1	Friday, 15 January 2021
2	(10.00 am)
3	SIR BRIAN LANGSTAFF: Good morning, Professor Collins.
4	THE WITNESS: Good morning, Sir Brian.
5	SIR BRIAN LANGSTAFF: My apologies for speaking from and
6	behind a mask, if you can't hear me very clearly.
7	I hope you can. Obviously, you can see me.
8	Let me describe the scene to you that you're
9	facing but, first of all, you're at home, I think.
10	THE WITNESS: That's correct, yes.
11	SIR BRIAN LANGSTAFF: Your wife is in the house?
12	THE WITNESS: Yes, she's here, yes.
13	SIR BRIAN LANGSTAFF: Right. You are talking to
14	an Inquiry chamber which, although I know you had
15	hoped to be here to see it in person, it's a big ro om,
16	will seat about 200 people and, at the moment, we have
17	a total of eight people in it, all very socially
18	distanced, as you might imagine, all wearing masks
19	except, at the moment, for Ms Scott who is going to
20	ask you the questions. Mary, in a moment or two, w ill
21	ask you to take the oath.
22	Beyond the Inquiry room, there will be
23	something in the region of 100 to 200, there were just
24	over 200 yesterday, watching either on a direct Zoo
25	platform or on YouTube. So those are the people
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1	could be transmitted through blood and blood products?

2 A. It would have been some time over the next year or so. Q. Can you recall during your medical training what, i anything, you were taught about the seriousness of non-A, non-B as a disease? A. I can't remember specifically what we were taught about non-A, non-B. We were taught that after transfusion there was the risk of hepatitis. I can't remember anything that was described about the risk 10 of -- the severity of that or whether it would develop 11 chronic hepatitis. 12 Q. Can you recall whether you ever had an understandin 13 that it was anything other than a serious -- or it 14 could be a serious disease and could be chronic? 15 A. Yes, I think I always understood it could be a chronic 16 disease and could be serious, yes. 17 Q. You then undertook various house officer roles in 18 surgery and medicine between August 1986 and 19 February 1989; is that correct? 20 A. That's correct, yes. 21 Q. Was your first haematology post February 1989 as 22 a Senior House Officer in Royal London Hospital? 23 A. That was the first formal haematology, although in my medical rotation at Oldchurch Hospital I covered some

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24 25 haematology there as well. But my first formal

1		you're speaking to. I imagine there will be probably
2		a number of people from Wales, in particular, who will
3		be interested to know what you have to tell us abou
4		that.
5		Mary, please would you ask Professor Collins to
6		take the oath.
7		PETER WILLIAM COLLINS, affirmed
8		Questions by MS SCOTT
9	MS	SCOTT: Good morning, Professor Collins.
10	Α.	Morning.
11	Q.	I'm going to start off by asking you some questions
12		about your CV. So we know from your witness statem ent
13		that you qualified, you completed your medical
14		training in 1986?
15	Α.	That's correct.
16	Q.	Can you recall what you learnt during that medical
17		training about the risk of viral infection via bloo
18		and blood products, particularly in relation to HIV
19		and non-A, non-B?
20	Α.	I was aware from medical school training that
21		hepatitis could be transmitted by blood products.
22		I don't think I was aware at that time about HIV be ing
23		transmitted. I was aware that I was aware of AI DS.
24		That had been mentioned in my undergraduate training.

25 Q. Can you recall when you did become aware that HIV

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1		training post in haematology was at the Royal London.
2	Q.	Was that under Professor Colvin?
3	Α.	Well, it was Professor Newland was the manage
4		the leukaemia side and the bone marrow transplantation
5		and Dr Colvin the coagulation and thrombosis side.
6	Q.	You then became an honorary lecturer in haematology in
7		February 1990 at The Royal London; is that correct?
8	Α.	That is correct, yes.
9	Q.	Was that a post that involved teaching?
10	Α.	No, it was really a research post, rather than
11		a teaching post.
12	Q.	So during that post, how much of your role involved
13		the treatment of those with bleeding disorders?
14	Α.	I would cover bleeding disorders out-of-hours on-call
15		and I would go on ward rounds where people with
16		bleeding disorders were being treated as in-patients.
17	Q.	You then had a post between September 1991 and
18		June 1993 as the Leukaemia Research Fund Clinical
19		Research Fellow at the Royal London. Did you spend
20		any time during that post working with those with
21		bleeding disorders or were your duties in relation to
22		those of leukaemia?
23	Α.	I was employed at that time doing a thesis on
24		thrombotic complications of bone marrow
25		transplantation, so that was the focus of the work

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Q. Then in September 1996 you took up your consultant

haematologist post at University Hospital Wales?

MS SCOTT: At the same time you became the Director of the

Cardiff Haemophilia Centre, which was then called the

So between 1996 and 2001 can you estimate how much of

Arthur Bloom Haemophilia Centre; is that correct?

your time was spent working within the haemophilia

centre and treating those with bleeding disorders?

roles -- because I had to manage people with venous

thrombotic disorders, anti-coagulation and see people

generally around the hospital who were having abnormal

A. It was probably about 80 to 90 per cent. My other

A. That's correct, yes.

A. Yes.

Q.

1		then. However, I did continue throughout all of that
2		time to be involved in the care of people with
3		bleeding disorders, particularly out-of-hours.
4	Q.	Were you involved during that time in any of the
5		testing of patients for HCV (hepatitis C)?
6	Α.	No, I wasn't involved.
7	Q.	Then between July 1993 and July 1995 you were
8		a lecturer and honorary senior registrar in
9		haematology at the Royal London Hospital; is that
10		right?
11	Α.	I think I was at the Royal Free Hospital, or is tha
12		next?
13	Q.	No, it may be the Royal Free Hospital. I've got th
14		Royal London but it could be that it's the Royal Free.
15		Great Ormond Street I've got next.
16	Α.	Well, no from the Royal London I rotated for two ye ars
17		to the Royal Free Hospital and then after two years
18		I rotated for one year at Great Ormond Street
19		Hospital.
20	Q.	That must be the Royal Free Hospital then. Then
21		August 1991 for a year at Great Ormond Street
22		Hospital?
23	SIR	BRIAN LANGSTAFF: 1995.
24	MS	SCOTT: 1995, sorry.
25	Α.	Yes.

- 1 shared the on-call.
- 2 Q. Then in September 2001, you were appointed a Profes sor 3 of Haematology at the School of Medicine in Wales and 4 an honorary consultant haematologist at the Cardiff 5 Haemophilia Centre at the University Hospital Wales
- 6 A. I was initially appointed as a senior lecturer and 7 then after that was promoted to reader and then 8 subsequently promoted to professor. So it was all the 9 academic track after that, yes.
- 10 Q. Is it right that from September 2001 approximately
- 11 50 per cent of your time was devoted to your academ ic 12 duties, teaching and so on, and 50 per cent of your 13 time to clinical work?
- 14 A. That was what my job plan was but I spent 15 substantially more than 50 per cent of my time doin
- 16 clinical work because of the volume of clinical wor 17 and I always prioritised the clinical work over
- 18 research and teaching, if there was any conflict.
- Q. Then in 2017 you stepped down as the Chair of the 19 20 Cardiff Centre and was succeeded by Dr Rayment; is 21 that right?
- 22 A. That's correct, yes.
- 23 Q. Then the other point I wanted to just to touch on o
- 24 your CV was your involvement with the UKHCDO. You
- 25 became a member of UKHCDO when you became a directo

	bleeding so, for example, after childbirth or after
	cardiac surgery, I would be involved in treating
	bleeding in those situations.
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Q.	Do I understand from your witness statement that
	between 1996 and 2005 you were the only consultant on
	call for those with bleeding disorders?
Α.	That's correct, yes.
Q.	Then in 2005 that changed because you took on well,
	Dr Rayment took up her post as a consultant at the
	centre?
Α.	Yes. So she took up her post then and after that w
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	of the Cardiff centre in 1996; is that right?
Α.	Yes, that is correct.
Q.	•
ч.	UKHCDO, including the inhibitor working party,
	von Willebrand disease working party, genetics working
	party, paediatrics, rare disorders, and data
	management, and you were the Vice-Chair between 201
	0 ,
	and November 2020; is that correct?
Α.	That is all correct, yes.
Q.	I'm going to move on now to ask you some questions
	about the facilities and services at the Cardiff
	contro. So first of all when you took up your

- 12 centre. So, first of all, when you took up your
- 13 directorship as director of the centre in
- 14 September 1996 can you describe the physical
- 15 facilities that the centre had at that time?
- 16 A. Yes. The facilities were relatively poor at that 17 time. We had a waiting room, we had one treatment 18 room and we had an office next door, and within tha
- 19 treatment room we obviously had to manage all of th
- 20 people attending the centre. So it was a very -- v ery
- 21 cramped in terms of the physical space.
- 22 Q. Where were the records kept at that stage, during t hat 23 period?
- 24 A. The records were kept in the office, which was next 25 door to the treatment room, so that if people arrived

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1		the records were readily available to be consulted.
2	Q.	Then in 2000 a new haemophilia centre was built; is
3		that right?
4	Α.	Well, the first thing that happened was that, befor
5		I arrived, it had been agreed that the haemophilia
6		centre would be the physical haemophilia centre
7		would be disbanded and people with bleeding disorders,
8		haemophilia and other bleeding disorders, would be
9		treated on a new haematology day unit. This caused
10		significant concern among the patient group and, as
11		I arrived, this was one of the first issues that I was
12		confronted with.
13		I think that to combine a comprehensive care
14		haemophilia centre and a haematology day unit is no
15		suitable, particularly as we were treating adults a nd
16		children, and so we had to go through, with the
17		patient group and myself, a process of advocating t
18		have a new haemophilia centre built that was separa te
19		from the day unit and that's the position you're
20		describing then. So the first step that there was
21		a joint haematology day unit and haemophilia centre,
22		which I don't think was adequate for the work we we re
23		trying to do.
24	Q.	Your witness statement says that happened in 1998.
25		Does that sound right?

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4		Outend Hearren bilis Contra and shuisushube had werked
1		Oxford Haemophilia Centre, and obviously he had worked
2		at the Cardiff Haemophilia Centre for some time.
3		I was very reliant on his clinical expertise becaus
4		he was clearly a more experienced and knowledgeable
5		haemophilia doctor than I was when I took up that p ost
6		immediately from training. So I was very fortunate to
7		have someone of that competence and knowledge to be
8		present at the centre at that time.
9	Q.	And there was a haemophilia nurse there,
10		Sister Jennifer Jones?
11	Α.	Yes, that's correct.
12	Q.	You had a physiotherapist, Mrs Fiona Hall, and you had
13		a social worker, Mr Timothy Hunt, whose role,
14		I understand, was limited at that point to social work
15		for patients who'd been infected with HIV; is that
16		right?
17	Α.	That is all correct, yes.
18	Q.	Is it also right that while you added additional st aff
19		to the centre over the years, you have always had
20		nursing staff, physiotherapists and social workers at
21		the centre?
22	Α.	Yes, throughout the whole of the period, and we hav
23		expanded the number of nurses and the number of
24		physiotherapists throughout that time and added, in
25		particular particularly important, paediatric

## A. That's correct, yes.

- Q. Then in 2000 the new haemophilia centre was built. Can you describe -A. Yes.
  Q. Is that where the centre remains?
  A. That's where the centre remains now, yes, yes.
  Q. What are the facilities there, the physical facilities there?
  A. So, again, we have a waiting area, with an area for
- 9 A. So, again, we have a waiting area, with an area for
  10 adults and a second waiting area for children,
  11 although it is the same physical space. We have
  12 a consulting room and we have two treatment rooms.
  13 One of those treatment rooms is shared with the
  14 haematology day unit. We have an area of a reception
- 15 desk, behind which we keep all of the notes, and we
- 16 have office space as well, both physically within that
- 17 area of the haemophilia centre and then across the
- 18 corridor we have two other offices that we have acc ess19 to.
- Q. When you took up your post in 1996, I understand from your statement that Dr Dasani was in post and you w ere the two doctors at the centre.
- A. Yes, that's correct. Dr Dasani was an extremely
   experienced and knowledgeable haemophilia doctor. He
   had worked at Lord Mayor Treloar, he had worked at

1		specialist nurses have are now been working a
2		the centre for many years.
3	Q.	We've touched on this already but you have now y ou
4		have got additional consultants at the centre. We
5		talked about Dr Rayment being appointed in 2004 but
6		coming to take up her post in 2005, Dr Alikhan
7		in 2008, Dr Heledd Roberts and Dr Obaji in 2019. S
8		there are five consultants now at the centre?
9	Α.	Since I wrote that statement there has been another
10		consultant appointment, Dr Gosrani, and he is
11		specialising in paediatrics. And that is deliberat
12		succession planning, so that when I retire he will
13		take over the management of children with bleeding
14		disorders. So we now have six consultants.
15	Q.	And your statement says also that you have a data
16		manager.
17	Α.	Yes. So relatively early on we appointed a data
18		manager. I think that's very important because unt il
19		then that was falling onto the medical and nursing
20		staff to undertake data management duties such as
21		returns to the National Haemophilia Database, and s
22		we appointed a data manager relatively soon after
23		I was appointed, within a couple of years, I think.
24	Q.	You also have a play specialist or play specialists
25		Can you tell us a bit about them?

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1	Α.	So we have a play specialist who works with the
2		children, and their role is to get children to be u sed
3		to having intravenous access, particularly with the
4		central lines and peripheral access, because obviously
5		some children are very nervous and afraid of having
6		treatment, and their role is to help with that
7		process, of gaining confidence of the child to have
8		treatment.
9	Q.	Then in 2012 a psychology service was set up, the A II
10		Wales Psychology Service for Inherited Bleeding
11		Disorders, which operates out of the centre; is tha
12		right?
13	Α.	Yes. So that was set up in 2012 and continues toda y.
14	Q.	So is that part of the haemophilia centre?
15	Α.	Yes. That's part of the haemophilia centre and it'
16		separate to the psychology service through the Wels
17		infected blood scheme. They have a separate
18		psychology service which is not associated with the
19		haemophilia centre, so that people can choose eithe
20		to have psychology input from psychologists associa ted
21		with the centre or independent of the centre.

- 22 Q. The psychology service that's part of the centre
- 23 provides counselling and psychology services for those
- 24 with bleeding disorders infected with HIV and
- 25 hepatitis and their families; is that right?

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1		for people who are attending the centre as patients
2		it's for their families as well, and some of the
3		relatives of people who have lost family members have
4		accessed the service of psychology support as well.
5	Q.	Now, the centre is the Comprehensive Care Centre fo
6		mid-and South Wales; is that right?
7	Α.	Yes, that's correct.
8	Q.	It runs two bleeding disorder clinics a month
9	Α.	Two a week.
10	Q.	sorry, a week
11	Α.	Two a week.
12	Q.	and has a 24-hour service through an out-of-hour
13		service.
14	Α.	Yes, that's right. There's an out-of-hours service
15		24/7 and people with bleeding disorders can access
16		that at any time.
17	Q.	In addition, you have a system where people can be
18		visited at home.
19	Α.	Yes, that's correct and that's been very important
20		over the last nine or ten months, that in order to
21		reduce the number of people coming to the hospital,
22		a lot of our care has now been delivered in patients'
23		homes. So the physiotherapists go to patients' homes,
24		the psychologist and the nurses will go to patients
25		

1	٨	Mall they provide neurobalegy contine for even the dy
	Α.	Well, they provide psychology service for everybody
2		who attends the centre but with a specific remit to
3		work with people who have been affected by
4		transfusion-transmitted disease.
5	Q.	That service has a consultant clinical psychologist
6		for one day a week, a principal counselling
7		psychologist for one day a week, and a highly
8		specialist clinical psychologist for three days
9		a week; is that correct?
10	Α.	That's correct and one of those posts is based in the
11		Swansea Haemophilia Centre so that we can have
12		appropriate access to care, more local to people's
13		homes. As part of that service, a psychologist was
14		also appointed in North Wales, associated with the
15		Bangor Haemophilia Centre but, in Cardiff, we're
16		not we're not involved in treatment in North Wal es
17		but as part of that All Wales psychology service, that
18		happened at the same time.
19	Q.	Do you know how much uptake there's been for that
20		service?
21	Α.	I think, to be fair, relatively slow. I think that
22		initially the uptake was slow but I think the uptak
23		is now very good and there are and I think that, as
24		people have got used to that service, more and more

people have come forward. Of course, it's not only

1		to the hospital.
2	Q.	Some of the centre staff also carry out school visits.
3		What does that encompass?
4	Α.	Well, this is if a child is either starting school or
5		changing school. This is to make sure that the staff
6		at the school understand the bleeding disorder and
7		that the child is able to access and be involved in
8		all of the activities in the school, and it's mainl
9		to reassure the staff of the school that there
10		shouldn't be any significant impairment in what the
11		child is allowed to do.
12	Q.	The centre also has a role, as I understand it from
13		your statement, in co-ordinating the care of all of
14		those diagnosed with bleeding disorders in south an
15		west Wales. Can you explain a little bit about wha
16		that means.
17	Α.	So the haemophilia services in south, west and
18		mid-Wales are set up as a clinical network and this
19		has been led by Dr Rayment over the last three to four
20		years, so that there is not a haemophilia consultan
21		now in the Swansea Haemophilia Centre and the staff
22		from Cardiff go to Swansea to provide the care in
23		Swansea, so that someone from Cardiff will go there
24		once a week to see patients and to do out-patient
25		clinics. We're available all the time for the nurs es

1		at the Swansea Haemophilia Centre and will react to
2		any issues that arise there.
3		The reason for that, that we had to set the
4		service up that way is that we were unable to appoint
5		a consultant to replace Dr Al-Ismail when he retire
6		and so we had to provide the service as outreach from
7		Cardiff. We also provide outreach to Nevill Hall
8		Hospital in Abergavenny and, before the travel
9		restrictions, I would go there once a month to do
10		a joint clinic with the consultant there. But we
11		still provide day-to-day clinical advice to the cen tre
12		in Abergavenny.
13	Q.	So are all patients with bleeding disorders registe red
14		at the Cardiff Centre or are they registered in
15		Swansea and Abergavenny as well?
16	Α.	So patients could be registered at Swansea, at
17		Abergavenny, or in Cardiff, or jointly, they could be
18		registered both at Swansea and in Cardiff. So
19		certainly patients are joint registered but some ar
20		only registered in Swansea and some are only
21		registered in Abergavenny.
22	Q.	You also provide advice on management of bleeding
23		disorders to all hospitals in the south and west of
24		Wales; is that right?
25	Α.	That's correct, so if a person has a problem they
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1		in 1997 because that gives us quite a useful snapshot
2		of what was going on in 1997. Soumik, it's
3		HCDO0000280_061.
4		We can see from the first page that this is
5		a covering letter dated 4 June 1997, dictated 23/5/97
6		from Frank Hill, and it looks like copied to Dr Lud lam
7		and Dr Colvin. Were they undertaking the audit?
8	Α.	Dr Hill undertook the audit. I think he's probably
9		copying it to Dr Ludlam and Dr Colvin because they
10		would have been the chair of UKHCDO at the time.
11	Q.	So the audit's fairly soon after you arrive at the
12		centre. If we go over to page 2 of the document
13	Α.	The audit was delayed. The audit should have happened
14		the year before in 1996 but it was delayed until
15		I took up post.
16	Q.	We can see at the first hole punch there "Haemophilia
17		patients registered". So out of those 328 patients
18		with inherited bleeding disorders registered in
19		Cardiff, of those is it right that these are the
20		haemophilia patients: severe haemophilia A 41, severe
21		haemophilia B 17, moderate haemophilia A 33, and
22		moderate haemophilia B 12; does that sound right?
23	Α.	It doesn't sound quite right to me. There are too
24		many people with moderate haemophilia. The proportion
25		of moderate haemophilia is much lower than for severe,

1		might go to the hospital in Haverfordwest, which is n't
2		a haemophilia centre, but that might be their close st
3		hospital and then the consultant haematologist is very
4		likely to ring us at the Cardiff centre and ask our
5		advice and we will advise on what should be done.
6		Either we can advise directly on what treatment sho uld
7		be given or sometimes we advise that the patient
8		should be transferred to Cardiff if there is a more
9		serious problem.
10	Q.	So you're describing there a patient going to their
11		local hospital because an event has occurred rather
12		than for their routine management?
13	Α.	Yes. It's not for routine management, no, not for
14		routine out-patient appointments. It's because the
15		have had an injury or, you know, they've been admit ted
16		through casualty with abdominal pain or something like
17		that.
18	Q.	In your statement, you've given us some figures as to
19		how many patients have been registered at the Cardiff
20		centre over the years, and you say that in 1996 the re
21		were 328 patients with inherited bleeding disorders
22		registered with Cardiff, 239 of those were over 18 and
23		87 of those were under 18; is that correct?
24	Α.	Yes.
25	Q.	Can I ask you to look at the audit that was underta ken
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1		so those figures don't quite ring true to me, I'm
2		afraid.
3	Q.	Then we can see there medical staff, as we touched on
4		earlier, you and Dr Dasani, nursing staff, you've g ot
5		two nursing staff at that stage, a social worker an
6		the physiotherapist, Ms Hall.
7	Α.	Correct, yes.
8	Q.	Then if we go over to the next page please, Soumik, we
9		can see there that under "Other Services for
10		Children", you've got mention there of home therapy
11		and prophylaxis, so 15 to 18 of the 24 severe
12		haemophilia A boys are on prophylaxis. Then, just
13		over the page to page 3, while we're on this docume nt,
14		we can see surgery. It sets out that there's genet ic
15		counselling and then surgery, emergency surgery,
16		dental surgery and all the arrangements for
17		gynaecology, orthopaedic surgery and physiotherapy.
18		Does that look familiar and accurate?
19	Α.	Yes, that looks familiar and accurate.
20	Q.	So I was asking you questions about numbers of
21		patients. You can take that down now, Soumik. We'll
22		come back to that document on another point a littl
23		later on.
24	SIR	BRIAN LANGSTAFF: I wonder if I can just ask
25		a question. You've told can we go back to page
		(F) Dama 47, 00

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saying.

1		of this document, and page 2. Thank you.
2		If we look at the haemophilia patients
3		registered there, the total comes to something just
4		over 100. What you were describing a moment or two
5		ago to Ms Scott from your statement was that in 199
6		there were 328 people over the age of 18 with
7		an inherited bleeding disorder and 87 under the age of
8		18, which is 405. So there's a very big difference in
9		numbers. The inherited bleeding disorders, what comes
10		within the scope of that? How many people with
11		an inherited bleeding disorder will not be people who
12		you would define as suffering from either severe or
13		moderate or mild haemophilia A or B?
14	Α.	A considerable number of people would have
15		von Willebrand's disease. There would be people with
16		inherited disorders of fibrinogen, Factor XI, plate let
17		disorders. The figures that I have given in my
18		statement I derived from the National Haemophilia
19		Database and so I think that would explain why ther
20		is a discrepancy from what we said here.
21		Of course, this isn't showing mild haemophilia
22		either. There would be a lot of people with mild
23		haemophilia who aren't included in those figures.
24	SIR	BRIAN LANGSTAFF: The other question go back to
25		page 1 now Ms Scott may be coming to this, I don 't

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1		Now, of course, all of those aspects, they
2		required within the hospital structure to get to be
3		put in place and I think what he was there saying was
4		that he hoped that the audit that he had written wo uld
5		be helpful for me to make propositions to the
6		management that we could make these improvements.
7		I think after Professor Bloom died, I took my
8		post up about four years later and there had been
9		three different people acting as consultant in that
10		time. So there hadn't been a stable consultant in
11		charge looking at a more long-term strategy, and
12		I think that that is reflected in this situation that
13		I found when I arrived.
14	SIR	BRIAN LANGSTAFF: So the reference to update the
15		centre, in Dr Hill's view it had fallen behind the
16		curve, had it, during the previous four years, at a ny
17		rate, the years before you came?
18	Α.	I think there were some aspects that were very good
19		and there were some aspects that, yes, had fallen
20		behind the curve. I'd come directly from Great Orm ond
21		Street where I had worked with Professor Hann and
22		there was a much more proactive view on prophylaxis in
23		children, particularly young children, to prevent the
24		progression or the development of joint damage, and
25		that was something I really needed to introduce in

1		know, but there Dr Hill says, in his second sentenc e:
2		"I hope it will help you in your efforts to
3		improve and update the Centre."
4		So had you discussed with Dr Hill plans to
5		improve and update the centre?
6	Α.	Yes. I mean, I read this audit through in the last
7		couple of days, and it sort of brought things back to
8		me as to the situation when I arrived in Cardiff.
9		There were, for example, no routine out-patient
10		clinics for anybody. Dr Dasani was seeing people i
11		the haemophilia centre on a sort of ad hoc basis. He
12		would contact people and they would come up and be
13		reviewed or they would present with a specific prob lem
14		and he would then review them overall. The number of
15		children on prophylaxis was clearly not appropriate
16		We had to put in place prophylaxis for the other
17		children.
18		So I think that there was a lot that we needed
19		to sort out. There were no the joint clinics, for
20		example, that we were setting up with the HIV
21		physician and the joint clinics with the orthopaedi
22		consultant, these were all things that I discussed
23		with Dr Hill that we were putting in place and
24		planning to do and that's, I think, what he was

1		Cardiff because, certainly, we were behind the curv
2		at that time in introducing prophylaxis for young
3		children and, of course, that's very important for
4		their long term well-being, because the joint damag
5		in your 20s and 30s is caused by bleeds in your first
6		two or three years of life.
7	SIR	BRIAN LANGSTAFF: Yes. Yes, thank you very much.
8		<b>SCOTT:</b> Sir, for your note, in fact, the figures in
9		Professor Collins' witness statement are 328 people in
10		total with inherited bleeding disorders, 239 over the
11		age of 18.
12	SIR	BRIAN LANGSTAFF: Well, paragraph 26 reads "There are
13		328 with an inherited bleeding disorder registered in
14		Cardiff". I see, yes, you are right. I beg your
15		pardon. I misread it. My fault. It's still a rat her
16		different figure than the just over 100, which was the
17		point.
18	MS	SCOTT: Indeed, yes.
19	Α.	I agree it is a very different figure. I can't
20		explain it more fully.
21	Q.	Then by 2019, your statement says that there are 80
22		patients with inherited bleeding disorders registered
23		with Cardiff, 640 over the age of 18 and 162 under the
24		age of 18. Those figures more or less remain accur ate
25		or has there been an increase since then?

1	Α.	There is always a steady increase in the number of
2		people registered. Yes, steadily more people are
3		being registered with as diagnosis, such as mild
4		von Willebrand's disease or a number of people who
5		have clearly had evidence of bleeding but we can't
6		find anything wrong on their laboratory tests. We
7		look after quite a few people in that category.
8	Q.	Of those 802 patients what would be your best estim ate
9		to how many of those patients were people with
10		haemophilia?
11	Α.	Now?
12	Q.	Yes.
13	Α.	Now. Probably about 150/160 something like that
14		I would have thought. One of the reasons I'm
15		struggling is, of course, we're now directly lookin
16		after all the people with haemophilia in Swansea as
17		well, and that again might be a cause of the
18		discrepancy in those figures because whether someon e's
19		registered with Swansea and Cardiff, as we discusse
20		earlier, it's not always clear-cut where you allocate
21		to which centre.
22	Q.	So some of those 802 people may be registered in more
23		than one place?
24	Α.	That's right, yes, exactly.
	-	•• • • • • • • • • • •

25 Q. Your statement tells us that currently registered

#### 25

1		hepatitis C that you were treating?
2	Α.	That's correct, yes.
3	SIR	BRIAN LANGSTAFF: Just to clarify, Ms Scott, the
4		13 with HIV and the 66 with HCV, that's the entiret
5		of the cohort is it? So the 13 co-infected are the
6		13 who have HIV and 13 of the 66?
7	MS	SCOTT: That's my understanding. Is that correct
8	SIR	BRIAN LANGSTAFF: So it's not an additional category?
9	MS	SCOTT: Is that correct, Professor Collins?
10	Α.	Yes, that's not an additional category. The 66 wit
11		hepatitis C include the 13 people who have HIV.
12		Again, just to make sure it's clear that some of those
13		people with HIV may also be registered in Swansea, and
14		so the numbers that Dr Al-Ismail gave you, you can'
15		add those two numbers together to give a South Wale
16		number because they will be being treated in both
17		centres.
18	Q.	I'm going to ask you some questions about the
19		arrangements for the supply of product and treatmen
20		to the Cardiff centre over the years, and also what
21		treatment's been provided to patients. But before
22		I do, I'm going to before I get on to your time
23		from 1996, you've exhibited to your statement some of
24		the treatment policies that were in place during
25		Professor Bloom's time at the Cardiff centre.

1		patients of the registered patients from the
2		centre, 13 of them have HIV, 13 of them are
3		co-infected with HIV and hepatitis C, 66 are infect ed
4		with hepatitis C, and four are being treated for
5		hepatitis B; is that right?
6	Α.	Yes, all those figures are correct, yes.
7	Q.	Can you recall what the numbers of patients infecte
8		with HIV and hepatitis C were in 1996 when you arri ved
9		at the centre? How many patients you were treating
10		for HIV and HCV?
11	Α.	The figure that I was told and that I've always
12		assumed was 45 people had been infected with HIV
13		some of them of course had died before I arrived in
14		Cardiff and also one partner had also been infected
15		with HIV, and the figure of the people infected wit
16		hepatitis C was either 108 or 118. There are two
17		figures that are given there.
18		Of course, many, many more people would have
19		been infected with hepatitis C but they had died
20		before the hepatitis C test became available.
21	Q.	So when you arrived in 1996 there were some number
22		between 13 and 45 patients infected with HIV that y ou
23		were treating in 1996?
24	Α.	Yes.
25	Q.	And some number between 66 and 108 or 118 with

1		Do you have any firsthand knowledge yourself of
2		how those treatment protocols or treatment policies
3		were implemented in Cardiff?
4	Α.	Well, clearly I wasn't in Cardiff then so I don't h ave
5		firsthand knowledge but, to the best of my knowledge,
6		those treatment protocols were implemented in Cardiff.
7	Q.	But given, professor, that you have no firsthand
8		knowledge yourself of what was happening in Cardiff
9		I'm not intending to ask you any questions in relat ion
10		to the implementation or otherwise of those policie
11		and procedures protocols, sorry.
12	Α.	I understand.
13	Q.	So what were the arrangements for how did the
14		centre purchase products, blood products, in 1996,
15		when you took over as director?
16	Α.	So, the blood products were all initially purchased by
17		the Welsh Blood Service and so they went to the
18		which is the transfusion centre. So they were
19		purchased by the transfusion centre and held at the
20		transfusion centre, and then all the hospitals in
21		South Wales would have the blood products delivered to
22		their hospital, so Cardiff would have the blood
23		products from the Transfusion Service, and Swansea,
24		blood products from the Transfusion Service, so oth er
25		hospitals would do the same. So the purchasing was
		(7) Dawa 05, 00

1		directly from the Transfusion Service and then it was
2		allocated to the hospitals, and then we would be
3		cross-charged by the Transfusion Service for the cost
4		of the product.
5	Q.	So is that both for NHS product and for commercial
6		product?
7	Α.	Correct. So the certainly when I arrived in 199
8		all of the product went to the transfusion centre and
9		then came to the centre. Since then, things have
10		changed because a lot of the product now is home
11		delivered so it doesn't go to the transfusion centre,
12		it's delivered directly to people's homes, and so
13		that's a different mechanism. But at that time, in
14		1996, the Cardiff Haemophilia Centre didn't buy any
15		product directly, it all went through the transfusion
16		centre.
17	Q.	So when you in your statement, when you say you and
18		Dr Dasani chose the blood products that were going to
19		be used at the centre, was that out of the products
20		that the Blood Transfusion Service was holding or
21		could you say to the Blood Transfusion Service: could
22		you purchase us X and Y?
23	Α.	Yes, we could go to the transfusion centre and say: we
24	Λ.	would like you to start holding a stock of this other
25		treatment, and then we would use it. So we could
20		treatment, and then we would use it. So we could
		29
1		consider the relative risk of blood products from the

		consider the relative lisk of blood products from the
2		point of view of infection.
3	Q.	So is this fair, that at that stage you and Dr Dasa ni
4		would have considered that all of the products were
5		much of a muchness in terms of safety of viral
6		transmission, and if there had been any issues with
7		a particular product you would have expected that t
8		have been brought to your attention by the Blood
9		Transfusion Service?
10	Α.	I think well, this of course was at a time when
11		recombinant blood products were just becoming
12		available, so both myself and Dr Dasani were
13		completely agreed that we would prefer to use
14		recombinant blood products than plasma-derived bloo
15		products because of the potential of risk of
16		infection.
17		I would have thought that if there were any
18		issues relating to the risk of infection, I'm more
19		likely to have been told by UKHCDO or by the compan ies
20		themselves than by the transfusion centre.
21	Q.	So when you started at the centre, you say in your
22		statement that your patients were receiving blood
23		products and people with haemophilia A were being
24		treated with the BPL 8Y heat-treated plasma product
25		and Replenate, people with haemophilia B with a hig

1		certainly we were the people choosing what products
2		to use, not the Transfusion Service.
3	Q.	Can I ask you about a paragraph in your witness
4		statement. It's WITN4029001 and it's at internal
5		page 15. It's paragraph 75. You say:
6		"Structures or decision-making bodies that
7		considered the risk of infections associated with
8		blood and blood products would have been led throug
9		the Blood Transfusion Service rather than through the
10		haemophilia centre."
11		What do you mean by that paragraph?
12	Α.	Well, I think that by that time the risk of infecti ons
13		from the products we were using in the haemophilia
14		service were much, much lower.
15	Q.	Because the products were why was that?
16	Α.	Because the products were by then all heat-treated and
17		had been for over ten years, and by then had very g ood
18		safety records in terms of HIV and hepatitis C. So
19		that response the question was, in 74, whether
20		there were any advisory or decision-making structur es
21		that covered the centre; the answer was no, there
22		weren't any. And I've made the point that if there
23		were any, it would be through the Blood Transfusion
24		Service not through the haemophilia centre.
25		There were no specific structures there to
		I I

1		purity Factor IX product, Replinine, and patients with
2		von Willebrand's were being treated either with
3		BPL 8Y, DDAVP or Haemate P. Is that right?
4	Α.	
5		then on recombinant Factor VIII. I think there wer
6		four people on recombinant Factor VIII, because the
7		had been involved in a clinical trial of recombinan
8		Factor VIII (the product was Kogenate) and at the e nd
9		of the clinical trial they had remained on that
10		recombinant Factor VIII. So a very small number we re
11		on recombinant at that time.
12	Q.	We can see that in the audit document.
13		So if we can go back to, Soumik, please,
14		HCDO0000280_061, and go to page 5 of that document.
15		Under "Availability of Blood Products", it
16		says:
17		"These are stored in the Haemophilia Unit.
18		Children are currently treated with BPL 8Y apart from
19		PUPs who have presented in the last 2 years"
20		So presumably since 1995:
21		" and 4 previously untreated patients who
22		were recruited into a trial of recombinant
23		Factor VIII. Four adults are also in this study."
24		So it looks like there's three cohorts of
25		patients in that study. Does that accord with your

25

1		recollection?
2	Α.	Yes. So the four people on recombinant Factor VIII,
3		that's correct to say that they were people who had
4		been recruited in the trial and carried on.
5		The previously untreated patients, I don't
6		remember there having been any previously untreated
7		patients in the previous two years before I arrived,
8		but what we would have done is that had there been any
9		we would have treated with recombinant Factor VIII.
10	Q.	You also say in your statement that and that you
11		just mentioned this was the point at which
12		recombinant Factor VIII was becoming available and you
13		were very keen for your patients to be put onto that.
14		Can you talk us through how that occurred.
15	Α.	Yes. So almost the moment I arrived, within a coup le
16		of weeks, the patient group had come to me and said
17		that they wanted to be pushing for recombinant
18		Factor VIII. Of course, recombinant Factor VIII wa
19		substantially more expensive and so I had to put
20		together cases based on the improved safety of
21		recombinant Factor VIII to make the case for the
22		increased funding.
23		It was quite complicated because we were
24		treating people from all areas of south, mid-and we st
25		Wales, and so we were having to go to a number of

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1		them to recombinant Factor VIII. We are in the
2		process of doing this and hopefully will have all
3		patients on recombinant Factor VIII in 3 to 4 month s'
4		time."
5		So in December 1997 it looks like you are
6		hoping that that will be in place by April 1998; ca
7		you recall whether that was the time at which point
8		
-		all your patients had been switched over?
9	Α.	I can't remember exactly. I don't think that they had
10		all been switched over by April 1998, based on
11		information I'd seen from the National Haemophilia
12		Database. I think it probably took another year fo
13		everyone to be changed over.
14		I think one of the things that this letter
15		just to make a point of this, I think this is
16		an important role of a comprehensive care centre th at
17		I had been informed by UKHCDO about variant CJD and
18		I had cascaded that information to all of the
19		haematologists in south and mid-wales so that they
20		were to make absolutely sure that they were awar
21		of this information because, of course, the
22		information had gone to haemophilia centres and not
23		all hospitals.
24	Q.	The next paragraph is also probably worth looking a
25		here, talking about the situation with recombinant

1		different health authorities to get the funding. W
2		put the case and, in 1997, there was an agreement that
3		everyone in Wales, including North Wales, whose
4		patients we weren't looking after, would have acces
5		to recombinant Factor VIII, and the additional funding
6		required was put in place to fund that.
7	Q.	If we can turn to a document that might help us wit
8		that, it's WITN4029013. This might help put some
9		dates on when that actually took place. So this is
10		a letter on 15 December 1997. It says "Dear
11		Dr Blank", and if we turn over to the second page w
12		can see it's signed by you and copied to a number o
13		your colleagues. We can see there Dr Al-Ismail, fo
14		example.
15		So if we turn back to the first page of that
16		document, and to the second paragraph, so just putting
17		this in context, you are enclosing a letter that's
18		been circulated by the UKHCDO regarding vCJD in the
19		treatment of haemophilia. Then you go on in the
20		second paragraph:
21		"From our point of view, we are very fortunate
22		that we have agreement to treat all patients with
23		recombinant blood products, and it would seem sensible
24		to change all our patients to recombinant Factor VIII

rather than to American-based plasma before changin

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1		Factor IX being more difficult, because it is not yet
2		available in the UK, likely to become available in the
3		next six months. Therefore, there's a choice:
4		" of continuing with the BPL product made
5		from UK plasma, or changing to a Factor IX
6		manufactured from American donors. Realistically,
7		this would mean purchasing the Factor IX from Alpha
8		At the present time we are discussing this issue with
9		individual patients and, if they show a strong
10		preference for changing to USA plasma, we will chan ge
11		their product. However, if no strong preference is
12		expressed, we will continue with the high purity BP
13		product until recombinant becomes available."
14		Why were you suggesting that patients should
15		have a strong preference before changing them over to
16		American plasma?
17	Α.	Well, I don't think that's looking at it,
18		I wouldn't use the word "strong preference". If
19		a patient had said they had a preference to change,
20		then I would have changed. I don't think there was
21		any resistance to that.
22		The reality was that, from my memory, that
23		people were resistant to changing to US plasma beca use
24		of the concerns they had in the past. It's important
25		to remember at this time, 1997, is that the

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1		information being given to us was that there was on ly
2		a hypothetical risk of variant CJD in UK plasma and ,
3		indeed, there was, as we may come on to later, ther
4		was advice that we shouldn't be telling the patient
5		at all about this issue, which UKHCDO disagreed wit
6		and I disagreed with.
7		So there was the level of risk being told to
8		us was that, essentially, it was thought that there
9		wasn't a risk and, of course, everybody at this tim
10		who was eating meat was being exposed to variant CJ
11		through that mechanism and so these were some of th
12		conversations I would have had to have had with the
13		patients about what their choice wanted to be, beca use
14		some people might well take the view that they were
15		being exposed through the food chain anyway.
16		My memory is that and I think I'm correct in
17		this no-one wanted to change to US plasma and, o
18		course, later on the next year BPL started to make all
19		of its products from US plasma and that did cause s ome
20		people some concern, that their product was now being
21		made from US plasma and, obviously, because they we re
22		very well aware of the problems of the past.
23	Q.	The Inquiry's heard evidence from some clinicians who
24		describe putting their patients or some of their
25		patients onto recombinant factor products and then

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1		often haemophilia centres are then required to use
2		a certain proportion of different recombinant
3		Factor VIIIs, and so I was certainly involved in th
4		centre of ensuring that we complied with those tend er
5		arrangements.
6		I think it is just worth pointing out that from
7		the point of view of the NHS, that tenders process has
8		saved a phenomenal amount of money for the NHS,
9		because the UK has acted as a single entity in thes
10		tender arrangements. Before, each individual sort of
11		area would have to make a tender and so would get
12		nothing like as good a price.
13	Q.	So just picking up on the point about centres havin
14		to use a minimum proportion of particular named
15		Factor VIII products, if, for example, the tender i
16		for, I don't know, five Factor VIII products, do yo
17		have to use all five of those or how does it work?
18	Α.	No, it would work let's say that there are, as y ou
19		say, a certain number of Factor VIII products. For
20		the top two in the tender we would have to use
21		a certain proportion of those. The top one we woul
22		have to use the most, then after that, but for the
23		rest of it there's a proportion where we can use
24		anything we want, and so we would then have to disc uss
25		with individuals about changing products. I would

1		there being a shortage and having to switch them back
2		to plasma products. Did you have difficulties with
3		that? Did that happen with any of your patients?
4	Α.	We didn't have to change anyone back to plasma-derived
5		products. We did have to reduce usage. We had to
6		reduce prophylaxis in some people and for a while
7		suspend prophylaxis in some people, and we had to
8		delay surgery. But we were able to maintain everybody
9		on recombinant. No-one was required to change back to
10		plasma-derived.
11	Q.	Can I now move on to the current purchasing
12		procedures, if I can put it like that.
13		We understand from your statement that
14		since 2005 products used at the centre have been
15		purchased nationally via the national tender process.
16		What role do you or the centre have in that process
17		if any?
18	Α.	Well, I play a role because I represent Wales on th
19		sort of UK-wide committee. There's a UK-wide
20		committee run by the commercial medicine unit and they
21		put a tender out on behalf of the whole UK and myse If
22		and people from the Welsh Commissioners represent
23		Wales on that committee. So we give our opinions.
24		The tender goes out and as the result of the
25		tender, dependent on what the specific tender, very

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1		always tell people that the reason the product was
2		changing was for price and that, you know, we would
3		discuss that it was for the benefit of the NHS
4		overall, although of course some of that saving has
5		been reinvested in haemophilia care in various ways
6		particularly in access to increased amounts of
7		Factor VIII, so that the amount of Factor VIII we'v
8		used over the years has gone up substantially and
9		that's funded in part by the savings in the contract.
10		But, of course, if some people for whatever
11		reason said they didn't want to change product, the
12		we wouldn't change their product. If they wanted t
13		stay on their product for any reason, they could st ay
14		on it. There was no if someone had that view, t hey
15		were allowed to stay on their product. There was n
16		products that were specifically unavailable.
17	Q.	I'm going to come back and ask you some questions
18		about your consent process in a moment as well, but
19		just sticking then with products that are available
20		that you provide to your patients at the centre.
21		People with haemophilia A, are they treated with third
22		generation recombinant Factor VIII products? Is that
23		how I understand your witness statement?
24	Α.	Yes. So at the moment they are treated with either
25		third generation recombinant Factor VIII products o
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is BeneFix.

Factor VIII.

the parents.

mild haemophilia?

A. A very small number -- one or two, I think.

Now we're using the enhanced half-life

Factor IX product which can be given once a week or

sometimes even once every two weeks, the enhanced

haemophilia B, on prophylaxis, has been offered the

people prefer to stay with the product they know an

have stuck with the standard half-life Factor IX which

treatment would be desmopressin, DDAVP, and everybody

with mild haemophilia would have a DDAVP trial so that

there are some bleeds that might well respond to DD AVP

we can see how well they respond to that, because

but very serious bleeds, if we're not getting good

Q. For von Willebrand's patients it's plasma-derived

A. Well, yes. So it's plasma-derived. The product we

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often this conversation takes place before the chil

is born because we offer antenatal diagnosis at about

whether the child has severe haemophilia or not. S

Factor VIII is the development of a Factor VIII

before the child is born we will have discussions with

32/33 weeks of gestation. An amniocentesis can define

enough levels, they might not respond. So if there is

an inadequate response we would use recombinant

product and DDAVP and/or Factor 8Y; is that right?

half-life Factor IX products. So everyone with

haemophilia B has been offered -- with severe

opportunity to go onto enhanced half-life. Some

Q. What is the first line of treatment for people with

A. Well, with mild haemophilia, the first line of

	enhanced half-life recombinant Factor VIII products
	or, now, over the last sort of year or so,
	increasingly more people are treated with the with
	Emicizumab, which is a non-Factor VIII product. It's
	the bispecific antibody, and the advantage to that is
	it can be given subcutaneously rather than
	intravenously and can be given weekly or every two
	weeks. So more people with haemophilia are opting to
	go on to that product over time.
Q.	People with haemophilia A and inhibitors treated with
	Factor VIIa and FEIBA; is that right?
Α.	Yes, and Emicizumab.
Q.	And people with haemophilia B, are they treated wit
	recombinant Factor IX products and some with plasma
	products?
Α.	So yes, so when recombinant Factor IX came in,
	everybody was offered recombinant Factor IX, and to my
	memory everyone decided they wanted to go onto
	recombinant Factor IX. However, some people who
	their experience was that they did not think that the
	recombinant Factor IX worked as well to treat or
	prevent bleeds as the plasma-derived, and so a smal
	number opted to change back to plasma-derived
	Factor IX.
Q.	And some remain on that product?
	A. Q. A.

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1		use at the moment is called Voncento. We don't use
2		Factor 8Y for von Willebrand's disease anymore. We
3		did when I first arrived but we haven't for a long
4		time.
5		We are just about to get access to recombinant
6		von Willebrand factor and we are just waiting for the
7		authorisation from the Welsh Commissioners to be ab le
8		to start using that in some people with
9		von Willebrand's disease.
10	Q.	I'm just going to ask you some more questions on th
11		consent process. You have already touched on this but
12		can I ask you what conversations you would have wit
13		a patient when you are discussing with them the typ
14		of treatment that you're going to give them? I'm
15		going to split this up between, if you like, type o
16		treatment, so you are choosing between different kinds
17		of treatment either plasma products, recombinant
18		products or half-life products, and then go on to I ook
19		at, within those types, different brands of treatme nt.
20		So when you are deciding what type of treatment
21		a patient should have, what information would you give
22		the patient about the risks and benefits of the typ
23		of treatment?
24	Α.	Well, this conversation predominantly happens in th
25		context of young children with severe haemophilia and

inhibitor. That's the most important side effect o
treatment, and then the child will be resistant to
Factor VIII treatment. We discuss, specifically on
the basis of a paper called the SIPPET study, which
was a randomised control study comparing the rate o
inhibitor formation with plasma-derived Factor VIII in
these previously untreated children versus recombinant

The key risk at the moment with recombinant

and it showed that children treated with plasma-derived had less risk of inhibitor. So we discuss that particular finding with the parents and then, you know, the discussion is do they want plasma-derived or do they want recombinant? Every single parent that I've ever spoken to with regard to this would prefer recombinant because the would prefer the recombinant product, even if there is a small increased risk of inhibitors. We also discuss the enhanced half-life

1		products. Although, with Factor VIII they are
2		enhanced half-life, in young children it doesn't make
3		a huge difference, because in young children the
4		half-life of Factor VIII is quite short anyway, and it
5		gets longer, the half-life of Factor VIII, as the
6		child gets older into adulthood. So we do discuss
7		enhanced half-life Factor VIII and many, many parents
8		choose to go with half-life Factor VIII.
9		Just recently, we have started to discuss the
10		role of Emicizumab in the management of severe
11		haemophilia, and that some parents may wish to star
12		with Emicizumab rather than Factor VIII because one of
13		the big advantages of that is you don't have to put
14		a central line in and it can be given subcutaneously.
15		The downside is that we have much less experience with
16		Emicizumab in young children and so we would have
17		quite a long and in-depth discussion about the choice
18		of Emicizumab or Factor VIII replacement in a young
19		child.
20	Q.	What information, if any, do you give to patients o
21		parents of patients during those sorts of
22		conversations about potential risk of pathogenic
23		transmission?
24	Α.	Well, I always discuss with the parents that in the
25		past Factor VIII has transmitted HIV and hepatitis and
		45

1		of time so that you know, because obviously people
2		have a discussion, go away have more questions and
3		come back, and that's something we always make clea
4		that that is available. It's, of course, not just
5		myself and other consultants doing this, the nursin
6		staff will also often will visit the individual's home
7		and have a discussion about treatment choices because
8		it's not just a product that you're having, it
9		involves whether it's likely that the child will need
10		an intravenous catheter to deliver the treatment an
11		what it's like living with a child with haemophilia is
12		something that we go through in some detail.
13	Q.	Would those sorts of discussions be recorded in notes,
14		in patients' notes?
15	Α.	Yes.
16	Q.	How do you record those discussions in notes?
17	Α.	I record it in the medical notes to say what we've
18		discussed. I particularly record the discussion about
19		inhibitor formation and that I have reassured with
20		regard to infectious diseases, and then also the
21		letter to the GP is now routinely copied to the
22		patient, so that, again, they can and I think
23		that's really quite helpful because, quite often, once
24		I've done the letter to the GP or one of my colleagues
25		has, then the individual will come back having read

1		I always do that because if someone looks it up on the
2		internet that's one of the first things they will come
3		across. So I do that in the context of reassuring
4		them that the products we use are safe from that point
5		of view.
6		It's also, of course, very important to note
7		that many of the women who are giving birth to
8		children now with severe haemophilia have lost family
9		members because of HIV or they are living with family
10		members who have HIV. So, for example, their fathe
11		may have had HIV. So I have that discussion with
12		them, really it's to try and reassure that the curr ent
13		recombinant products are not made in any way with
14		human or animal derived products and so can be
15		considered essentially safe, from the point of view of
16		transmission of those diseases.
17	Q.	Would you provide any written materials to patients
18		Is that part of your practice when making these sor
19		of treatment decisions?
20	Α.	We do provide some written material, yes, but we te nd
21		mainly to spend time talking. These conversations
22		aren't one-off conversations. We will have
23		discussions. Sometimes these sorts of discussions
24		happen before the woman is pregnant. We will have
25		these discussions and they are over a prolonged period

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1		the letter and say this is something that, you know ,
2		I'm not sure about and I want more information. So
3		I think that that's quite important.
4	Q.	So you will have those types of discussions for
5		children, even before they are born, presumably you
6		also have those types of discussions when new products
7		become available, new types of treatments become
8		available, you would have those with your existing
9		patients?
10	Α.	That's right. So over the last two or three years
11		we've had extensive discussions with people who, fo
12		example, are on prophylaxis the standard half-life
13		Factor VIII, and we discussed the options of changing
14		to an enhanced life Factor VIII or more recently to
15		Emicizumab and quite a few people now are opting fo
16		Emicizumab, and that is all in the context of the
17		discussion about what the individual person is wanting
18		to achieve with their prophylaxis, because often th
19		intensity of the prophylaxis depends on the intensity
20		of the physical activity the individual wants to
21		undertake.
22	Q.	It sounds from what you have said that those
23		discussions with patients, adult patients or existing
24		patients, is not a one-off conversation for those.
25		When new products can come online, it sounds like it's

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1		an ongoing dialogue that may take a few sessions; i
2		that right?
3	Α.	Yes, that is right. I mean, my experience with
4		Emicizumab is that a number of people I have discus sed
5		Emicizumab with them and initially they have said,
6		"Oh, I will stick with Factor VIII", and as time ha
7		gone on, a subsequent conversation is, "Well, I've now
8		decided I want to try the Emicizumab treatment", an
9		that's what happens. So, yes, people will obviousl
10		change their minds as they get more of a feel for
11		a new product, and obviously people in South Wales
12		with haemophilia talk to each other.
13	Q.	What's your practice in terms of the balance betwee
14		giving patients information about products and leaving
15		it entirely up to them to make a decision versus, y ou
16		know, you as the clinician making a recommendation to
17		the patient as to what you think would be best for
18		them. What's your practice? Where do you sit alon
19		that continuum?
20	Α.	Well, the first thing I just want to say is that
21		I think that it's not the clinician, it's the
22		haemophilia centre, so the haemophilia centre in terms
23		of the nurses, the physiotherapists everyone is
24		involved in this. It's not clinician-led anymore
25		specifically, it's a team, a holistic team approach
		18

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<ul> <li>prolonged because essentially the Factor VIII or th</li> <li>Factor IX is recirculated through the kind of</li> <li>recycled through the endothelial cell system. That's</li> <li>one type. The other type is where a molecule calle</li> <li>polyethylene glycol is added to the Factor VIII and</li> <li>that will extend the half-life. So there are</li> <li>different mechanisms.</li> <li>All of them come out with a half-life</li> <li>essentially that they all prolong the half-life by</li> <li>essentially that they all prolong the half-life by</li> <li>that the individual has is the same essentially for</li> <li>all the products and so those are, you know,</li> <li>discussions that are had.</li> <li>Similarly, with Factor IX it's the same. There</li> <li>is the option of the pegylated Factor IX or there a re</li> <li>two recycling mechanisms of Factor IX, one because the</li> <li>Factor IX is bound to albumin and the other the</li> <li>Factor IX is bound to what is called the Fc receptor.</li> <li>So there are different mechanisms. With Factor IX,</li> </ul>	1		certain half-life products where the half-life is
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20So there are different mechanisms. With Factor IX,21importantly, the pharmacokinetics are different, so	18		Factor IX is bound to albumin and the other the
21 importantly, the pharmacokinetics are different, so	19		Factor IX is bound to what is called the Fc receptor.
	20		So there are different mechanisms. With Factor IX,
22 the way that you use the product is different	21		importantly, the pharmacokinetics are different, so
22 the way that you use the product is unlefell	22		the way that you use the product is different
23 dependent on the mechanism, and so that has to then be	23		dependent on the mechanism, and so that has to then be
24 taken into consideration as well.	24		taken into consideration as well.
25 <b>Q.</b> So you give information about the different ways that	25	Q.	So you give information about the different ways that

1		Our view is that the individual with haemophilia ha
2		the control of the situation and it's for them to
3		decide what type of product they want to use and, o
4		course, some people will try a product, find it suits
5		them well or find it doesn't suit them well and
6		they'll try something different.
7		So it's entirely down to the individual as to
8		which type of product they want to try.
9	Q.	Then once you have made a decision about what kind of
10		treatment, then the patient then has another choice
11		do they, as to which brand or which particular product
12		that they are going to use; is that right? Do you
13		offer them so they have decided they want to hav
14		a half-life product, do you then say, "There's this
15		one, this one and this one"?
16	Α.	Well, we do, but it's in the context of cost as wel I,
17		because different products cost different things,
18		different amounts. So we discuss the different typ es
19		of extended half-life product.
20	Q.	So typically the information you would give about each
21		extended half-life product, for example, balanced
22		against the other, what sort of type of information
23		would you be giving?
24	Α.	Well, we would give information about the mechanism by
25		which half-life products are prolonged. There's
		50

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1		the products work. You've said that you give
2		financial information as well so you give the patient
3		information about how much each product costs. Is
4		that right?
5	Α.	Well, we don't say specifically how much they cost but
6		we say that certain products are cost less than
7		others and that, all things being equal, that might be
8		something to consider in the choice.
9	Q.	You've already told us that sometimes you're saying to
10		patients, "Look, in order to comply with our
11		obligations under the tendering process we need to
12		think about switching you to a new product", and yo
13		would give them that information as part of that
14		discussion?
15	Α.	At the moment the current tender does not require you
16		to use a certain amount of any product. You can us
17		any product you want off the tender. In the past, we
18		did have to use a certain amount and we would explain
19		to the person, "Look, the reason we want to change you
20		is because of this national tender, it's going to s ave
21		the NHS money", and I've never had any person reall
22		showing concern about that. Some people wanted to
23		stay on their same product because they preferred t
24		and then that was fine. We would agree to that.
25	Q.	So the impact on the tender, in terms of choice of
		50 (13) Pages 49 - 5

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1		product, was very much a request to the patient rat her
2		than saying, "In order for us to comply with our
3		tendering obligations you must switch product"?
4	Α.	Yes. So it was never a compulsion. It was always
5		explained. But the people I talked to I think buy
6		into the concept of the NHS and the kind of the col
7		resource that is the NHS, and in South Wales the NH
8		is a very important part of the social fabric, beca use
9		of course it came from South Wales, and so people will
10		fully understand these concepts. So I've never
11		some people, as I say, would prefer to stay on the
12		product they're on and then that would be absolutel
13		fine.
14	Q.	So, again, when you're talking with patients about the
15		different choices they have got of half-life products,
16		for example, is the choice entirely up to them or i
17		that a choice or was that a little bit more
18		clinician-led, or centre-led, because of aspects like
19		price?
20	Α.	Everyone has access to enhanced half-life products and
21		we would not in the end dictate to people what they
22		wanted. We would explain the pros and cons of each
23		product.
24		I think that to put it into context, of
0.5		

## 25 course, Emicizumab is substantially more expensive

#### 53

1	MS	SCOTT: I'm going to ask you some questions now about
2		testing for infections. I understand from your
3		statement that all the patients at Cardiff had been
4		tested both for HIV and HCV (hepatitis C) and told of
5		their infections by the time you arrived at the clinic
6		in 1996.
7	Α.	Yes, that's correct.
8	Q.	Was there anything you heard from patients or from the
9		staff that had been at the centre under
10		Professor Bloom about the way that that was managed by
11		Professor Bloom?
12	Α.	I have heard the statements of the patients and I'v
13		obviously heard the oral evidence of the patients and
14		much of the oral evidence I knew before I saw that,
15		because they explained that to me. The only person
16		who was working at the haemophilia centre at the time
17		that the information about HIV would have been related
18		to the patients was Jenny Jones. Dr Dasani wasn't
19		working there at that time. I think he started in
20		1989. The other person who would have been there
21		would be Dr Elizabeth Moffat, who was the research
22		registrar around that time.
23		It's difficult for me to really give any
24		further answer. The person who might well have
25		directly observed this is Sister Jenny Jones.

1	than Factor VIII to treat a person who doesn't have an
2	inhibitor and we give open access to people to
3	Emicizumab, so price is not the defining issue; if
4	someone wants to go on Emicizumab, that's
5	a significant cost increase in their care, but
6	people you know, if people want to, then we chan ge.
7	MS SCOTT: Sir, I was going to go on to a different topic
8	now and I note the time so I wonder if now is a goo
9	time for a break.
10	SIR BRIAN LANGSTAFF: Yes.
11	We take a break, as you may have realised,
12	during the morning, and it's normally about
13	half-an-hour so we will meet again at 5 to 12.
14	What I tell all witnesses is that they mustn't
15	discuss their evidence, being under oath, either th
16	evidence you have given or that which you think you
17	may be asked to give in due course. That includes
18	discussing with your wife. You can talk about
19	anything else you like but not that. So we will se
20	you back at 5 to 12.
21	A. Okay. Thank you.
22	(11.27 am)
23	(A short break)
24	(11.55 am)
25	SIR BRIAN LANGSTAFF: Yes.

#### 54

1	Q.	Do you recall any conversations with her about that
2		time and the events that unfolded at that time and how
3		they were managed?
4	Α.	I don't specifically remember her describing
5		I mean, she did describe some specific cases to me but
6		we clearly can't discuss specific events. But in
7		terms of general terms, she didn't say to me anythi ng
8		specifically about how people were informed of thei
9		HIV infection. Of course, the person who informed
10		most people about their hepatitis C infection was
11		Dr Dasani because he was working at the haemophilia
12		centre at that time, and also Dr Simon Davies, who was
13		the locum consultant around 1991 sorry, 1992. H
14		took over as locum consultant when Arthur Bloom die d.
15		So he would have been both him and Dr Dasani would
16		have been there when people were told of their
17		hepatitis C result.
18	Q.	So most of your knowledge about how testing for
19		infections and delivering results to people, and so
20		on, was managed comes from the patients directly
21		either to you or through the information they'd giv en
22		and that you have become aware of to the Inquiry?
23	Α.	Yes, that's correct, yes.
24	Q.	I also understand from your statement that partners of
25		those hepatitis C-infected patients had also been

(14) Pages 53 - 56

1		tested prior to your arrival at the centre in 1996 and
2		they'd been tested by Dr Dasani and they were all
3		negative; is that right?
4	Α.	That's right. Dr Dasani undertook a sort of
5		comprehensive process of offering testing to partners
6		and it is correct they were all negative for
7		hepatitis C.
8	Q.	So the testing that has taken place since your arri val
9		in 1996 has been of partners of those infected with
10		HIV; is that right?
11	Α.	Yes, we offer HIV tests for partners of people who
12		were infected with HIV and that's been going on eve
13		since I've been there and continues to today.
14	Q.	You say in your statement that that was led by
15		Dr Dasani. Have you been involved in that process
16		yourself?
17	Α.	Yes. I've been involved in that process but
18		Dr Dasani I think it is important to recognise t hat
19		Dr Dasani was an expert in the management of HIV an
20		he took the lead in these sorts of processes relate
21		to HIV. But, certainly, I will have been involved in
22		offering tests to partners on a fairly regular basi s.
23	Q.	You also say that patients who were treated with
24		pooled plasma products and who were HIV or HCV
25		negative were also tested regularly for those virus es.

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1		norticularly about the implications of the test and
		particularly about the implications of the test and
2		with HIV what the why it's possible that the
3		individual may be at risk of having contracted HIV.
4		This often is for people who have moved in from abroad
5		and who may have been treated with blood products i
6		the past and so we don't have a record of the blood
7		products.
8		The patient group in Cardiff really is quite
9		stable. Relatively few people leave South Wales,
10		relatively few people come so it's a very unusual
11		event. But we will also discuss implications for
12		insurance and mortgages and life insurance, so we have
13		those sorts of discussions. But it must be 20 year
14		since I've had this sort of discussion with anybody
15		There was one case I remember, one individual,
16		where we made a diagnosis of hepatitis C of a lady
17		with von Willebrand's disease, who had not been to the
18		centre for a long time and that was made after
19		I started working in the centre. Again, we discuss ed
20		with her the reason for wanting to do that, it's
21		because we thought she might possibly have received
22		a pool blood product in the past and it did
23		unfortunately prove that that was the case.
24	Q.	When you arrived at the centre, you had a policy to
25		keep patients on the same batch of product where

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	-	
1	Α.	Yes. So when I arrived there was already
2		a surveillance programme in place where people were
3		tested every six months if they were on plasma-derived
4		products, and that continued until we introduced
5		recombinant, after which we stopped doing that, onc
6		recombinant products had been introduced.
7	Q.	So for those very few patients who remain on plasma
8		products, do they still get testing?
9	Α.	No, no.
10	Q.	You also say that you tested new patients coming in
11		from other centres and from abroad for HIV and
12		hepatitis C.
13	Α.	Yes. We inherited quite a few people who were
14		infected with HIV or hepatitis. Often they were
15		coming to Cardiff to attend the university and we
16		would take over their care whilst they were at
17		university. They all already knew of their HIV or
18		hepatitis C status but we retested them when they
19		arrived with their full knowledge and agreement.
20	Q.	What is the process when you need to test somebody for
21		HIV or hepatitis C? What's the conversation that y ou
22		have with them in order to get their consent?
23	Α.	This hasn't happened for many, many, many years.
24		I don't remember doing this for a very long time. But
25		the discussion is around what the test is,

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1		possible to reduce donor exposure. Presumably that
2		has fallen by the wayside has it with the recombina nt
3		products?
4	Α.	To a degree. We still tend to try to stick to simi lar
5		batch numbers, although there isn't really any
6		compelling reason to do that. I think it's out of
7		habit that we just continue to do that.
8	Q.	You also describe in your statement how vaccination
9		were offered against hepatitis A and hepatitis B. Can
10		you just explain why those vaccinations were offere
11		in 1996 when the plasma products patients were
12		receiving were virally inactivated?
13	Α.	I think it was mainly because there was a small ris
14		from blood transfusions still, from red cells, and
15		that people with bleeding disorders are more likely
16		than other people to need a red blood cell transfusion
17		and so that was the reason. Of course, when I arri ved
18		people were on plasma-derived products and although
19		there had been safety for ten years, there was alwa ys
20		this underlying concern that perhaps there would be
21		a kind of a breakdown in the manufacturing process
22		that led to another a problem, which was one of the
23		main arguments from my point of view for recombinan t.
24	Q.	Do you still offer those vaccines to patients?
25	Α.	No, we don't routinely at the moment, no. Children
		60 (15) Pages 57 - 60

1		I think get routinely vaccinated for hepatitis B
2		anyway now but we don't routinely offer hepatitis A
3		vaccination now.
4	Q.	Why is it that those with bleeding disorders are more
5		likely to need red blood cell transfusion?
6	Α.	Well, at that time, because a lot of people were no
7		on prophylaxis so if they started to, for example,
8		have a bleed from a stomach ulcer, they might bleed
9		a lot more than other people. Whilst people with
10		bleeding disorders are more prone to that, because the
11		vast majority of people with severe haemophilia are
12		now on prophylaxis to some degree that's mitigated
13		against.
14	Q.	I'm going to ask you now about the current treatmen t,
15		the clinics that you hold for your patients and the
16		reviews that you undertake. How frequently would y ou
17		see somebody with severe haemophilia in a clinic?
18	Α.	Well, if someone's stable, it would be every
19		six months. Younger children it might well be ever
20		three or four months, particularly when they are very
21		young and are initiating treatment. And we also have
22		a policy of open access. So essentially if someone
23		wants to discuss something or has an intermittent
24		bleed, they can come to the centre at any time and be
25		seen or, if it's not that urgent, they can ring in and

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1		would be taken to get a blood count, for a patient
2		infected with HIV, a CD4 count, a liver function te st,
3		viral loads for an HIV-infected patient, and later on
4		HIV virus resistance tests and, as you've described,
5		there was a period where regular testing for
6		hepatitis C and HIV were undertaken if the patient was
7		negative for those viruses.
8	Α.	Correct.
9	Q.	For testing for hepatitis C genotype and PCR testin
10		when that became available. In a clinic where you see
11		a patient today, what tests are you doing on a regu lar
12		basis?
13	Α.	In a clinic today we are mainly doing tests to look
14		for anaemia and iron deficiency, which would be a full
15		blood count and a ferritin. We would be testing fo
16		Factor VIII inhibitors on a regular basis and we wo uld
17		do liver function and renal function tests.
18		People with HIV have their tests ordered or
19		requested by the blood-borne virus clinic and then
20		they come to the haemophilia centre with those form
21		for the tests to actually be done. So we are no
22		longer involved in requesting the tests for monitoring
23		for HIV.
24		For hepatitis C, people will be monitored
25		routinely through the haemophilia centre, and what we

1		be slotted into the next clinic. So anyone can
2		essentially come when they want to if they have
3		a problem.
4	Q.	What about a patient with moderate haemophilia?
5	Α.	So, again, every six months. We would offer people
6		with moderate haemophilia an appointment every six
7		months. People with mild haemophilia it might be once
8		a year, would be the average. But if a person has
9		hepatitis C or HIV they would be seen more often, a
10		least every six months if they had active hepatitis C.
11	Q.	And a patient with von Willebrand's? How often wou ld
12		they be seen?
13	Α.	Type 3 severe von Willebrand's, at least every
14		six months. There are some people with
15		type 3 von Willebrand's who have a really quite
16		significant bleeding pattern, they would be seen at
17		least every six months in a formal clinic, but peop le
18		with type 1 von Willebrand's, where it's a more mil
19		disease, maybe once a year or often once every
20		two years. Some people have they can go 10 or
21		15 years with no problems and then they might have an
22		issue, for example, related to when they need
23		a surgical procedure.
24	Q.	You described in your statement that at every
25		appointment or that every appointment blood samples

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1		now have is the joint clinic with Dr Srivastava, wh
2		is the consultant hepatologist. He will advise us on
3		what blood tests to perform, and so we follow the
4		advice dependent on what he is suggesting.
5	Q.	Can you describe for us the consent process that yo
6		would undertake with a patient at a six-monthly
7		regular clinic appointment for those tests.
8	Α.	For a routine clinic appointment, we would just say to
9		the patient, we're going to do your routine tests,
10		we'd you know, test for anaemia, look for an inhibi tor
11		which is what people are aware. We certainly don't
12		take more formalised consent than that.
13	Q.	So if you were testing for a particular virus,
14		a parvovirus, or something of that nature, would yo
15		have a more formal consent process?
16	Α.	We certainly would now, yes.
17	Q.	What would be the nature of that conversation? Can
18		you describe that typical conversation you might have,
19		if you were testing for parvovirus, for example?
20	Α.	Well, that hasn't come up for a very, very long tim e,
21		although it did come up this week. I wasn't the
22		clinician involved in that discussion and it's
23		a discussion about an individual case, so we probably
24		best not. But we would have no reason to test for
25		parvovirus, so I don't think that would come up unless

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	the individual patient requested it at the moment.
Q.	So are there circumstances in which you have, in
	a regular clinic, have to go into a more in-depth
	discussion with patients in order to obtain consent
	for particular tests, particular blood tests or
Α.	Genetic tests we have a more in-depth process and w
	have a system of written, signed consent for taking
	genetic tests, those to look for the mutation that is
	causing haemophilia A or B, but now it's much more
	possible to test for all sorts of genetic disorders
	because of the huge progress that has been made in
	genetic testing over the years. So we are now
	offering genetic tests for families with
	von Willebrand's disease or with Factor XI deficien cy
	or with platelet disorders and so we would go throu gh
	a much more formal consent process and we have
	a written patient information sheet and a consent form
	and they would sign written consent for that proces s.
Q.	I understand from your statement that the centre no
	longer stores samples; is that correct?
Α.	That's correct. Since we transferred to recombinan t,
	there didn't seem any reason to continue to do that
	so that was we stopped storing samples when peop le
	converted to recombinant.
	A. Q.

25 **Q.** What's happened to the stored samples?

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1	Q.	Can I take you to a document to see how this might
2		have worked in practice. It's WITN4029008.
3		We can see here this is an article "Long-term
4		follow up of patients treated with intermediate
5		Factor VIII concentrate BPL 8Y", and your name alon
6		with Dr Dasani and Dr Brown as authors. If we see the
7		summary, second sentence:
8		"Long-term surveillance [first sentence]
9		studies of clotting factor concentrates are important
10		to detect infrequent or delayed complications and t
11		provide data against which newer products can be
12		compared. We have assessed the long-term use of
13		BPL 8Y Factor VIII concentrate"
14		So that's the purpose of the study. We can see
15		that you collected data from 33 patients treated ov er
16		96 months. You tell us in your witness statement
17		that, as this was a surveillance study, this is not
18		something that you sought ethical approval for or
19		consent from the patients; is that right?
20	Α.	Yes, that's correct. We thought that this was put in
21		the criteria of a service evaluation rather than
22		a clinical study.
23	Q.	If we turn over the page, Soumik, there's "Patients
24		and methods", we can see there the method that was
25		used, 33 patients treated exclusively with BPL 8Y:

1	Α.	I can't answer that for definite. What I can say i
2		that the stored samples are no longer present. No-one
3		can tell me exactly when they were destroyed. It i
4		possible that they were destroyed after there was
5		a failure of one of the virology freezers but peopl
6		can't tell me definitively. What they can tell me
7		definitively is that they no longer hold any samples.
8	Q.	When you were storing samples, what were patients told
9		about that when routine blood tests were taken, wer
10		they told that their samples were being stored back in
11		1996/97?
12	Α.	Yes, they were told that we were storing samples in
13		case there was a problem with another infectious agent
14		and that we might need to test those samples in the
15		future. So that was the discussion that was had
16		regarding those samples.
17	Q.	So was that discussion a process by which you were
18		obtaining consent from the patient to test for futu re
19		viruses or was it a discussion on the basis that yo
20		would then come back to get their consent to test for
21		those viruses if that became appropriate?
22	Α.	It was on the basis that if, for example, a test fo
23		variant CJD became available, we would go back to the
24		individual and discuss whether they wanted that tes
25		to be done or not.

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1		"The patients' notes were reviewed and data
2		collected."
3		Then at the top of the next column:
4		"Virological testing had been carried out on
5		a six-month basis."
6		So that, presumably, is a reference to the
7		testing that had been undertaken at the clinic
, 8		reviews; is that right?
9	Α.	
-		That's correct, yes.
10	Q.	Then moving down to the end of that paragraph:
11		"Stored sera were used for parvovirus
12		antibody testing by ELISA"
13		So it's really that that I wanted to ask you
14		about. In this study, were you testing the stored
15		sera for parvovirus?
16	Α.	In some cases, those were tested on stored sera. I
17		some cases, the individuals were invited up to the
18		haemophilia centre to have samples taken for the
19		parvovirus test.
20	Q.	So while and if this sera if the testing was
21		done on stored sera, are we to understand then that
22		the patients wouldn't have consented to that test?
23	Α.	Yes, that's correct.
24	Q.	So some of the patients in this study would have
25		consented to parvovirus testing but wouldn't have

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25

1		understood that it was to be reported in this article;
2		is that right?
3	Α.	I don't know. I wasn't directly involved in that
4		conversation. That would have been Dr Dasani and
5		Dr Brown directly involved in that conversation. S
6		I don't know exactly what was said.
7	Q.	Should the patients have consented to their stored
8		sera being tested for parvovirus?
9	Α.	I think in retrospect, looking at this now, I think
10		that they should have been asked to have their stored
11		sera tested for parvovirus, yes.
12	Q.	Do you know whether the patients were told the results
13		of the tests for the parvovirus?
14	Α.	I don't know the answer to that, I'm afraid.
15	Q.	Would that have fallen to Dr Dasani?
16	Α.	Possibly, or to Dr Brown. I think the other point
17		just to make about the results is that I think that
18		because I've obviously read this paper again now.
19		This was written soon after I started in Cardiff an d,
20		reading it again now, I'm not sure that we have
21		interpreted the results correctly with regard to those
22		parvovirus results. The reason I say that is that
23		these people, by definition, were receiving 8Y. 8Y
24		has immunoglobulin in it and it is possible that th
25		noncovinus antihadu that wa ware nicking up in that

## 25 parvovirus antibody that we were picking up in that

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1		that I don't think those samples should have been
2		tested.
3	Q.	I'm anticipating from your previous answer that you
4		won't know the answer to this but were those patien ts
5		followed up as a result of what was thought to be
6		positive parvovirus tests?
7	Α.	Well, they were all being followed up regularly. O
8		course that test is a test that if it is positive
9		shows past parvovirus infection, not current
10		parvovirus infection, and something like 50 to
11		60 per cent of the UK population will be
12		parvovirus IgG positive because they have had
13		parvovirus in the past.
14		So it's not a disease that leads to chronic
15		problems. You have parvovirus, you get over it. It's
16		sort of a classic childhood illness, a little bit like
17		measles, you have it, you get over it, and then tha
18		is there's no further consequences of that.
19		So all of these individuals would have been
20		being followed up through the clinic and, you know,
21		any clinical symptoms would have been investigated
22		appropriately. But I don't think parvovirus would
23		have been an issue in that situation.
24	Q.	Sticking then with treatment of patients at the
25		centre. Again, a similar question to the one I ask ed

1		test was, in fact, coming from the concentrate rath er
2		than a demonstration that the individual had had
3		parvovirus in the past.
4		So I think it's difficult to interpret the
5		results of that, and that's something I've become
6		aware of when I've re-read this paper and looked at it
7		again with fresh eyes. I think, however, there is no
8		doubt that we should not have tested those stored s era
9		without talking directly to the individuals involved.
10	Q.	Equally, should the patients have been told what th
11		outcome of those tests were?
12	Α.	I think they should have been told the outcome of
13		those tests but, as I say, it is possible we would
14		have given them the wrong information or potentiall
15		misleading information. I think the conclusion tha
16		I reach now is that we shouldn't have tested them a
17		all because we could not derive a clear understanding.
18		The reason this was of such significance at that time
19		was because there had been a case report from the
20		Royal Free Hospital of an individual who had
21		contracted parvovirus apparently from concentrate and
22		
		developed significant anaemia, and parvovirus was
23		developed significant anaemia, and parvovirus was being seen as an important sort of potential marker

## Factor VIII around that time. However, I fully agr ee

<ul> <li>anything that you've heard from patients or from, i</li> <li>particular, Dr Dasani or Sister Jones about the way</li> <li>that patients' treatment was managed by</li> <li>Professor Bloom during his directorship of the cent re?</li> </ul>	
<ul><li>4 that patients' treatment was managed by</li><li>5 Professor Bloom during his directorship of the cent re?</li></ul>	
5 Professor Bloom during his directorship of the cent re?	
<b>5</b>	
<ol> <li>A. No. All I know about the treatment is from the two</li> </ol>	
7 protocols that I've submitted, from 1983 and 1985.	
8 That's all I really know about the treatment. I kn ow	
9 from discussion with patients that there wasn't a full	
10 discussion about the different types of treatment o	
11 necessarily all the potential risks of treatment.	
12 That's all I know. I don't know anything further.	
13 Again, Jenny Jones would have been present a	t
14 those discussions, Elizabeth Moffat would have been	
15 present at those discussions, and they may be able to	
16 give a better answer than I can.	
17 <b>Q.</b> Your knowledge of the protocols and procedures that	
18 you have exhibited to your witness statements come	
19 simply from those documents, do they, rather than f rom	
20 anything you've gleaned about how they were	
21 implemented from discussions with patients or	
22 Dr Dasani or Sister Jones?	
23 A. That's correct. I was unaware of those documents	
24 until we received the request from the Inquiry for	
25 documents. I went through everything I could find and	

1		those were documents that I was unaware of their
2		existence until I looked through sort of the old kind
3		of files that I'd inherited from Professor Bloom's
4		office.
5	Q.	So you didn't have conversations from someone
6		saying, "Well, you know, this is the treatment
7		protocol we used to apply, see this document"?
8	Α.	No, I didn't, no. But Jenny Jones would have follo wed
9		those protocols. She would have worked directly of
10		those protocols.
11	Q.	Moving on then to how HIV is managed and has been
12		during your tenure at the centre.
13		You have already told us that Dr Dasani was an
14		HIV expert. The Inquiry's heard evidence from
15		Dr Winter, who described himself I think as an HIV
16		physician. Is that the same situation that Dr Dasa ni
17		was in?
18	Α.	Yes, Dr Dasani had because HIV was a very new
19		disease and he had been looking after people with HIV
20		since it was first recognised, he was probably as
21		knowledgeable about the management of HIV as anybod
22		at the time. He attended British HIV Association
23		meetings, he kept up-to-date with the literature, and
24		I think he was he could be considered as an HIV
0.5		

25 physician in the same way that Dr Winter could be.

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1		done that all the time I'd been in Cardiff. The
2		people with HIV who were being looked after in the
3		haemophilia centre expressed a very strong opinion
4		that they wanted to stay under the care of Dr Dasan i,
5		and so they continued to be looked after by him, with
6		Dr Freedman doing joint clinics. So it was really
7		only after Dr Dasani retired that the expertise wit hin
8		the haemophilia centre needed to be more formally
9		supported by the blood-borne virus clinic, and it was
10		after that time that we started to people starte
11		to go to the blood-borne virus clinic specifically so
12		that they could see specialists, because of course we
13		weren't in the way that Dr Dasani was, we weren'
14		specialists in HIV management.
15	Q.	So is this right, that currently all patients with
16		HIV, their HIV is managed by the blood-borne virus
17		clinic and the blood-borne virus clinic runs clinic
18		on the same day as the haemophilia centre so, while
19		there aren't joint clinics, the patients only need to
20		attend the hospital on one day?
21	Α.	That's correct. We tried very hard to make that th
22		case, so that the individual would go to the
23		blood-borne virus clinic first, they would be given
24		their blood tests, they'd come to the haemophilia
25		centre, we would review any issues related to
		·

1	Q.	You've also said that you were able to refer some o
2		your patients to the infectious diseases team led b
3		Professor and I'm not going to be able to pronou nce
4		his name correctly Bory
5	Α.	Borysiewicz.
6	Q.	How frequently did you refer such patients?
7	Α.	Well, this was before I'd arrived. Dr Dasani told me
8		that he would sometimes seek Professor Borysiewicz'
9		opinion on patients. It was certainly not a formal
10		thing. That was all before I arrived. One of the
11		very first things I did after arriving in Cardiff w as
12		to approach the consultant in infectious diseases,
13		called Dr Freedman, and he was, again, an expert
14		in HIV. And we then started working jointly with
15		Dr Freedman, both myself and Dr Dasani, to look aft er
16		people with HIV, and Dr Freedman started to come to
17		the haemophilia centre and do joint clinics with us so
18		that he could advise people directly. And so he an
19		Dr Dasani then all treatment-related decisions i
20		terms of what anti-HIV medication, the decision tak en
21		jointly by Dr Freedman and Dr Dasani after that tim e.
22	Q.	Then at some point the HIV care moved to the
23		blood-borne virus clinic. Was that a new service that
24		was set up?
25	Α.	No, Dr Freedman ran a blood-borne virus clinic and had

1		haemophilia and add any blood test, like inhibitors or
2		whatever, and then the haemophilia nurses would tak
3		bloods. So that's the process.
4	Q.	Presumably is there a mechanism by which you can
5		discuss patients with your colleagues from the
6		blood-borne virus clinic so there's joined up
7		multidisciplinary care?
8	Α.	Yes., at any time I can contact a member of the
9		blood-borne virus team and discuss an individual that
10		I might have some concern about. They are very
11		accessible and very easy to contact.
12	Q.	Then moving on to arrangements for managing patient
13		with hepatitis, in your statement you say that prio
14		to your arrival patients had been managed by
15		Dr Dasani, with referrals being made to England for
16		second opinions and some liver transplants having been
17		undertaken in London and Cambridge; is that right?
18	Α.	That is correct, yes.
19	Q.	Are we to understand from that that there was no
20		hepatology expertise within Wales at that stage?
21	Α.	There was certainly no hepatologist in Cardiff.
22		I don't know within Wales. It may be that there we re
23		none in Wales. There was certainly no liver
24		specialist that could, for example, undertake liver
25		transplantation in Wales and there still aren't.

1		That's a service that is not available in Wales, liver
2		transplantation. But in Cardiff there was no wh en
3		I started in 1996 there was no hepatologist in
4		Cardiff. If you wanted to have an opinion locally you
5		would have to talk to a gastroenterologist who
6		certainly had more knowledge than we did about chronic
7		liver disease but they weren't a hepatology
8		specialist.
9	Q.	You have already described to us that, when you
10		started, you started a regular out-patient clinic for
11		those with hepatitis. Were you running those clinics
12		with advice from Dr Freedman? Is that how it worke d?
13	Α.	So Dr Freedman was a specialist in treatment to
14		eradicate hepatitis C because he was an infectious
15		disease doctor. Dr Freedman wasn't a specialist in
16		the management of chronic liver disease. So when i
17		came to the eradication of hepatitis C, Dr Dasani
18		[and] Dr Freedman would jointly come to decisions o
19		what treatment should be offered. If we were
20		concerned about an individual having progression of
21		liver disease, we would have to seek the opinion of
22		a gastroenterologist, or Dr Dasani would sometimes
23		contact one of his contacts elsewhere in the UK and
24		directly refer the individual.
25		So, for example, if there was concern about

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1		wasn't just people with inherited bleeding disorders.
2		This was everyone in the Cardiff area. There was n
3		access to hepatology service for anybody, so it was n't
4		a specific issue for bleeding disorders but, of
5		course, because so many people with bleeding disorders
6		have hepatitis, it was disproportionately affecting
7		their care.
8	Q.	Then you describe in your statement how between 200
9		and 2009 you were able to establish a joint clinic
10		with Professor Godkin who is a hepatologist
11	Α.	Yes.
12	Q.	and able to review patients with more progressiv
13		liver disease that way and then make referrals to
14		Birmingham in some cases.
15	Α.	Yes, correct. So Professor Godkin came to the
16		haemophilia centre did joint clinic with either myself
17		or Dr Dasani, and we were and people with liver
18		disease would be seen in that clinic. He would see
19		them, examine them, advise them and, if necessary, he
20		would make the referral to the centre in Birmingham.
21	Q.	You have also described how that wasn't part of
22		Professor Godkin's brief, as it were. He had to fi
23		that in on top of his existing commitments and so i
24		wasn't something that lasted beyond 2009?
25	Α.	That's correct. It wasn't in his job description a nd

1		an individual having progressed liver disease, he
2		might refer to London or to Cambridge to say, shoul
3		this individual be assessed for a liver transplant,
4		and the answer would come back yes or no and we wou ld
5		refer like that.
6		About sorry.
7	Q.	Sorry.
8	Α.	About one or two years after I started in Cardiff, one
9		of the gastroenterologists did a secondment to the
10		liver unit in Birmingham and, I think, spent about
11		a year there as, sort of, part of, sort of, more
12		specialist training. That was Dr Thomas and when h
13		came back to Cardiff, we started to use him as our
14		hepatology consult and, because of his links with
15		Birmingham, people were then starting to be referre
16		to Birmingham if they had problems with liver disea se
17		that were progressing.
18	Q.	So is this right: up until, I think, 2003 you were
19		managing your patients who were infected with
20		hepatitis C, you were managing their care with
21		assistance from, at various times Dr Freedman or
22		Dr Thomas, once he came back in, I think you said i
23		your statement, 1998?
24	Α.	Yes, that is all correct. We didn't have access to
25		formal hepatology and, just to make the point, this

1		he I obviously don't know the exact ins and outs of
2		it, but he has explained to me that he was told tha
3		he couldn't continue to provide that service becaus
4		it wasn't part of his job plan. But I don't know t he
5		exact how those exact discussions went ahead.
6		Even though he stopped coming to the joint
7		clinics, he still was available. So if, for example,
8		I was concerned about someone, or one of my colleagues
9		was concerned, we could still go and knock on his door
10		or contact him by email and say "This is the
11		situation", and then he would see the individual very
12		quickly in one of his clinics. He was still
13		available, it's just that he wasn't available to come
14		and do that joint clinic.
15	Q.	So, again, the reviewing and monitoring was left to
16		you on a day-to-day basis with escalation to
17		Professor Godkin when you thought that was
18		appropriate?
19	Α.	Yes. So we had to undertake the surveillance for
20		liver disease, which I think was clearly something
21		that I don't think was optimal care because we're n ot
22		trained in what we were being asked to do, and when
23		Dr Godkin was coming to the joint clinic he was,
24		obviously, appropriately assessing people, we were,
25		I think, not providing optimal care during that period
		(20) Pages 77 - 80

1		because that wasn't a possibility.
2	Q.	
3		various documents that show that this gap in servic
4		was identified, and a specific recommendation was
5		made, to ensure appropriate consultant and specialist
6		hepatology input into the treatment of patients
7		in 2011, and you were involved in that process
8	Α.	Yes, so sorry.
9	Q.	Yes?
10	Α.	So that was a ministerial review of inherited bleed ing
11		disorders in Wales and the key a number of findings
12		came out of it but an absolute key finding was that
13		the haemophilia centre in Cardiff needed access to
14		a consultant hepatologist who could do the joint
15		clinics and who could manage the patients optimally
16		By this stage Swansea Haemophilia Centre did have
17		a consultant hepatologist who was seeing patients
18		there and one or two of the people from Cardiff wen
19		to Swansea to be seen by that hepatologist so that
20		they could access services that were appropriate to
21		their needs.
22	Q.	You were also involved in the inherited bleeding
23		disorder action plan, which seems, as I read it, th at
24		funding was confirmed in 2014/2015 for a consultant
25		hepatologist. Is that your understanding as well?
		81

1		but I can't say that with real authority.
2	Q.	You've said very candidly that that was not optimal
3		care. What impact do you think that has had on you
4		patients, the fact that, certainly from 2009, there
5		hasn't been hepatology input, other than as described
6		when escalated, for your patients with hepatitis C or
7		hepatitis?
8	Α.	I think that's a very difficult question because
9		I knew I was going to be asked that question. It
10		comes down to individual cases and the question of
11		whether individual cases could have been managed
12		better had they been more proactively been follo wed
13		up in hepatology is a very difficult question to
14		answer.
15		We certainly, I think, picked up a number of
16		severe liver-related complications quite quickly,
17		because we were doing regular ultrasounds of the liver
18		and regular blood tests to detect liver tumours.
19		Whether they would have been picked up more quickly
20		had they been in a formal hepatology clinic, it is
21		possible, but I don't know. That's a very difficul
22		question to answer.
23	Q.	So currently patients with hepatitis are being mana ged
24		through joint clinics with you and Dr Srivastava an
25		there's also the blood-borne virus clinic also h as

1	Α.	I wouldn't like to be sure to say what my
2		understanding was. I wasn't involved in the
3		discussions because there would have been discussions
4		between the Welsh Commissioners and the Cardiff and
5		Vale board about the funding arrangements, which
6		I wasn't involved in in that process at all. So
7		I don't know how those discussions panned out or what
8		was said.
9	Q.	Do you know why it took from 2011 to 2016 for
10		a hepatologist to be engaged?
11	Α.	Again, the information that will give the clearest
12		answer would come from the hospital board, who woul
13		have been it would have been their role to make
14		that appointment.
15		My understanding was that the post had been
16		advertised earlier but a suitable candidate hadn't
17		come forward and the suggestion that has been said to
18		me but, again, I can't say this with complete
19		authority, was that the job plan had included that
20		that individual would also have to undertake other
21		general medical duties, as well as being
22		a hepatologist and, therefore, it was thought unlik ely
23		that you would get someone who really wanted to be in
24		hepatology to come and take that post on.
25		That's what I've been, sort of, led to believe

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1		a roll. What role does that clinic take?
2	Α.	So Dr Srivastava in the joint clinic, the role ther
3		is to monitor people with regard to progression of
4		liver disease and undertake surveillance. So, for
5		example, some people will be on a surveillance
6		programme of regular ultrasound, regular blood tests,
7		some people require regular endoscopy to look for
8		oesophageal varices. So that will be the role of the
9		clinic with Dr Srivastava.
10		In Wales, when the funding for the new
11		hepatitis C treatments came in, these are the
12		non-interferon-based treatments, that funding was
13		allocated so that people would be treated with the
14		blood-borne virus clinic to offer treatments to
15		eradicate the hepatitis C virus. So the hepatitis
16		eradication therapy is done through the blood-borne
17		virus clinic and that has all now been completed. So
18		no-one is attending the blood-borne virus clinic fo
19		hepatitis C eradication therapy because everyone wh
20		has elected to have treatment has had the virus
21		eradicated, so there is, at the moment, no-one
22		attending that. That clinic was run by Dr Healy an
23		he was one of the again, an infectious disease
24		microbiology expert and he took the role on of
25		managing hepatitis C eradication throughout the who le

(21) Pages 81 - 84

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to look to see if there are key documents missing o

assessment. So the only thing I'm aware of is this

**Q.** So when you come to treat patients, do you, would you

information? Is that something you would have

have to look through their notes to find key pieces of

noticed? Would you have noticed that key documents

remember a case where I have been unable to find th

to me clear what was there. So, yes, I can't think of

us it's your policy to keep records of those infect ed

Do you know whether that's become formal

with HIV after they've died. You've also said it's

hospital policy or is that simply the policy of you

86

A. The money was paid into an endowment fund. So

I wasn't directly involved in the transfer of the

something that you were involved with?

process with the pharmaceutical companies? Was tha

your policy to keep records for the life of your

information that I was expecting to find. It was a ll

are missing from the patients that you are treating

A. I think if there had been any systematic issue,

I would have noticed, yes. I think -- I can't

Q. You also say in your statement that it's -- you tol

elements that I think should have been there.

I haven't been through the notes to make that

issue of filing HIV notes separately.

from 1996 onwards?

any issues.

patients.

centre?

1		of the Cardiff area for all patients with hepatitis C.
2	Q.	Now I'm going to ask you some questions about medic al
3		records. Can I start by asking you this: the
4		Inquiry's heard evidence from a number of patients
5		treated at Cardiff before you arrived by
6		Professor Bloom and they have told the Inquiry that
7		there were a number of key records missing from the ir
8		medical records, gaps in their medical records, and so
9		on.
10		Is that something that you found yourself when
11		you came to Cardiff and were treating patients? Wa
12		key information missing or key documents missing?
13	Α.	I think the only key documents that were missing wh ich
14		came up in the audit by Dr Hill was that the people's
15		HIV results were filed they were all filed
16		together, separate from the notes. As far as I'm
17		aware, those are the only key documents that were n ot
18		in the notes that one would have expected to be in the
19		notes.
20		When I arrived in Cardiff, all of the notes of
21		the people who had died of HIV were in a cupboard i
22		the office that I inherited and we have kept those
23		notes ever since.
24		I am not aware that those notes have we just
25		kept them. We haven't I haven't been through th em

#### 85

1	Α.	It's the policy of the haemophilia centre to keep
2		those. I think the policy in general in the NHS wo uld
3		be not to keep records of people who have died, you
4		know, only for a period and I think that if someone
5		doesn't attend the hospital for maybe ten years or so
6		the policy might be not to retain the records. Of
7		course, someone with a bleeding disorder might not
8		attend for 20 years and then come with a problem, and
9		so we needed to retain the notes.
10	Q.	The hospital tolerates your policy, do they, of
11		keeping notes for the life of the patient and after
12		their death?
13	Α.	Yes, there is no issue with that in the current
14		situation. As you are aware, there was a time when
15		there was I can't remember how long ago it was b ut
16		the Inquiry has the documents, where there had been
17		this issue of trying to not store these documents for
18		life, and I made the point that I thought we should.
19		And I didn't get any push-back on that apart from t
20		say, "Well, you find the space then", which is what
21		we've done.
22	Q.	Can I ask you now some questions about links with
23		pharmaceutical companies. You've told us in your
24		statement that three companies gave donations that
05		halped build the new centre in 2000. Whe menared that

25 helped build the new centre in 2000. Who managed that

money. That went through the finance department. But
I was involved in sort of discussing with various
companies whether they would be prepared to make
a donation.
The problem was that we had the agreement
because, as I've said earlier, all the haemophilia
centre had been disbanded and the people being treated
in the haematology day unit. Having made an argume nt
that we needed a new centre, a stand-alone haemophilia
centre and this was very strongly supported by the
local patient group. We had a number of meetings with
senior management, myself and the local patient group,
to put this to advocate for this. The agreement
then was that, "Okay, you can have a stand-alone

#### then was that, "Okay, y nd-alone haemophilia centre, but you are going to have to fund

- 20 the cost of it" and that's why we were obliged to I ook 21 for sources of funding. We had a number of different 22 sources of funding that went to build the new centre. 23 Q. What sort of sums were the pharmaceutical companies
  - contributing then to the building of the new centre
- 25 Α. It was around about 10,000 to 20,000 from my memory.

2	Α.	Yes, that's from my memory.
3	Q.	Were they companies that you were companies whos
4		products you were using at the time?
5	Α.	Yes, they were recombinant Factor VIII product
6		companies. So we approached all of the companies with
7		the same request and they either agreed or didn't
8		agree.
9	Q.	What do you do or what do you do at the centre, or you
10		personally, to guard against any risk that companie
11		contributing to the centre's work doesn't influence
12		the decisions that you make about prescribing
13		products?
14	Α.	I think we've always been very independent about wh at
15		products we would use. Of course, with the nationa
16		tenders, we followed the national tender. So that
17		doesn't that then becomes much less of an issue
18		because we are you know, we essentially have to
19		fulfil the requirements of the tender. And I think
20		that is a very big advantage of the tender because it
21		does remove the possibility or even perception that
22		there may be influence on prescribing.
23		So I don't think that that process of donations
24		to fund the building of the haemophilia centre had any
25		influence on our decision to prescribe any specific

1

**Q.** For each company?

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1		across correspondence between him and pharmaceutica
2		companies in any of the documentation that was left at
3		the centre and that you've inherited?
4	Α.	I haven't. I'm aware of some of the documentation
5		that I've been shown by the Inquiry but I haven't c ome
6		across any documentation regarding an interaction
7		between Professor Bloom and pharmaceutical companies.
8		I didn't come across anything like that, no.
9	Q.	Knowing what you do about the way that documents ar
10		stored and the way that correspondence is generated
11		certainly in '96, where do you think that
12		correspondence would have sat? Where do you think it
13		would have been kept?
14	Α.	Well, I don't know. I would have thought that if
15		there had been any correspondence it would be in
16		Professor Bloom's office, and I inherited his offic
17		when I went there. Three people, as I said, have b een
18		consultant for the centre in between Professor Bloo
19		dying and myself going there, so I didn't directly
20		inherit his office. So I don't as I say, I didn 't
21		come across this sort of documentation.
22		Professor Bloom of course died suddenly, so his
23		office would have been left sort of in the state th at
24		he was using it. There would have been no it
25		wasn't as if he retired and might have decided to g et

1		brand of Factor VIII.
2	Q.	You also described in your statement how
3		pharmaceutical companies continue to fund clinician
4		attending educational meetings and activity patient
5		days?
6	Α.	Correct.
7	Q.	Given what you said about the national contract, what
8		do you think the pharmaceutical companies are getting
9		out of that funding?
10	Α.	Well, the clearly from the point of view of the
11		pharmaceutical company they want to influence the
12		prescription of their product. Whether that is the
13		case or not, I don't know. I think that you will h ave
14		discussed this with many haemophilia doctors. I me an,
15		I might be supported to go to a meeting by a differ ent
16		company each time. My colleagues might well be. S
17		there is a sort of a balance there. As I say, I th ink
18		that, from my perspective, I don't feel that I've b een
19		influenced in prescribing policy because the policy,
20		as I describe, is sort of dictated by the national
21		contract. That's my sort of understanding of the
22		situation.
23	Q.	Can I you have mentioned earlier on this morning
24		that when you took over the centre you inherited so me
25		files of papers from Professor Bloom. Have you com

1	rid of documents. He died suddenly while still in
2	post. So I can't explain so, for example, I've not
3	come across any even UKHCDO minutes from
4	Arthur Bloom's time, so I just don't know where all
5	those documents went.
6	MS SCOTT: Sir, I notice it's 1 o'clock. I think I've got
7	probably about 15 minutes more to go, so what I was
8	going to suggest is that I continue for the next
9	15 minutes and then we take a break so that
10	Core Participants can ask any questions that they wish
11	to of me to put to
12	SIR BRIAN LANGSTAFF: Might it be more convenient, do you
13	think, to come back at 2.00 and ask the 15 minutes
14	then, having picked up the questions they may have to
15	ask in the meantime?
16	MS SCOTT: I'm happy to proceed on that basis.
17	SIR BRIAN LANGSTAFF: Let's oh, all right, let's go on
18	for 15 minutes. Are you happy to go on for 15 minu tes
19	and then take a break or would you rather take a break
20	now?
21	A. No, I'm happy to continue for another 15.
22	MS SCOTT: We've already looked at I'm moving on to
23	a new topic now, which is just a question on resear ch.
24	We've already looked at one of your studies one of
25	our articles, rather.
25	

1		What I would like to ask you is the difference
2		between, in your view, research studies and service
3		evaluations. So the article we looked at previousl
4		was a service evaluation, and you have said in thos
5		circumstances you wouldn't get ethical approval and
6		you wouldn't seek patient consent, but you would if it
7		was a research study.
8		I just wanted to explore with you where the
9		bright line is, in a sense, particularly given that
10		the example we looked at previously involved testin
11		of stored sera, for example.
12		So could you just explain to us where your
13		bright line is between a research study and a servi ce
14		evaluation.
15	Α.	So my understanding is that if a person or a patien
16		group are being treated by standard practice of the
17		centre and that routinely collected information is
18		reported, then that is a service evaluation.
19		A research study is asking a specific question.
20		So you may say: we're going to change treatment and
21		see what happens. That would be a research study a nd
22		would require ethical approval and informed consent
23		I note that in the Inquiry's ethics
24		specialty group has specifically mentioned the
25		difficulty of drawing the line between research and

#### 

1		Committee, we did get it passed by the ETSA(?) so w
2		did take written informed consent from the individu als
3		concerned.
4		So that's broadly where I'm seeing the line.
5	Q.	Sorry. Carry on.
6	Α.	I could give another example in my work in post par tum
7		haemorrhage, so I've done about 10 or 12 years now
8		work with colleagues in Cardiff trying to improve t he
9		care of women who have bleeding after childbirth an
10		one of the main drivers for that is to try and redu ce
11		the amount of blood transfusion people require afte
12		childbirth.
13		Now, we've done a number of studies where we
14		have recruited women, we've been to ethics committe es,
15		the women recruited into the study give written
16		informed consent, and they are research studies. But
17		once we've completed that research, we then applied
18		the knowledge gained from the research to change th
19		way post-partum haemorrhage was treated throughout
20		Wales, as part of a quality improvement programme and
21		that was a two-year quality improvement programme
22		based on the understanding that we gained from that
23		research.
24		Now, that involved, essentially, all the women
25		giving birth in Wales because all obstetric units i

1	service evaluation and I think it is a difficult
2	situation that that does need to be seriously
3	considered.
4	So let's say, for example, that we have a group
5	of people an example of this is that we wrote
6	a paper about unclassified bleeding disorders. We
7	over the years we've looked after people with
8	unclassified bleeding disorders. These are people who
9	have bleeding during invasive procedures or at othe
10	times but we can't find anything in the laboratory
11	that explains that bleeding so they are called
12	unclassified bleeding disorders. We've managed the
13	according to standard practice and so we have reported
14	that as a service evaluation. That's the way we ha ve
15	reported it. So we didn't apply for ethical approv al
16	and we didn't seek informed consent.
17	On the other hand, one of our team has done
18	a PhD looking for the underlying cause of unclassified
19	bleeding. And that we submitted to the Ethics
20	Committee, we invited people up, we explained the
21	study and we took written informed consent, and tes ts
22	were done that aren't routine laboratory tests, but
23	tests were done to see if we could find the underly ing
24	cause for the unclassified bleeding disorder. That is
25	clearly research, and we did go to the Ethics

#### 

1		Wales took on this quality improvement programme. We
2		have collected information from that quality
3		improvement programme and demonstrated a very
4		substantial improvement in the quality of care,
5		a reduction in the number of women with severe
6		bleeding and very major reduction in the number of
7		women receiving a red cell transfusion.
8		However, that's a quality improvement
9		programme. In order to report that, that isn't goi ng
10		to go to an Ethics Committee, we haven't taken writ ten
11		informed consent from the 60,000 women involved, we
12		are reporting that as an evaluation of the service
13		across Wales.
14		So those are kind of a broadly where I see the
15		difference but I do agree that it is often difficul
16		to know where to draw the line between these things
17		and on the paper on 8Y that you showed me earlier
18		I think we drew the line in the wrong place. Looking
19		at that back now, I think we drew the line in the
20		wrong place.
21	Q.	Is the fact that the information is going to be
22		albeit the information about the patients is going to
23		be anonymised, the fact that it's going to be
24		published, it's going to be able to be accessed by
25		many people and analysed, and so on, is that relevant

(24) Pages 93 - 96

1		to the question about whether or not one gets consent,
2		even if not relevant to whether or not one goes to
3		an ethical committee?
4	Α.	No, I don't think I think if you don't have to s eek
5		ethical approval then I think it is reasonable to
6		publish the aggregate data from the haemophilia centre
7		and, as I said, we publish in the aggregate data fo
8		all the births in Wales over a two-year period. If we
9		weren't able to do that, then all of that knowledge,
10		which would substantially improve the quality of care,
11		would be lost because it's impossible to go and see
12		consent from 60,000 people.
13		So I think there has to be some
14		proportionality, I think that's the word that is us ed
15		by Ethics Committees and the Health Research
16		Authority, the NHS Health Research Authority does h ave
17		guidelines on where you try and draw the line. But it
18		sometimes isn't completely clear.
19	SIR	BRIAN LANGSTAFF: Is perhaps part of the problem the
20		word "evaluation"? I can understand the difference
21		between reporting what is happening, on the one hand,
22		making research into why it is happening, which is
23		a separate issue, and making recommendations into what
24		should be done, which is a question of judgment or
25		policy or proposal. All three are quite distinct i

## 97

1	the patient, the NHS number, the date of birth,
2	information on their diagnosis, their factor levels or
3	the subtype of von Willebrand's disease, informatio
4	is held about HIV status, hepatitis C status. There's
5	a large section about variant CJD, about people who
6	were designated in the at-risk group for variant CJ
7	and whether or not they have received implicated batch
8	in that context. That's all held there.
9	There's a whole section which is called
10	Haemtrack, which is patient-reported information. So
11	an individual will on their phone they will have
12	an app, every time they give themselves Factor VIII or
13	the Factor IX they enter the information into their
14	app and that is uploading to the National Haemophilia
15	Database, and then the haemophilia centre can see
16	their own patients' data. So if a person in west
17	Wales enters that they have had a severe bleed in the
18	knee, we in Cardiff, we could be alerted to that, s
19	we might then phone up and say "Are you okay, can w
20	help", that sort of thing.
21	They are very useful in clinic because we can
22	then go back six months and we can see the pattern of
23	bleeds over the last six months, and if an individu al
24	has forgotten bleeds, we might say "Back in June yo
25	had this knee bleed, what was that about", and then

1	you can see them as being quite distinct but they
2	shade into each other. But the word "evaluation"
3	suggests that somebody at some stage is making
4	a judgment about something, rather than simply
5	reporting what is, organising the data to show what
6	is.
-	
7	Is there any truth in that observation or not?
8	A. I don't know. It's not my word. It's the wording of
9	the NHS Health Research Authority. They have
10	a specific section called "service evaluation" and in
11	that it is, as I've tried to describe, that it's
12	observation of routine care and routine collected
13	information then being reported in an anonymised
14	aggregate way.
15	They use the term "service evaluation" for
16	that. It may be that a better term might be helpfu
17	but that is the currently used term.
18	MS SCOTT: I wanted to ask you some questions about the
19	National Haemophilia Database Research Registry, which
20	you talk about in the UKHCDO section of your witnes
21	statement, ie with your UKHCDO hat on.
22	Can you just tell us what sort of information
23	is held within that research registry?
24	<b>A.</b> Yes. So the information held there is named the name
25	of the patient it's not anonymised the name o

1		they are reminded. So that's very useful and that'
2		patient-reported information, and it can then show
3		whether if after an individual say, for example,
4		an individual's on Factor VIII prophylaxis and then
5		they convert to Emicizumab, does that mean that the ir
6		bleed rate goes down? Do they get improved outcome s?
7		So very useful clinically.
8		The other information that's connected is about
9		people's joint scores, and so this is one of the most
10		important markers of how well people are being look ed
11		after because if their joints deteriorate over time,
12		it suggests something is not quite right. If the
13		joints are staying perfect over time it suggests that
14		good quality haemophilia care is ongoing.
15		So that information and it's all collated
16		within the National Haemophilia Database and, as yo
17		know, from Professor Hay's discussion, this goes ba ck
18		to, I think, 1969 and has evolved progressively ove
19		the years with different types of information eithe
20		being collected or not collected.
21	Q.	So when you talk in your statement about the resear ch
22		registry, that is actually the database itself? It's
23		not a separate part of the database?
24	Α.	It technically is separate because the database is the
25		database, the National Haemophilia Database. That has

25

1	a number of functions. It has the function of dire ct
2	patient care, for example through this Haemtrack
3	mechanism and the issuing of patient bleeding disorder
4	cards; so that's important and it has a role for so rt
5	of service planning. So the Department of Health
6	might want to know what the trend is of Factor VIII
7	usage over time and we can give that information.
8	Now, the research registry was set up so that
9	the individual's data that was held in the database
10	for those purposes could then, on top of that, be u sed
11	for research purposes and, until that time, then
12	people weren't people were informed that their
13	information was going to the database and could be
14	used for research purposes but they hadn't given
15	express consent. So the idea of starting the resea rch
16	registry was so that we would then go to each
17	individual and give them the opportunity to say: th
18	information held on the National Haemophilia Database
19	I'm either happy or not happy for it to be used for
20	research purposes.
21	And that process we put that to an ethics
22	committee, because the database was then submitted to
23	an ethics committee to consider that. Patient
24	information sheets were produced and passed by the
25	ethics committee and the said process was passed by

#### 101

1		drafted, I believe, in September, needs to bear in
2		mind that there's been an update about the consent
3		process which was given in evidence by Professor Ha
4		when he gave evidence to the Inquiry?
5	Α.	Absolutely, that the process has changed, and it's
6		because the advice and the advice changed. And it
7		does make it difficult to do the right thing when
8		advice is changing.
9	Q.	So is the position now that third parties may be ab le
10		to access patient not un-anonymised, if I can put i
11		that way, so patient data, I mean the detailed pati ent
12		information that you have described, without the
13		patients being asked for their consent?
14	Α.	Yes. So well, no-one can access the data apart
15		from UKHCDO so only UKHCDO can access the data, and we
16		have a data management working party that controls
17		access to that data and that has on it patient
18		representatives, representatives of the Haemophilia
19		Nurses' Association, the physiotherapists' association
20		and representatives of the Commissioners, and they
21		have the overview of what can be done.
22		We also have a group called the data analysis
23		group which meets every month which if a proposa
24		for information comes to the National Haemophilia
25		Database, so, for example, if that's a proposal fro

1	the ethics committee. And then we started on this
2	process of individually seeking consent in each
3	haemophilia centre in the UK to do that. That's th
4	process that had been going on for you know, two to
5	three years, that process had been going on.
6	Professor Hay then explained in his evidence
7	that that was then superseded by the NHS Health
8	Research Authority Confidentiality Advisory Group, who
9	then came back, after we had gone through all of
10	this and many of us were very keen on continuing
11	with this process because we thought it was a good
12	thing to do he was then informed that he should
13	stop doing that and that we would apply for
14	a section 251.
15	So we have throughout this process I think, and
16	I think Professor Hay described this quite well, is
17	that getting advice is one thing but getting
18	consistent advice is difficult. Even from the
19	authorities that are supposed to be advising us we get
20	different advice, and it changes with time. It doe
21	make it very difficult for us to, with authority, k now
22	where we should be going. But that's kind of the
23	brief outline of the National Haemophilia Database
24	research register.

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**Q.** So anyone reading your witness statement, which was

1		NHS England, for example, we would discuss that at the
2		data analysis group and again, that includes
3		representatives of the patients, it includes
4		representatives of haemophilia nurses and
5		physiotherapists, and we decide whether that
6		information is reasonable to give.
7		So that is the situation. So the situation now
8		is that a proportion of people have given express
9		consent for their data to be used for research and in
10		Cardiff we've got quite a lot of people have writte
11		and done their informed consent, you know, well in the
12		hundreds, but now there's a group that hasn't becau se
13		we've been told to stop the process. So it is, in my
14		view, a bit unsatisfactory the advice that we've
15		received from the Confidentiality Advisory Group on
16		how this is going.
17	Q.	Forgive me if this is my fault, but is the research
18		that can be done simply by the UKHCDO, it's not by
19		pharmaceutical companies? They wouldn't have acces
20		to that information if they made an application
21	Α.	They would not have access. No-one has access, apart
22		from UKHCDO.
23	Q.	So all the research would be within the UKHCDO?
24	Α.	It would be and the people who do the analyses, the
25		statisticians, they don't see they see anonymise

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the bust.

1		data, so they don't see anything like the patient's
2		name or date of birth or anything. They see
3		anonymised data and they would then do the analyses
4		They, essentially it's aggregate data so, you kn ow,
5		people receiving treatment X would have this number of
6		bleeds per year on average. That's the sort of
7		information that is available.
8	Q.	Then just lastly before I've gone slightly over my
9		15 minutes' time estimate, but can I just ask you t wo
10		more questions.
11		The first one arises out of what you wrote at
12		paragraph 320 of your witness statement, and it's
13		this:
14		"The transmission of HIV and hepatitis to
15		patients with bleeding disorders has dominated my
16		consultant practice and the way I approach the
17		management of people with bleeding disorders."
18		I just wanted to ask you to expand on that if
19		you can, the ways in which the infection of patient
20		with bleeding disorders has dominated your practice
21	Α.	Well, I think this is all through my career, both i
22		training and as a consultant. It has always been -
23		a major aspect of looking after people with bleedin
24		disorders is the management of the complications of
25		the infectious diseases that were transmitted.

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1		very difficult for people to deal with because they
2		know the history, they are then are being told that
3		maybe this might be another problem. But, again, w
4		don't really know. That's very difficult for peopl
5		to have to listen to and understand.
6		The other way that this is really dominating,
7		continues to dominate, as I explained earlier, many of
8		the mothers who look after and have children with
9		haemophilia nowadays, they've lost members of the
10		family to HIV or hepatitis C, and it's always with
11		them and when you're seeing those families, you kno
12		it's always with them, and you have to discuss thin gs
13		in the context of understanding how they might feel
14		about having a child with haemophilia, knowing the
15		problem that it's caused their family member.
16		I think both for myself and for all the people
17		who work in Cardiff, it does dominate our thinking in
18		terms of how we try to approach things, because
19		clearly we can't put anything right but I think
20		acknowledging what has gone wrong is very important.
21	Q.	Lastly from me before we break, the Inquiry
22		understands that the statue of Professor Bloom has
23		been removed from the centre and that the centre is no
24		longer named after him. Can you tell us how that
25		decision came to be made and why?
		-

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(27) Pages 105 - 108

1	When I first arrived in Cardiff people were
2	still dying of AIDS because the highly effective
3	treatment was only really, sort of, came in earl
4	in 1997, so people were still dying of AIDS and we had
5	to look after people in that very difficult situation.
6	Since 1997, in Cardiff, we haven't had anyone
7	die of AIDS. Obviously, people with AIDS have died
8	potentially of complications related to that but no
9	died specifically of AIDS, because the treatment ha
10	improved, but still dominates your thinking when yo
11	are seeing patients that, clearly the treatment
12	that has been given by the centre has caused major
13	problems for an individual is always very high in your
14	mind when you are talking to people and it's the same
15	with hepatitis C. You always know and you always
16	understand that.
17	I think then the variant CJD issue did come to,
18	in many ways, really dominate things in the early
19	2000s as we had to then go to people and say "Look,
20	you are going to be put into what's called at-risk
21	group for variant CJD for public health purposes", and

then explain what that meant, because that's not

a difficult -- that's not an easy conversation to have

and, again, that became a dominant feature of our

practice at that time, because the uncertainty was

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A. We were contacted by Haemophilia Wales and there

the centre renamed. They wanted to wait for the

outcome of the Inquiry and for the Inquiry to give

their views and, once that was known, Haemophilia

Wales wanted to then make a decision on whether to

change the name of the haemophilia centre and remov

multiple occasions and that was their consistent view.

experiencing pressure to remove the bust and they

haemophilia centre becoming the centre of the story

they wanted us to remove the bust and wait for the

Wales can give their understanding and their versio

take the bust down we took it down, and that wasn't

the unanimous decision of Haemophilia Wales, but it

of that, but that's the way I felt it happened. Th

understanding of what happened. Clearly, Haemophilia

day that Haemophilia Wales said that they wanted us to

They wanted to wait for all the evidence to be

approached me and said that rather than the

presented before a decision was made.

Inquiry to give its opinion. So that's my

I discussed this with Haemophilia Wales on

However, they got to a position where they were

was -- from what I understand, Haemophilia Wales di

not want the bust of Professor Bloom to be removed and

1	was the as lunderstand it concensus desision
	was the, as I understand it, consensus decision.
2	SIR BRIAN LANGSTAFF: Well, let's take a break then, shall
3	we, until will 2.25 be all right for you,
4	Professor Collins?
5	A. Sorry, what was the time again?
6	SIR BRIAN LANGSTAFF: 2.25 be all right for you?
7	A. That will be very good, thank you.
8	SIR BRIAN LANGSTAFF: So 2.25 then.
9	A. Okay, thank you.
10	(1.27 pm)
11	(Luncheon Adjournment)
12	(2.25 pm)
13	SIR BRIAN LANGSTAFF: Yes.
14	MS SCOTT: Professor Collins, I've now going to ask you
15	a handful of questions from Core Participants.
16	First of all, did you ever Professor Bloom
17	died four years before you arrived in Cardiff. Did
18	you ever meet him and speak to him?
19	A. No, I never met or spoke to Professor Bloom.
20	Q. You exhibited some of the treatment protocols that
21	were in existence in Professor Bloom's time. You
22	exhibited those to your witness statement. Do you
23	know where those treatment protocols were found?
24	<b>A.</b> Yes, they were in a file. There was an arch lever
25	file that was in the haemophilia centre when I look ed

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	know.
	Do you know whether Professor Bloom held any
	files relating either to the centre or to patients at
	his home?
Α.	I don't know. I have heard I think it was a radio
	programme on BBC Wales to suggest that might have been
	the case but I have no knowledge as to whether that 's
	true or not.
Q.	Just a couple of questions then about links with
	pharmaceutical companies. I asked you some questions
	about the funding provided by pharmaceutical companies
	in 2000, so five years before the national tender
	process came into place. What steps at that time -
	so before the national tender process was in
	existence, so around 2000 or before what steps were
	taken, if any, at the centre to ensure funding
	received by pharmaceutical companies of the centre did
	not influence product selection?
Α.	So there were three pharmaceutical companies involved
	and there were three brands of recombinant
	Factor VIII. They all donated roughly the same amo unt
	of money, so it wasn't as if one was more influenti al
	than the others.
	My opinion at the time was that all three of
	those recombinant Factor VIII products were equally
	Q.

1		through all the documents to see what would be of
2		relevance to the Inquiry.
3	Q.	You mentioned that when you joined the haemophilia
4		centre there was still some of Professor Bloom's
5		documents in his room which then became your room.
6		What documents had he left?
7	Α.	Well, those were the documents that I've just
8		described.
9	Q.	So there were the treatment protocols.
10	Α.	Well, there were lots of documents there. There we re
11		various letters that I've submitted to the Inquiry
12		about the use of different concentrates. There was
13		importantly, I think, there was a whole two arch le ver
14		files of reports to solicitors about individual people
15		who had contracted HIV, which again I've declared t
16		the Inquiry. They are about individuals, of course
17		Then there were lots of documents about the
18		day-to-day management of things that I didn't think
19		had any relevance to the Inquiry. So my
20		understanding because I didn't submit I didn'
21		make the submission to the Inquiry on behalf of
22		Cardiff and Vale UHB, that was made by the people. My
23		understanding was that they sent all of it but I do n't
24		know if that's definitely true.
25	Q.	We can make inquiries about that. The Inquiry will

1		safe and as efficacious. I think they all were goo
2		quality products and all could have been used.
3		I can't remember exactly what products we were usin
4		at that time. I think we were probably using all
4 5		1, , ,
	~	three. That's the best I can do, I'm afraid, on that.
6	Q.	Does the fact that the national tender system that
7		currently in place, the fact that you have complete
8		freedom to prescribe from any of the medications on
9		the list, on the approved list of purchased products,
10		mean that there is still scope, in your view, for
11		there to be for donations from or support from
12		pharmaceutical companies to influence prescribing
13		policy? So, in other words, the fact that there is
14		a tender system in place, is there not still scope for
15		funding from pharmaceutical companies to influence
16		prescribing policy at the centre?
17	Α.	I think there is the potential risk that there woul
18		be influence, yes. I think that this is an issue t hat
19		affects many areas of healthcare and many areas of
20		public life. I do not think that the prescribing i
21		Cardiff, or now that we are involved in treating
22		people in Swansea, I do not think that it has ever
23		influenced our decisions with regard to which products
24		to use.
25	Q,	
20	Q.	A couple of questions on the research database, the

1		UKHCDO research database. Given the process that y ou
2		described, of getting informed consent from patient
3		and the fact that you'd actually got quite far thro ugh
4		the process in Cardiff, when the UKHCDO was advised to
5		stop that process, is it right to say that it would
6		have been practical, at least from would it be
7		practical to obtain informed consent from patients to
8		the use of their data for research purposes?
9	Α.	It was definitely practical to obtain written infor med
10		consent from the very large majority of patients. The
11		database holds quite a lot of information on people
12		who are no longer seen in any haemophilia centre, they
13		are essentially lost to follow up, and Cardiff has
14		some people in that category: very difficult to rea ch
15		those people.
16		I think that we could have taken written
17		informed consent from 90 to 95 per cent of people and
18		that was completely practical. I think there was
19		always going to be a small group that would be very
20		hard to reach and, as I said earlier, my personal
21		preference would have been to be allowed to have
22		carried on doing that, had the Confidentiality
23		Advisory Group not changed their advice to us.
24	Q.	Why can't the data that's held in the research
25		registry part of the database, why can't that data be

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1		hepatologist hadn't been appointed was revisited.
2		So certainly the Deputy Chief Medical Officer
2		
		has had quite a lot of interaction with regard to the
4	•	Inherited Bleeding Disorders Service with that review.
5	Q.	<b>3</b>
6		groups and the Department of Health, how was the We Ish
7		Government represented from 1996 onwards? Are you
8		able to answer that question?
9	Α.	I can't answer that question. I don't think I have
10		any knowledge. These are meetings between the
11		Department of Health in Wales and the Department of
12		Health in England? Is that the question?
13	Q.	I think no, between clinician groups in Wales an
14		the Department of Health in Wales is what I imagine .
15	Α.	I mean, apart from the ministerial review, I don't
16		remember any really significant interactions. Ther
17		were some letters and information about things like
18		Skipton Fund and that sort of thing, but I didn't h ave
19		any discussions with any of the politicians with
20		regard to that. So I don't remember anything
21		directly, I'm afraid.
22	MS	<b>SCOTT:</b> Sir, those were the questions from the Core
23		Participants.
24		
25		
20		

1		held anonymously, so as to protect patients being
2		identified when that data's being used for research
3		purposes?
4	Α.	There aren't two registries. There's one registry and
5		the one registry is used for the direct patient car
6		for the research and for the public health planning
7		When the data is used for research purposes, it
8		gets anonymised, or perhaps better pseudo-anonymised,
9		so that the analysis is based on pseudo-anonymised
10		data. But the database itself doesn't change, it's
11		always there. So the fields that identify people a re
12		hidden when the analyses are done.
13	Q.	Moving on to a new topic now, what role has the Wel sh
14		CMO (Chief Medical Officer) played in the managemen
15		and oversight of the haemophilia centre since you'v
16		been there?
17	Α.	I have well, with Chief Medical Officer I've not
18		I can't remember any direct interaction, but with the
19		Deputy Chief Medical Officer, Dr Chris Jones, he of
20		course has had interaction with the haemophilia
21		centre, and he chaired the ministerial review in 2011,
22		and he chaired a follow-up review I think it was
23		around about 2015 particularly looking to see
24		whether the recommendations had been implemented, and
25		of course at that time the question of why the

1	Questions by SIR BRIAN LANGSTAFF
2	SIR BRIAN LANGSTAFF: Yes, thank you. Well, I have one or
3	two of my own.
4	Can I just pick up on that last question that
5	you were asked and link it to what you were saying
6	earlier about the role of the Transfusion Service i
7	Wales, which looked after the supply to you of
8	products. At the time you were talking about that,
9	the thought went through my mind: suppose a new vir us
10	happened to be identified in blood. I appreciate that
11	now blood products tend to be recombinant by and large
12	but some still aren't. So it's a possible risk to
13	blood products, it's certainly a risk to the blood
14	supply more generally.
15	You said that you would expect to be told or
16	learn about possible hazards in blood, be told by the
17	Blood Transfusion Service or through UKHCDO; so the
18	question then arises how they know. They presumabl
19	will know in the usual way, that some doctor or som
20	surveillance authority in some country in some part of
21	the world identifies that something has happened,
22	something has happened that deserves to be reported
23	and so it's reported, and then someone writes about it
24	in a peer review journal and other people begin to
25	take notice, and fortunately, in the modern world,

25

15 January 2021

1		with the internet and so on, news can agreed quite
2		rapidly and probably, one hopes, faster than the
3		virus.
4		But would that not come to your notice in that
5		way, it would come to your notice, you would expect,
6		through UKHCDO or the Transfusion Service? The rea son
7		I link that with the relations with the Welsh
8		Government relates to this: part of the landscape t hat
9		I'm looking at in this Inquiry involves the DHSS.
10		Largely, the evidence will relate to what happened in
11		London but, of course, healthcare is now a devolved
12		issue, more strictly than it ever was, and so the
13		Welsh Government has the same role, perhaps, it mig ht
14		be thought, in respect of what happens in Welsh
15		hospitals as the DHSS different in those days acros
16		most of the UK. Plainly, the medical division of the
17		DHSS were kept informed and had their own views abo ut
18		what was happening and what the risks were, and so on.
19		So how do you see it working if a new virus is
20		identified somewhere which has a threat to blood
21		products or blood supplies or, for that matter, not
22		necessarily a virus, something like a prion?
23	Α.	I think for the blood supply, for example, in red
24		cells, platelets, FFP, cryoprecipitate that is
25		produced by the Welsh Blood Service I would expect
		-

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1		and that looks at risks of blood products, both
•		-
2		recombinant and plasma-derived. It may well be tha
3		information would come through that reporting syste
4		early and quickly. So I think it's difficult to kn ow
5		exactly where the information is most likely to com
6		from in respect of if there is a completely new, ou
7		of the blue threat to the blood supply. I would have
8		hoped to receive the information from multiple sour ces
9		very rapidly.
10	SIR	BRIAN LANGSTAFF: Would one of those sources be the
11		database?
12	Α.	Possibly it will be the database, though the database
13		is, of course, reporting retrospectively, and so if
14		a new treatment was causing serious side effects, t he
15		data may not pick that up for you know three or fou r,
16		five, six months after these events started happening.
17		But there is an example within the database of o ne
18		of the recombinant Factor VIII concentrates was
19		thought to be associated with more inhibitors than
20		other recombinant Factor VIII concentrates, and the
21		database very quickly looked at the information hel
22		in the database and was able to confirm that that did
23		look like it was the case, and that led to people i
24		the UK using different concentrates. So that did
25		happen quite quickly.
20		nappon quito quitoriy.

1	that they would be the first to become aware and al ert
2	and make sure that that was known. I would have
3	thought that immediately they would be in discussio
4	with the Welsh Assembly Government about a threat o
5	that severity but I don't personally know what
6	committees or what groups would do that because it'
7	not part of my remit.
8	What I was saying about more likely to be
9	hearing things from UKHCDO would be that, if there was
10	a problem with a concentrate, I would expect that t hat
11	would be known in the haemophilia world and would b
12	picked up by one of my colleagues and I would be more
13	likely to, you know, very rapidly hear about it fro
14	there. So let's say, for example, variant CJD,
15	I heard about it through Professor Ludlam sending m
16	a letter in 1977 (sic), even though, as I've explained
17	that at that time the suggestion was that this wasn 't
18	anything to be concerned about and that we weren't
19	supposed to be telling patients.
20	So I think that that is from the point of view
21	of the concentrates, so I would have thought it mig ht
22	well be that UKHCDO or a member of that UKHCDO migh
23	hear first.
24	There's a reporting system within Europe called

There's a reporting system within Europe called EUHASS, which is run by Professor Makris at Sheffie Id,

1		So the database does have the ability to look
2		at this sort of thing but it is, as I say,
3		retrospective.
4	SIR	BRIAN LANGSTAFF: Obviously a lot may depend upon the
5		precise data that goes into database in respect of
6		what are at first anecdotal reports of reaction or
7		illness. Does anyone keep a close weather eye on the
8		database or does it come into play only when it's
9		responding to the worries of others?
10	Α.	No, there is a reporting system. So every month th
11		database sends an email to every haemophilia centre
12		saying: do you have any adverse events to report? And
13		names certain adverse events, like thrombotic events,
14		infections, I can't remember the other neurologi cal
15		events because of you know, might we start picki ng
16		up variant CJD issues? So it specifically asks eve ry
17		month: have you had any of these events? Our data
18		manager in Cardiff emails all the consultants in
19		Cardiff and says: have you seen any events? And if we
20		have, they get reported.
21		The reports then are reviewed by the director
22		of the database, who's Dr Hay at the moment,
23		Professor Hay at the moment, but also there is
24		a working party called the Co-Morbidities Working
25		Party, and if there's any serious adverse event, like,

1	for exa	mple, a thrombosis or somebody has been give
2	a treat	ment and they have had a heart attack or
3	someth	ning, that committee will review the
4	circum	stances of that event, and they will review i
5	with th	e clinician who's reporting the event, so th ere
6	will be	some kind of the Zoom meeting and clinician
7	will rep	port it, and that group will then come to th
8	conclu	sion whether they think that the event is lik ely
9	to be c	ausally related to the product or not.
10		They will then report that on to the
11	manufa	acturer and to the authorities to say that thi
12	advers	e event has been reported. And of course if
13	there's	a serious event as well, then the protocol is
14	that UP	KHCDO will email the whole membership to
15	say: a	person has been treated with treatment X and
16	they de	eveloped a heart attack immediately after, yo
17	should	be aware that this has happened. And that
18	would	be the process that has been put in place to do
19	that.	
20		So the events don't sort of disappear into
21	a black	chole, as it were. There is some attempt to
22	scrutin	ise the severity and the likelihood or
23	causal	ity and then to communicate that if necessary.
24	SIR BRIAN	<b>LANGSTAFF:</b> So what you are describing sorry.
25	A. Sorry,	I was going to say that's a relatively recen

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1		patient that that report has gone in.
2	SIF	<b>BRIAN LANGSTAFF:</b> If you happen to be the individual
3		clinician, what would you think you would do?
4	Α.	I think that for a serious adverse event that we we re
5		reporting, we would I think we probably would ta lk
6		to the patient now. I think, to be completely hone st,
7		before this Inquiry started I probably may not have
8		done. I have been made to reflect on keeping peopl
9		better informed of what is being done with their
10		information and I think that's something that UKHCD O,
11		as a whole, has been reflecting on.
12	SIF	RESEARCE STARES THE reason I ask is probably
13		obvious, is that there have been a number of comments
14		made to the Inquiry that the individuals who had be en
15		told they have had HIV or hepatitis C or, for that
16		matter, hepatitis B weren't told, though it was
17		hypothesised that it was the case, where they got i
18		from and they weren't told that they had it from
19		infected blood. So I think you may well be right that
20		they are expressing an interest in knowing of the
21		source if it is known or hypothesised. That's,
22		I think, the outcome of your own ruminations from w hat
23		you've been saying.
24	Α.	Yes, I think that that is the case, yes. I think
25		there is also that we need to think that haemophili

1		thing that we've set up over the last few years.
2	SIR	<b>R BRIAN LANGSTAFF:</b> From the way you are describing
3		that, that is something that has happened?
4	Α.	It has happened, yes. So events have happened and
5		clinicians have discussed with the group who is
6		overseeing the events and decisions have been come to
7		as to whether they think the event is related to th
8		product or not, and that information has then been
9		disseminated to the membership. That has happened,
10		yes.
11	SIR	<b>BRIAN LANGSTAFF:</b> What information, do you know, has
12		been given to the patient about the fact that their
13		data or their event has been reported in this way?
14	Α.	I think that well, I don't know. I think that
15		would be down to the doctor looking after them in the
16		centre that has submitted the information. Clearly,
17		the patient will know that the event has happened,
18		because it's happened to them.
19		In addition to reporting to UKHCDO, you have
20		a duty to report through the yellow card system as
21		well, you know. So if product X causes someone to
22		have a heart attack, you've a duty to report throug
23		that yellow card system completely separately.
24		So there are multiple ways forward. I think it
25		would be up to the individual clinician to inform the

1	doctors looking after people with bleeding disorder
2	now, many them are young consultants who may not be
3	aware what people have been told in the past and so
4	may not be aware that people haven't had all the
5	information that they may reasonably expect, and
6	I think that that is something, again, that we are
7	considering as a group, how that should be addressed.
8	SIR BRIAN LANGSTAFF: That leads me on to something I was
9	going to ask, actually a bit later in the questions
10	which I have for you, but you may recall that when the
11	Inquiry was in Cardiff, at the Royal College of Mus ic,
12	you and I had the odd conversation and in one of them
13	you were saying how listening, reacting to the
14	evidence which had been given, that you hoped or
15	wanted some of your staff or your juniors to come a nd
16	hear what was being said.
17	Did that happen?
18	A. Yes. So a number of members of staff were at the
19	hearings in Cardiff, there for a number of reasons,
20	both to really to hear the testimony of the people
21	giving evidence, because some of these people that the
22	evidence was about had died long before the staff were
23	part of the haemophilia centre, and even before I w as
24	at the haemophilia centre, and I thought it was ver
25	important that people knew and understood what had

1		happened because I think it is so important in trying
2		to provide a service for this group of people.
3		But they were also there to try and lend, as it
4		were, moral support to the people giving evidence
5		because many of the people giving evidence the staf
6		knew very well and they knew it was a very difficul
7		situation for these people to tell their story, and we
8		thought it was important that members of staff were
9		there to help people. We discussed this in advance
10		with Haemophilia Wales to make sure that they thoug ht
11		that that was the right thing to do and they said t hat
12		they did. Some members of staff who had long left the
13		haemophilia centre or who had retired came to the oral
14		evidence in Cardiff, specifically and I'm thinking
15		here of some of the social workers who had retired
16		specifically to help give support to people who had
17		been giving their evidence.
18	SIR	BRIAN LANGSTAFF: Insofar as younger staff may have
19		learnt something, what messages, what lessons do yo
20		think they took away from listening to the evidence of
21		those who gave it, in what you say was courageous
22		evidence to give?
23	Α.	I think there are a lot of things that have come
24		through but one of the most important is that altho ugh
25		these events may have been in the 1970s and 1980s,

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1		ripples are as small as they have to be?
2	Α.	Well, I mean, I think the fact that we are having t his
3		Inquiry is a major part of that process. Ever sinc
4		I started in Cardiff, people have been coming to me
5		saying that they think that there needs to be a full,
6		open, transparent inquiry into what happened, so as to
7		understand the process. And I think most of the
8		people I talk to in Cardiff, it's that they want to
9		understand clearly and fully what happened and not
10		have this residual concern that things aren't being
11		uncovered and aren't being said.
12		So I think that will be absolutely crucial to
13		how the events are as you say, ripple down the
14		generations, as to whether it can the outcomes o
15		this Inquiry can resolve the questions that the
16		patient group are asking. I think that's absolutel
17		key to what happens. I think that I've always felt
18		that we needed this sort of inquiry. When I went t
19		Cardiff I hadn't considered that but, talking to th
20		patient group from very early on, they persuaded me
21		that it was the only way that things would move
22		forward, and I think that that is very important, t hat
23		we look that we have a clear understanding of wh at
24		happened and as far as possible why it happened.
25	SIR	BRIAN LANGSTAFF: And perhaps do what it can to ensure

1	before some of the members of staff were even born,
2	they are still very important and resonant to the
3	people that that they were affected, both the
4	individuals and their families. And I think that w
5	mustn't think about this as all being events in the
6	past. These are events now. People are still living
7	with the events. So it's not a historic thing that
8	we're looking at, it's ongoing. And it will echo d own
9	the generations, I'm sure of it, that as I've
10	explained, people who have children with haemophili
11	now may have lost their father, and it will continu
12	to be very important for a very long time.
13	SIR BRIAN LANGSTAFF: In one sense I suppose you came to
14	Cardiff after what may be seen by some as a questio
15	of history, although you see the ripples extending
16	down into the future, you'll have some similarities in
17	your position, looking back, as we do at the Inquiry,
18	looking back on what has happened without knowing from
19	firsthand what was happening. You have this
20	advantage, that you have taken over the reins and a re
21	being involved in the treatment of those who suffer ed
22	and related to their families and carers and so on, on
23	an ongoing basis. So you have a lot of involvement in
24	that sense. What lessons would you learn for the
25	future that we might all use to ensure that the

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1		that something like it never happens again.				
2	Α.	Well, I think very important that we minimise the				
3		chances of anything like this happening again.				
4		I think it's you never know what's round the cor ner				
5		and it is very important that everything that can				
6		possibly be done to prevent further serious				
7		complications of treatment that are being given to				
8		people with bleeding disorders, that everything is				
9		done to prevent that. I'm not just thinking about				
10		infectious disease but complications of other				
11		treatments. We have to have as much do as much as				
12		we possibly can to prevent further problems.				
13	SIR	BRIAN LANGSTAFF: Changing the topic just a little,				
14		though it's got a link to what we've just been				
15		discussing, it always struck me listening to the				
16		evidence that we've been having as to the past that				
17		being a congenital disease or a condition, I'm				
18		sorry, I shouldn't call it disease, condition				
19		haemophilia is always going to be recognisable most				
20		often in very young children. And that may be with				
21		parents who, because of the nature of the genetics				
22		involved, may not themselves have any familial				
23		experience of haemophilia. So they are on their ow				
24		and they are lost a little bit with a child that ha				
25		a condition they don't perhaps fully understand. And				

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4		
1		the child needs to come to terms with it too.
2		So why wasn't a paediatrician or someone with
3		an RCPH what is it? The Royal College of
4		Paediatrics and Child Health qualification involved?
5		Well, you have in your Cardiff centre, from what yo
6		were describing, thoroughly involved paediatrics. You
7		have a consultant who is primarily focused on
8		children. You're plainly equipped with play
9		specialists to assist the child, particular nurses who
10		have paediatric experience, which reassures me that at
11		least in one centre that has been the model.
12		How common is it across the whole country, by
13		which I mean the UK?
14	Α.	Most children in the UK are looked after in paediat ric
15		haemophilia centres, so centres like Great Ormond
16		Street, for example, would only look after children
17		Other centres where both adults and children are
18		looked after, for example in Oxford, they have
19		a paediatric haemophilia consultant who looks after
20		the children. So I think it's the case now that th ere
21		is certainly a recognition that children should be
22		looked after by people who specialise who are
23		paediatricians who specialise in looking after
24		children with bleeding disorders. I think that would
25		be the general standard of care.
20		se the general blandard of baron

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1		help with training with venous access, and this sor				
2		of thing. So I think that there is certainly				
3		a significant focus on trying to make sure that				
4		children are well looked after. In addition, in th				
5		Cardiff centre we have a general paediatrician who				
6		comes and does joint clinics with us. So she's not				
7		a haemophilia doctor but she is a general				
8		paediatrician. So she comes and does the joint clinic				
9		with one of the haemophilia doctors, so that if the				
10		children or the parents bring up				
11		a non-haemophilia-related issue then we have the				
12		expertise to address that.				
13	SIR	BRIAN LANGSTAFF: The only other thing that I wanted				
14		to ask you was, when you have been discussing with				
15		patients what treatment they might prefer, whether				
16		they want to stay on what they have had, go on to				
17	recombinant, if not what sort of recombinant, these					
18	sorts of discussions, how long roughly do those					
19	discussions take? You have said it was a process and					
20	plainly that must be right and sensible but, roughly,					
21		how long the initial conversations and how long				
22		overall do you think you might end up discussing, i				
23		the average case?				
24	Α.	In the average case, if it's a question of changing				
25		medication, I would say on average, it will be				

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1	Again, another example would be Bristol. It
2	has a combined adult and paediatric centre but the
2	paediatric centre essentially stands alone with
4	paediatric haematologists and haemophilia doctors and
5	nurses looking after their patients and there are
6	examples all round the country. Glasgow would be
7	another good example of the two centres, adults and
8	children.
9	I think it is the case that children are looked
10	after by paediatric specialists, certainly the
11	severely affected children.
12	SIR BRIAN LANGSTAFF: That's true, of course, in the
13	bigger centres. What about the centres and the
14	associate centres? Do they have any such involvement
15	or do they simply refer children on to the referenc
16	centre or the care centre?
17	A. I think well, it's difficult for me to comment
18	outside of South Wales. In South Wales children ar
19	looked after through the their treatment is
20	co-ordinated by Cardiff through the comprehensive care
21	centre but the treatment might be delivered through
22	a clinic in Swansea or Abergavenny, where one of us
23	goes out and sees the person more locally. Our nurses
24	will travel all the way out to west Wales, you know
25	100 miles or more to visit patients in their home t
	·

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1	ten minutes on a first consultation and then
2	ten minutes some time later once the person has
3	thought about it.
4	In addition, the nurses will have separate
5	conversations about the issues and, sometimes, thes
6	issues will go on for many months as people conside
7	whether they want to change treatment or not. So
8	I would say it's roughly that sort of time.
9	But there are different so changing from one
10	standard half-life Factor VIII to another standard
11	half-life Factor VIII is not a huge jump, because
12	you'll be it's a very similar treatment but
13	changing from, for example, Factor VIII to Emicizum ab,
14	that's a very big change that will almost certainly
15	require multiple conversations to understand the
16	implications of that change and whether people want to
17	go ahead and do that, because partly because it'
18	such a new treatment the consequences of receiving the
19	new treatment may not all be known and there may be
20	consequences of receiving that treatment that we ar
21	not currently aware of.
22	So some people see the advantages of once
23	a week subcutaneous, but others see the kind of
24	reassurance of being on the treatment they've been on
25	for 20 years and why do they want to change.

1	SIR	BRIAN LANGSTAFF: That's all that I have to ask.				
2		Ms Scott?				
3		Further questions by MS SCOTT				
4	MS	SCOTT: Sir, one question has arisen out of a response				
5		that Professor Collins gave to a question asked by you				
6		and it's this.				
7		Professor Collins, could you explain what the				
8		yellow card system is and how it works.				
9	Α.	Well, if an adverse event, a side effect, relating to				
10		a drug occurs, then the clinician will complete wha				
11		used to be called a yellow card. It's now online.				
12		You go through a website and you put in the				
13		information related to that adverse event so that i				
14	a number of different clinicians are saying the sam					
15	thing, then the regulators will note that very earl					
16		and be able to take action if appropriate.				
17	Q.	So the online system is run by whom?				
18	Α.	I'm not sure I can answer that, I'm afraid.				
19	Q.	Okay.				
20	Α.	I don't want to give an inaccurate answer. But it'				
21		an official system. It's not you know, it is an				
22		official system but I don't say which agency, I'm				
23		afraid, is in charge of running it.				
24	Q.	Thank you.				
25		Professor, is there anything that you would				

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1	about the local grouping in South Wales is that,
2	despite the huge challenges and the grief that has
3	often been associated with their individual stories,
4	the local patient group has always worked very closely
5	and very constructively with the haemophilia centre to
6	improve care for people with bleeding disorders across
7	the whole of Wales. Some of their notable
8	achievements in enhancing care have been that they
9	were instrumental in Wales becoming the first country
10	in the world to establish recombinant for all, they
11	campaigned for the new stand-alone haemophilia cent re
12	in Cardiff, they greatly enhanced physiotherapy across
13	all of Wales and they established the psychology
14	service dedicated to people with bleeding disorders
15	They also were instrumental in improving the
16	hepatology service. These achievements would not have
17	been possible without the tireless work of Haemophilia
18	Wales, and I think it's of great credit to them tha
19	these have been achieved. However, the most import ant
20	thing that I want to say is that the staff working at
21	all the haemophilia centres in South Wales are acutely
22	aware of the suffering that the treatment with
23	infected blood has caused. Many people have died long
24	before their time and they are all greatly missed.
25	People and their families have had to live with the

1		like to say?
2	Α.	So I would like to say a few words particularly about
3		the extraordinary group of people that have attende
4		the haemophilia centres in South Wales over the las
5		24 years, and these are people that I've come to kn ow
6		very well.
7		They were absolutely central to the campaign
8		that led to this public Inquiry and they battled at
9		times against what must have seemed enormous obstac les
10		but they never lost focus in that and that was clea
11		from the moment I first came to Cardiff.
12		It is I think a great sadness that many of
13		these people have not lived to see their work achie ve
14		the outcome that they wanted, particularly that the
15		have not been able to hear the evidence and that they
16		are not going to be able to hear the outcome of the
17		Inquiry.
18		Of particular note from the local patient group
19		I would say that establishing The Birchgrove Group was
20		an outstanding and defining achievement, and I thin
21		it's one that has had significant influence over very
22		many years. I've learnt an enormous amount from
23		talking with this group of people and I have to say
24		I'm very proud to be able to be part of their lives
25		I think it's very important when we're thinking

1	appalling consequences of this tragedy and they
2	continue to do so.
3	I am sorry that these patients and their
4	families, who I and my colleagues have had the
5	privilege to care for, have had to experience the pain
6	and suffering caused by these events.
7	Thank you.
8	SIR BRIAN LANGSTAFF: Thank you very much. I have to
9	thank you for a number of things, not least I know
10	that you would have wanted to be here in person to say
11	what you have just said, as well as give your
12	evidence, and I'm very grateful to you for being
13	prepared to change your arrangements at short notic
14	because of the way in which the timetabling had to be
15	worked out in the light of the current virus and it
16	restrictions. So thank you for being prepared to d
17	that.
18	But thank you also for giving us the view of
19	somebody who was pretty much at the centre, given y our
20	involvement in the national committee as you have
21	spoken about, UKHCDO and Cardiff, of what life as
22	a haemophilia consultant and director has been like in
23	the last 20-odd years, and in particular all the
24	challenges that you have faced and the challenges that
25	you have had to experience following on from the

1	tragedy, as you call it, which you've just describe d.	1	26 January. Thank you very much.
2	I don't need to repeat it. It's clear.	2	(3.16 pm)
		2	
3	And for giving your evidence in such a clear,		(Adjourned until Tuesday, 26 January 2021 at 10.00 am)
4	direct and helpful way. So thank you very much	4	
5	indeed.	5	
6	A. Thank you for the opportunity.	6	
7	MS SCOTT: Sir, we're not sitting next week.	7	
8	SIR BRIAN LANGSTAFF: No.	8	
9	MS SCOTT: Then the following week, on the Tuesday and	9	
10	Wednesday, the 26th and the 27th is going to be the	10	
11	medical ethics group panel.	11	
12	SIR BRIAN LANGSTAFF: Yes. So that will be a panel	12	
13	presentation of the sort that those of you who were	13	
14	here will have seen before, when we had our previou	14	
15	expert groups. So this, of course, will be online,	15	
16	which will be a new online experience for us but we	16	
17	shall manage it and we shall make progress then too	17	
18	That's the whole of the next session will be the	18	
19	medical ethicists. That will be the Tuesday and th	19	
20	Wednesday and, if necessary, further in that week.	20	
21	I think just the Tuesday and the Wednesday will	21	
22	probably be sufficient.	22	
23	MS SCOTT: Yes, that's the plan at the moment.	23	
24	SIR BRIAN LANGSTAFF: So for those of you who are watching	24	
25	online, we sign off now until Tuesday week,	25	
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33/2 61/20 109/17 119/15 Frank [1] 19/6 Frank Hill [1] 19/6 Free [6] 5/11 5/13 5/14 5/17 5/20 70/20 Freedman [11] 74/13 74/15 74/16 74/21 74/25 75/6 77/12 77/13 77/15 77/18 78/21 freedom [1] 112/8 freezers [1] 66/5 frequently [2] 61/16 74/6 fresh [1] 70/7 Friday [1] 1/1 from [148] fulfil [1] 89/19 full [4] 58/19 63/14 72/9 127/5 fully [5] 24/20 53/10 70/25 127/9 128/25	40/25 generations [2] 126/9 127/14 genetic [6] 20/14 65/6 65/8 65/10 65/12 65/13 genetics [2] 8/5 128/21 genotype [1] 63/9 gestation [1] 44/3 get [22] 13/2 23/2 27/22 34/1 39/11 43/5 49/10 58/8 58/22 61/1 63/1 66/20 71/15 71/17 82/23 87/19 91/25 93/5 95/1 100/6 102/19 120/20 gets [4] 45/5 45/6 97/1 114/8 getting [5] 42/19 90/8 102/17 102/17 113/2 give [29] 27/15 38/23 43/14 43/21 45/20 50/20 50/24 51/25	132/17 133/12 Godkin [4] 79/10 79/15 80/17 80/23 Godkin's [1] 79/22 goes [6] 38/24 97/2 100/6 100/17 120/5 130/23 going [44] 1/19 2/11 8/10 18/10 19/2 27/18 27/22 29/18 40/17 43/10 43/14 43/15 50/12 52/20 54/7 55/1 57/12 61/14 64/9 74/3 83/9 85/2 88/19 91/19 92/8 93/20 96/9 96/21 96/22 96/23 96/24 101/13 102/4 102/5 102/22 104/16 106/20 109/14 113/19 121/25 124/9 128/19 134/16 137/10 gone [7] 35/22 40/8 49/7 102/9 105/8 107/20 123/1	20/17 H habit [1] 60/7 had [139] 1/14 2/24 3/12 4/17 6/12 8/15 8/17 8/17 8/18 8/19 9/5 9/16 10/25 10/25 11/1 11/12 11/12 11/19 17/3 17/6 18/15 22/4 22/16 23/4 23/8 23/15 23/16 23/19 23/21 25/5 26/12 26/13 26/14 26/19 30/17 30/17 31/6 32/7 32/9 33/3 33/8 33/16 33/19 35/8 35/9 35/17 35/18 35/22 36/19 36/19 36/24 37/12 37/12 38/5 38/7 40/14 44/17 46/11 48/11 51/14 52/21 55/3 55/9 56/25 58/6 59/14 59/17 59/24 60/19	19/20 19/21 20/12 31/23 40/21 41/10 65/9 haemophilia B [6] 19/21 19/22 31/25 41/13 42/6 42/7 haemorrhage [2] 95/7 95/19 Haemtrack [2] 99/10 101/2 half [27] 41/1 42/2 42/5 42/8 42/10 43/18 44/25 45/2 45/4 45/5 45/7 45/8 48/12 50/14 50/19 50/21 50/25 51/1 51/1 51/7 51/9 51/10 53/15 53/20 54/13 132/10 132/11 half-an-hour [1] 54/13 half-life [24] 41/1 42/2 42/5 42/8 42/10 43/18 44/25 45/2 45/4 45/5 45/7 45/8 48/12 50/19 50/21 50/25 51/1 51/1 51/7 51/10 53/15	84/17 84/20 84/20 87/16 93/24 94/17 97/13 99/24 100/18 100/25 101/1 101/4 103/5 103/17 104/21 105/15 105/20 105/22 106/9 106/12 106/12 107/20 107/22 112/22 113/13 114/13 114/20 115/3 116/21 116/22 117/13 117/20 121/1 121/12 121/15 121/17 121/18 122/3 122/4 122/8 122/9 122/11 122/13 122/16 122/17 123/1 123/11 126/18 128/24 129/11 130/2 132/2 133/4 134/21 135/2 135/4 135/23 136/22 hasn't [4] 58/23 64/20 83/5 104/12 hate [1] 98/21 haven't [9] 43/3 85/25
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50/4 51/7 53/9 54/13	135/17	8/16 10/1 10/4 10/6	35/8 38/3 38/13 40/18		
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