be considered I think is appropriate.

20 **Q.** What about the second --

21 **A.** Or one could say considered first, or considered prior

22 to blood product use.

23 **Q.** What about the second paragraph, Professor Ludlam,

24 which simply really describes what's said to be

25 a state of affairs, that many directors already

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1 reserve supplies of NHS concentrates, cryoprecipitate,
 2 or freeze-dried for those two categories, and it would
 3 be circumspect to continue this policy. That would
 4 appear to be no more than a recommendation of the
 5 continuation of a status quo for those directors who
 6 are already doing it.

7 **A.** I think it would encourage people to do so, because if
 8 they weren't doing that, they -- all they would be --
 9 this policy, set out in 2, was clearly desirable, and
 10 if they weren't doing that, then they would see that
 11 they were out of line.

12 **Q.** Why was it -- you may not be able to answer this, but
 13 you are the only Reference Centre Director left to
 14 question I can ask this of. Why do you think it
 15 wasn't put in stronger terms?

16 **A.** I think that perhaps, to some extent, reflects the
 17 sort of people that Professor Bloom and Dr Rizza were.
 18 They were keen to encourage people to, as they would
 19 see it, improve haemophilia care. And they were both
 20 very polite individuals, and I think this was a sort
 21 of turn of phrase, and it was a way of encouraging
 22 people along. In those days, there weren't protocols
 23 like there are now that make strong recommendations
 24 about what you should do.

25 This was -- both Dr Rizza and Professor Bloom

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1 be worded differently, but I think the message was
 2 clear.

3 **SIR BRIAN LANGSTAFF:** Thank you.

4 **MS RICHARDS:** The next Reference Centre Director meeting,
 5 Professor Ludlam, was 19 September 1983.

6 Soumik, can we have HCDO0000413, please.

7 We can see the date at the top of the page. We
 8 can see your attendance, we can see the chair
 9 welcoming Dr Walford, invited to attend the meeting in
 10 view of the department's interest in AIDS.

11 If we then go on to page 3, please, you'll see
 12 under the heading "Current situation regarding AIDS"
 13 that it is by now known that a haemophiliac patient in
 14 Bristol has died. They died in August 1983.

15 So there's a discussion about tracing up donors
 16 of the -- and so on, and discussion about batches.

17 If we would just continue down the page,
 18 there's then, as you'll see from the top of the second
 19 paragraph, a discussion about whether the method of
 20 supply of blood products should be changed so that
 21 it's supplied by Regional Transfusion Centres.

22 If we go towards the bottom of the page, we can
 23 see about five lines up from the bottom:

24 "Many of the Reference Centre Directors have
 25 grave misgivings about this scheme."

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1 promoted haemophilia care by encouragement, rather
 2 than directive, and I think this reflects the way
 3 Professor Bloom approached things.

4 **Q.** We've seen reference in some materials and discussed
 5 with some witnesses the concept of clinical freedom;
 6 effectively, the entitlement of the clinician to take
 7 their own decision as to what treatments they should
 8 prescribe for patients. Did that concept, whether
 9 couched in those terms or otherwise, feature
 10 explicitly in Reference Centre Director discussions?

11 **A.** No, I don't think so. No.

12 **Q.** Now, the next Reference Centre Director meeting --

13 **SIR BRIAN LANGSTAFF:** Just a moment. If you just stay on
 14 that page. It's the use of the word "circumspect"
 15 that hits me, I have to say. From what you've just
 16 said, the politeness of Professor Bloom and Dr Rizza
 17 might have been better expressed, had they said that
 18 such a policy should be encouraged but "it would be
 19 circumspect to continue this policy" is really -- I'm
 20 not altogether sure what it's saying except "Carry on
 21 as before"; can you help? It's just a choice of
 22 words.

23 **A.** I agree it's a choice of words, and I think this
 24 perhaps reflects a rather more gentler way of life,
 25 perhaps, than there is now. I can see that it could

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1 If we go over the page, there's then, in the
 2 first main paragraph beginning "The position
 3 regarding", there's a discussion about the extent to
 4 which information is being disseminated to the
 5 Communicable Disease Surveillance Centre, because
 6 Dr Galbraith has raised concern that he was not
 7 informed about the Bristol case, and there's a debate
 8 about that. If we go towards the bottom of the
 9 paragraph we can see the agreement is that reporting
 10 to CDSC should be through Dr Craske.

11 Then we can see that, bottom of the page,
 12 there's proposals from Dr Craske in relation again to
 13 collecting data. That continues over the top of the
 14 page and then there's a reference to the Haemophilia
 15 Society having asked Professor Bloom to update an AIDS
 16 circular, which is read through and approved.

17 So, by this time, the Reference Centre
 18 Directors are clearly aware of the death of a patient.
 19 There is, would you agree, still no discussion about
 20 providing information to patients as clinicians -- we
 21 leave aside anything that The Haemophilia Society
 22 might send out -- would you agree?

23 **A.** Um, yes ...

24 **Q.** Was it, to your knowledge, the Reference Centre
 25 Directors' view that questions of what should be --

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1 information should be given about the risks of
 2 treatment was more a matter for the Haemophilia
 3 Society than patients' clinicians?
 4 A. Um ... I think it would be -- it was becoming,
 5 I think, a very general knowledge that there was
 6 a possibility of infection through commercial
 7 concentrates. I don't recall any discussion about
 8 whether patients should be, if you like, contacted
 9 directly.
 10 I suppose I'm looking at this sentence about
 11 the --
 12 "Professor Bloom read through the document he
 13 had prepared for the Society and this was approved by
 14 the Reference Centre Directors."
 15 I assume this refers to the document or the
 16 paragraph that he had written in May 1985 -- sorry,
 17 '83, earlier in the year, which he had written at the
 18 request of the secretary, I think he was called, of
 19 The Haemophilia Society, David Watters, because before
 20 that, at the beginning of May, there'd been an article
 21 in a newspaper about the possibility of HIV being
 22 passed to patients in the UK through US concentrates.
 23 So there'd been some anxiety among patients
 24 who'd rung up The Haemophilia Society, and the
 25 Reverend Alan Tanner and David Watters had -- clearly

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1 should be classified as having AIDS.
 2 Now, we've not discussed at all the definition
 3 of AIDS. And originally it was called GRIDS,
 4 Gay-Related Immunodeficiency Syndrome, because of the
 5 homosexuals who were the first to exhibit the clinical
 6 symptoms.
 7 The first definition of AIDS was suggested by
 8 CDC and the MMWR I think on 23 September 1982, and
 9 that listed a long list of opportunistic infections;
 10 opportunistic infections that would lead one to make
 11 a clinical diagnosis of AIDS. And I would say this --
 12 I can provide the document if you would like, but
 13 basically making a diagnosis of AIDS was a clinical
 14 diagnosis. There were no laboratory tests at all, and
 15 it didn't depend upon measuring T cell subsets or skin
 16 reactions. It was if you had no other reason for
 17 immune deficiency, then -- and you developed one of
 18 these so-called opportunistic infections, then you
 19 were designated as having AIDS.
 20 And the opportunistic infections were very
 21 variable. It depended where you lived. If you lived
 22 in central Africa, you got the wasting syndrome, the
 23 diarrhoea. If you lived in North America or the UK,
 24 you were much more likely to get a pneumocystis
 25 carinii pneumonia. But I would come to the issue of

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1 receiving a lot of calls and David Watters rang
 2 Professor Bloom and explained they were getting a lot
 3 of enquiries: could he write something reassuring for
 4 the patients that they could send around to the
 5 patients in The Haemophilia Society?
 6 So he wrote the paragraph that I think is dated
 7 4 May. So I think this refers to that document, and
 8 I think there was some doubt about the -- how the
 9 patient had been labelled as having AIDS.
 10 As you know, the Hepatitis Working Party had
 11 sent out documents, questionnaires, in March '83
 12 telling haemophilia directors about AIDS, and asking
 13 for reports -- to send reports in to Dr Craske.
 14 And his letter was accompanied by an
 15 information sheet about AIDS. It was headed the "AIDS
 16 2". And this listed the diseases specific for AIDS,
 17 and in the list is Candida -- thrush -- oral,
 18 pharyngeal, oesophageal, or systemic Candida. And
 19 this was how AIDS was apparently being defined.
 20 I dwell upon this because I think this is the
 21 same document that was actually sent around US
 22 Haemophilia Centres in 1983 because I've seen
 23 a document from there that looks very like this. And
 24 I think it's interesting that this document suggests
 25 that individuals with oral or pharyngeal candida

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1 oesophageal candidiasis, or oesophageal candida,
 2 rather, that if you had candida in your mouth or
 3 throat -- and that was actually not all that uncommon
 4 in the general population, if I can put it that way --
 5 but the moment it starts to go down your oesophagus,
 6 then you suddenly change from not having AIDS to
 7 having AIDS, and that's quite a threshold to cross, as
 8 you'll appreciate. If you have little --
 9 Q. Professor --
 10 A. I'm sorry?
 11 Q. Professor Ludlam, the question I'd asked you was about
 12 the absence of any discussion by the Reference Centre
 13 Directors of providing information to patients about
 14 the risks of treatment, and I'd asked you whether
 15 there was some perhaps assumption by Reference Centre
 16 Directors that this was something that could be
 17 delegated to the Haemophilia Society, rather than
 18 being the responsibility of the clinicians.
 19 So I wondered if we could just come back to
 20 that.
 21 A. Um, err, I don't think there was positive discussion
 22 about that approach, no.
 23 Q. Okay.
 24 A. But can I continue with what I was saying? Because
 25 I think it is relevant if we're thinking about the

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minutes of this meeting.

And who should be reporting potential AIDS cases to Dr Craske or to CDSC. What I was trying to explain was that the diagnosis of AIDS could occur if the candida infection spread from the mouth and throat down to the oesophagus or gullet.

And I think -- Dr Galbraith, I should say, had also written in the -- either the BMJ or The Lancet in I think March or April, asking for cases of suspect AIDS to be notified to him.

So we know Professor Bloom had an individual -- an individual with haemophilia who had oesophageal candida. He told The Haemophilia Society annual general meeting of this at the end of April '83.

And you've heard about the request for the paragraph that he wrote in -- I think it was dated 4 May, and that that was clearly the trigger for Dr Galbraith writing to the Department of Health about the safety of imported concentrates.

There's been concern about the wording about no definitive case of AIDS being known in the UK at that time; Professor Bloom wrote that. And I think -- and yet, two days later, the CDR report stated that there was a patient with AIDS in Cardiff, a 20-year-old individual, with oesophageal candida. And so these

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Q. Could we then just, if we can just stick with the chronology of UKHCDO meetings. There's only one further set of minutes I want to ask you to look at, for present purposes, and it's the bigger Haemophilia Centre Directors AGM in October '83. It's PRSE0004440. You'll see the date, 17 October 1983, and the long list of attendees.

Could we go to page 10, please, Soumik.

Yes. So if we go to the bottom half of the page, you will see Dr Chisholm raising an issue about cryoprecipitate and reversion to cryoprecipitate.

There's just one passage in this I want to ask your observations as a Reference Centre Director at the time of, and that's Professor Bloom's reported response where he said he felt there was no need for patients to stop using the commercial concentrates, because at present there was no proof that the commercial concentrates were the cause of AIDS.

Then there's a discussion that follows in relation to supply issues.

Do you have any insight as to why, if these minutes are accurate, Professor Bloom was stating that there was no proof that commercial concentrates were the cause of AIDS and thus no need to do anything?

A. There was good circumstantial evidence, but I suppose

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two documents don't fit comfortably together.

I've, as you see, tried to piece this together, and the other thing that has puzzled me is why, later on in the year, the minutes of meetings refer to a suspect case of AIDS in Cardiff. And the reason it's referred to as a suspect case is because, in Dr Craske's view, it was still under investigation and therefore should be called a suspect case. That's a matter of semantics.

But I would move forward to the letter that appeared in the Lancet on 10 December 1983. I wonder if I could possibly have the document?

Q. Professor Ludlam, I'm slightly concerned we may be going off topic. You'll have an opportunity tomorrow to add to things, but I'm quite keen before we finish today to just try and finish the topic of the UKHCDO's response to the AIDS crisis.

Is the article in The Lancet in December 1983 relevant to the evidence you want to give on that issue? If not, could we perhaps come to it tomorrow?

A. I'm happy to come back to it tomorrow, and I'm sorry to have distracted you, but I think this is an important issue, and perhaps we could return to it.

Q. Yes, certainly.

A. Yeah, thank you.

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it is true to say there was no proof, but good circumstantial evidence.

Q. Do you recall this discussion at all, one set of -- one meeting in October 1983, do you have any recollection of it?

A. I am sorry, I don't. I do recall, I think, Dr Chisholm was actually quite keen on cryoprecipitate. The only reason I make this comment is because the meeting I organised in 1997 to discuss the question of variant CJD and the risk from UK blood products, my recollection is that Dr Chisholm was actually very keen that we reverted to the use of cryoprecipitate, which I had some difficulty with, but that was her view. So I think she must have been -- she was a good attender at meetings and she was interested in haemophilia and knew a lot about it, and she ran a small centre.

Beyond that, I am sorry, I don't remember this particular bit of discussion at the meeting.

Q. If you'll take it from me, professor, there were then two further Reference Centre Directors meetings in 1984, I'm not going to take time looking at them because it would be to prove a negative, there was a meeting on 13 December 1984, you have the minutes. There was then a meeting in September 1984. Again,

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1 you have the minutes.
 2 There was again, neither of those discussions
 3 feature any deliberation as to what information should
 4 be provided to patients, and then we get to the
 5 December 1984 Elstree meeting where we see for the
 6 first time a discussion about telling patients their
 7 diagnosis and about being tested at that stage, not
 8 about risks, because that moment, as it were, has
 9 gone.
 10 We see for the first time the production of
 11 guidelines in the form of the AIDS advisory document.
 12 That's December 1984, in circumstances where the MMWR
 13 that first reported AIDS in haemophiliacs was two and
 14 a half years previously.
 15 As a Reference Centre Director, do you consider
 16 that that was an adequate response by the group of
 17 Reference Centre Directors or far too late?
 18 **A.** I think the policy, if I can answer this in two parts,
 19 the policy of -- the treatment policy, the continued
 20 use of US concentrates and how they were used, is in
 21 keeping with the policy that there was in the United
 22 States, The National Haemophilia Foundation, that had
 23 had extensive discussions with people like Bruce Evatt
 24 at the CDC, and their policy was to continue to use
 25 concentrates.

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1 **A.** As I was indicating yesterday, my memory of who knew
 2 what when over this time period is fading.
 3 But my recollection is that patients were
 4 actually pretty well informed through the general
 5 press and television about risks and American imported
 6 blood products. And I'm interested, as I was
 7 mentioning right at the beginning of today, reading
 8 last night the statements from two of my registrars,
 9 who were younger than me and have rather better
 10 memories, that patients were -- one of them says well
 11 informed and happy to, you know, talk about it. It
 12 was a topic of general or not uncommon conversation
 13 when they came up for clinics or with bleeds.
 14 So -- and many patients were members of the
 15 Haemophilia Society, and if they weren't, as
 16 I described earlier, Haemophilia Society literature
 17 was made available to patients.
 18 So I think there was the general feeling, and
 19 I think probably accurate, that the majority of
 20 patients were aware of the possibility. How high
 21 you'd put that possibility, I agree, could be
 22 considered. But there were clearly people who were
 23 coming up to the clinic and talking about it in
 24 Edinburgh, and The Haemophilia Society were receiving
 25 phone calls after newspaper articles, and as the

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1 Looking from where I sat -- and also there was
 2 the view, I'm sorry, of the NHF about children, if
 3 possible, being treated with cryoprecipitate. But if
 4 it was a policy in the country where there were --
 5 there was a lot of AIDS in the general population,
 6 then -- of continued use of concentrate -- then that
 7 was possibly a reasonable policy to other countries to
 8 adopt.
 9 Now, you're not asking me to, I think, review,
 10 or are you, whether a concentrate -- the importation
 11 of concentrate should have been reviewed
 12 differently -- or viewed differently rather than
 13 reviewed differently.
 14 **Q.** I'm not asking you that question, professor, no. It's
 15 the question of whether the Reference Centre Directors
 16 should and could have done more earlier. It may
 17 not -- a ban on imported concentrates was not in the
 18 Reference Centre Directors' gift, but Reference Centre
 19 Directors failed to address at all in this
 20 two-and-a-half year period, as far as we can see from
 21 the minutes, any question of the provision of advice
 22 or warnings about risks of treatment to patients, and
 23 the only recommendation in relation to treatment is
 24 what we saw in that letter of 24 June 1983.
 25 Do you think that was good enough?

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1 records show that there were quite a lot of newspaper
 2 articles over this period related to this topic.
 3 So I think there was the reasonable view that
 4 patients were aware of the risks. The question you've
 5 put to me is: should the Reference Centre Directors
 6 have been proactively going out and asking haemophilia
 7 directors to tell patients? And as I mentioned
 8 earlier, had we received the Council of Europe
 9 directive, maybe we would have sent out such advice.
 10 So that's the background, and that, I think, is
 11 why the Reference Centre Directors didn't issue
 12 specific instructions or guidance.
 13 **MS RICHARDS:** Okay, thank you.
 14 Sir, I note the time and I'm going to move to
 15 a completely different topic next.
 16 **SIR BRIAN LANGSTAFF:** Yes, well, we will take a break in
 17 that case. Thank you, professor. We'll take a break
 18 until tomorrow morning at ten o'clock, and I look
 19 forward to seeing you then.
 20 **THE WITNESS:** Thank you.
 21 **SIR BRIAN LANGSTAFF:** Ten o'clock tomorrow morning.
 22 (1.35 pm)
 23 (The hearing adjourned until 10.00 am the following day)
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1	I N D E X	
2	PROFESSOR CHRISTOPHER LUDLAM	2
3	Questions by MS RICHARDS (continued)	2
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<p>MS RICHARDS: [12] 2/12 2/15 3/3 7/5 9/10 9/14 41/17 45/12 46/13 46/16 79/4 92/13 SIR BRIAN LANGSTAFF: [27] 1/3 1/5 1/23 2/17 6/19 6/22 6/24 7/4 9/13 41/19 42/5 42/14 43/1 43/10 43/12 43/17 43/20 44/11 44/13 44/15 44/25 45/6 46/11 78/13 79/3 92/16 92/21 THE WITNESS: [4] 1/4 1/22 2/1 92/20</p> <p>'</p> <p>'70s [1] 52/10 '79 [1] 61/9 '80s [1] 52/11 '82 [1] 57/9 '83 [6] 31/14 51/22 81/17 82/11 85/14 87/5 '84 [7] 2/4 14/1 29/14 49/2 51/22 57/9 73/11 '85 [2] 28/5 31/15 'infected' [1] 35/20</p> <p>0</p> <p>001 [1] 23/19 004 [1] 75/2 008 [1] 69/21 042 [3] 35/4 46/3 46/5</p> <p>1</p> <p>1 December 1981 [1] 31/11 1 January 85 [1] 32/24 1.35 [1] 92/22 10 [6] 37/24 42/6 42/8 43/2 43/3 87/8 10 December [3] 34/8 34/16 43/14 10 December 1983 [1] 86/11 10 May [1] 54/16 10.00 [2] 1/2 92/23 104 [1] 20/18 105 [1] 30/2 107 [2] 46/2 46/16 11.28 [1] 45/9 11.55 [1] 45/11 12 [1] 45/7 13 [2] 37/14 75/8 13 December 1984 [1] 88/24 13 May [1] 69/24</p>	<p>13th May 1983 [1] 69/20 14 February 1983 [3] 66/4 66/10 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