18

From: Christine Dora
Date: 26 June 2000

PS/Minister for Health and Community Care

Copy to:
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Mr Oliver, HD:PHPU:1:1
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Policy Unit
Mr S Ghibaldan, Special Adviser
Mr D Whitton)
Mr N Gillam) Special Advisers - Media
Ms P McPherson)

HAEMOPHILIA AND HEPATITIS C
PUBLICATION OF REPORT

Purpose

1. To seek the Minister's agreement to release the Report on Hepatitis C and the Heat Treatment of Blood Products for Haemophiliacs in the Mid 1980s on Wednesday 5 July, by means of a letter to the Chairman of the Health and Community Care Committee, and an arranged PQ. I attach the following Annexes for the Minister's agreement:

Annex A	-	Report - Final draft
Annex B	-	Letter to Health and Community Care Committee
Annex C	-	Draft arranged PQ
Annex D	-	Draft News Release (to follow from InD)
Annex E	-	Defensive Briefing

Timing

2. **Immediate**. The Minister may have some further comments, and drafts need to be finalised by midday Friday 30 June so they may be distributed.

Background

3. The Minister asked us in late summer 1999 to undertake a factfinding exercise into the heat-treatment of blood products in Scotland around the period 1985-87, following reports of concerns that haemophiliacs in Scotland were at risk from Hepatitis C for longer than those in England. This report has been in preparation since the end of December 1999, when the submissions from interested parties were received. The Minister received a draft report at the end of April, indicated that she was broadly content, and asked for some fine-tuning. Following a further submission (24 May) and a meeting on 30 May, the Minister said she intended to review some detailed textual points, but I have not had word that she is content (or otherwise). I have also received some minor comments from the haemophilia centre directors to whom I had copied extracts of the report. I have amended the draft accordingly.

4. The Health and Community Care Committee wrote to the Minister on 7 June to ask her to widen the remit of the exercise to include blood transfusions and the issue of compensation (she declined) and to attend one of their meetings to discuss the report (she said merely that she would send them a copy for their consideration). I have read a minute of the Committee's meeting of 21 June, in which they decided to seek some "clarification" of the remit. I have not yet seen any approach from them to the Minister on this.

Consideration

5. The Minister had asked me to make sure that the evidence we had heard from others was acknowledged as such, and not presented as the Executive's certain knowledge. There are too many statements of evidence to do this for every single one, but I have strengthened the blanket acknowledgement in paragraph 13. I have amended the report in places to take into account the comments of haemophilia directors who were copied extracts of the draft as the Minister wished. I have also added in conclusions (originally included with my minute of 25 April, which the Minister agreed were appropriate), but I have amended their emphasis and would be grateful to know that she approves (paras 38 and 39). If the Minister has any further amendments to make, I suggest for the sake of speed we discuss them rather than deal with them in writing.

6. As the Minister knows, the report concludes that there was indeed a difference in timing between Scotland and England on the heat treatment of blood products, but it accepts the reasons for this difference, and notes that the efficacy of the heat treatment was not confirmed until several years later. It also reports Haemophilia Directors' views of clinical policy at the time.

7. In your minute of 11 May you recorded the Minister's decision that no compensation should be offered to people infected through blood products under the circumstances in question.

Presentation

8. The Minister had previously said publicly that she would consider whether further action was warranted once she had had a chance to study the report. Having seen the draft report she decided that she would like to deal with this issue all in one go and move on. She wished to reflect that she had listened to concerns and carried out a fact-finding exercise as

she had said she would, and she would express sympathy to those affected by Hepatitis C (not an apology as many of the haemophiliacs affected had asked for). She would refer to the Scottish Needs Assessment Programme exercise as a way of moving forward on Hepatitis C.

9. I suggest that now is also the time for the Minister to state clearly her policy on compensation: if she does not, I believe that the calls from MSPs will only grow.

10. As the Minister knows, we believe that the Haemophilia Society will not be satisfied with this report. They have been pressing for several years for compensation for haemophiliacs infected with Hepatitis C through blood products. The Minister can therefore expect criticism of this exercise as not having gone far enough. The Haemophilia Society have received good coverage in the past (e.g. of their ceremony laying lilies at the door of No 10 Downing Street, one lily for each person who had died from Hepatitis C contracted from blood products). Their cause is one which attracts natural human sympathy, and I would not wish to underestimate possible media activity. I have gathered together some defensive points for the Minister to clear (Annex E).

11. The Minister has said that she will give a copy of the report to the Health and Community Care Committee; she wants to do this before recess. Given the interest of other MSPs in the issue, it would also be a good idea to have an arranged PQ to let other MSPs know about the report, and to place a copy in SPICe. From a news management point of view, InD advise that Thursday 6 July would be a good day for this to reach the newspapers so as not to clash with any of the Minister's more positive stories. It follows that the report should reach the Health and Community Care Committee on Wednesday 5 July, and the Parliamentary Question should be answered and the News Release issued on that day.

12. We would suggest that out of courtesy the relevant parties (SNBTS, Haemophilia Society and the haemophilia directors) should receive a copy of the report a few hours in advance of the newspapers so they have time to prepare a considered response to media enquiries. I therefore suggest:

- PS/HD write to the Committee Clerk on 4 July so they receive the report on 5 July;
- arranged PQ answered early on 5 July (say 9.30 a.m.);
- my branch will issue the report to "interested parties" by email first thing on 5 July;
- news release should go out later that day.

13. I have just learned that there is to be a debate on Health in the Scottish Parliament on Thursday 6 July. The Minister might take the opportunity to mention this report during that debate, reply to any calls for compensation and try to get the matter over with before recess. The material included with this submission should suffice for those purposes.

Conclusion

14. I invite the Minister to approve the content of the Annexes to this minute and to agree the arrangements suggested for getting this report into the public domain. If she wishes to discuss any of this, I am of course be ready to speak with her.

CCD

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26 June 2000

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SCOTTISH EXECUTIVE

Health Department

HEPATITIS C AND HEAT TREATMENT OF BLOOD PRODUCTS FOR HAEMOPHILIACS IN THE MID 1980s

June 2000

HEPATITIS C AND HEAT TREATMENT OF BLOOD PRODUCTS FOR HAEMOPHILIACS IN THE MID 1980s

Introduction

1. In the late summer of 1999, the Minister for Health and Community Care, Susan Deacon MSP, gave Scottish Executive officials the task of ascertaining the facts surrounding the heat treatment of blood products for haemophiliacs in the mid 1980s. The remit for this exercise was as follows:

- to examine evidence about the introduction of heat treatment in Scotland for Factor VIII in the mid 1980s, to assess whether patients in Scotland with haemophilia were exposed to the risks of the hepatitis C virus longer than they should have been, given the state of knowledge at the time;

- to examine evidence about the information given to patients with haemophilia in the 1980s about the risks of contracting the hepatitis C virus from blood products.

2. Assertions came to Ms Deacon's attention in late summer 1999 that a hepatitis C inactivated Factor VIII product had become available in England in 1985 through the Bio Products Laboratory (BPL), whereas it had taken until late 1987 for the Scottish National Blood Transfusion Service (SNBTS) to produce a comparable product in Scotland. The assertions led to concern that Factor VIII users in Scotland might therefore have been at risk longer than they should have been. This was the subject of media debate and of calls from MSPs to look at the matter. In early August 1999, the Minister asked officials to begin the factfinding exercise which is the subject of this report, and she invited the Haemophilia Society to meet her so she could hear their concerns first-hand. This meeting took place on 14 September 1999.

3. In this exercise, we have tried to ascertain and present the facts about what happened, based on the evidence we have received from interested parties. This exercise is not an attempt to approve, blame or justify. Nor is it an attempt to apply hindsight and set out in detail what might have been done instead.

Methodology

4. We have examined written submissions from the Scottish National Blood Transfusion Service, from the Haemophilia Society, and from individual haemophiliacs and their families. We have met with the Haemophilia Society and with current Scottish Directors of Haemophilia Centres. We have assessed the information given to us and its relevance to this exercise. We have gone back to the relevant people with further questions arising from what we have read in their submissions. We believe we have pulled together a comprehensive view of the issues.

5. We have drawn substantively on the content of the submissions we received, and throughout this report we have marked any reference to those documents. In the interests of openness, these papers are available for viewing (apart from most of those from individual

haemophiliacs: we sought permission to make them publicly available but, understandably, many correspondents felt unable to grant it). The volume of the material gathered together is considerable. However, we are making copies of the main submissions written for this exercise available to SNBTS, the Haemophilia Society and to the Directors of Haemophilia Centres. A copy has also been placed in the Scottish Parliament Information Centre. If other copies are requested they will be provided on payment of an appropriate fee to cover copying costs

6. The events in question took place so long ago that we have found it difficult to access relevant information from our own files. Some of them had been destroyed, presumably during routine procedures for the review and disposal of files. We used the files and information still available to us, and asked the Department of Health to give us any further relevant information.

Background on the Hepatitis C Virus

7. Hepatitis C (HCV) is a blood borne virus, first isolated and fully identified in 1989. Knowledge about this virus had been developing since the mid 1970s, when the scientific community began to comment on asymptomatic liver disease in haemophiliacs treated with blood products. Although the disease could be classified as hepatitis, being an inflammation of the liver, it was not identifiably the result of either the hepatitis A virus or the hepatitis B virus. The condition became known as Non-A Non-B Hepatitis (NANBH) until the isolation of the virus in 1989. Knowledge about hepatitis viruses is still evolving, and several further types have since been identified.

8. From reading the scientific literature in the late 1970s and early 1980s included with SNBTS's submission, it is apparent that there was no real consensus on the progression of any disease caused by the hepatitis C virus (as we now know it) at the time. Current best estimates are that around 80% of those infected by hepatitis C will become chronic carriers of the virus; around 20% of people with chronic hepatitis C infection will develop progressive liver disease resulting in cirrhosis and, in approximately 5% of cases, primary liver cancer, over a period of 20-30 years. Hepatitis C can be transmitted from person to person through the cross-contamination of blood (for example, through the sharing of needles) and, less commonly, can be sexually transmitted.

Background on Haemophilia

9. There are 2 types of haemophilia – Haemophilia A and Haemophilia B. This report concerns blood products for the treatment of haemophilia A. Haemophilia A is a genetically inherited bleeding disorder which results from lack of the coagulation Factor VIII in the blood. In patients with this deficiency, any episode of bleeding is abnormally prolonged and potentially fatal. The product of choice for treating Haemophilia A is Factor VIII concentrate, which until recently was produced solely from human plasma. (It can now be produced bio-synthetically, using genetic engineering.) Manufacturing pools for plasma products such as Factor VIII consist of donations from tens of thousands of individuals. If just one of the donations used in the manufacturing pool for Factor VIII is infected with hepatitis C, there is a risk to the whole batch made from that pool, and to all recipients of that batch of blood products. It is possible nowadays to identify the presence of the virus in pools or in individual donations. Up to around 1989-90, it was not possible to do so with any certainty, as the virus had not then been isolated.

Effect of HCV on Haemophiliacs

10. Throughout the mid to late 1970s, scientific papers noted the occurrence of hepatitis and liver function abnormalities in haemophiliacs, and postulated that they might be related to treatment with blood products, particularly concentrates of Factors VIII and IX, because the large donor pools used to produce these products would increase the risk of any hepatitis virus (and indeed any virus) present in individual donations.

11. It is generally accepted that a number of haemophiliacs in Scotland (as in other countries) were infected with hepatitis C through blood products. Figures provided by the Scottish Haemophilia Centre Directors show that:

- 253 haemophilia patients currently living in Scotland are hepatitis C positive;
- 15 HIV-negative haemophilia patients have died of liver disease in Scotland since September 1985; [1]
- of the 29 haemophilia patients who were first treated with a blood product during the period in question in this paper (September 1985 – December 1987), 7 have tested HCV positive, 19 have tested HCV negative, and the HCV status of 3 is unknown. Current Haemophilia Centre Directors told us that it was their policy to contact all haemophilia patients on their registers who may have been exposed to HCV risk, and to offer testing, after testing became routinely available in 1993-94. Reasons for not being able to confirm the HCV status of some patients might include them not having wanted to take the test, or having moved outwith Scotland.

12. During this exercise, we received 28 letters from individual haemophiliacs, and 15 letters from friends and families of haemophiliacs, describing the effects of the hepatitis C virus on their lives. Some of the letters deal with the health problems encountered by sufferers. Most people who mentioned treatment said it had been unsuccessful. Three people mentioned funding problems with treatment. Many writers felt that haemophiliacs had not been adequately warned of the risks of infection from blood products, and that they had received inadequate advice and support. Some correspondents were the parents of haemophiliac children; they described how they felt after having consented to treatment which resulted in their child becoming infected. Many correspondents expressed great disappointment that no apology had ever been offered to them. A few correspondents said that there had been a delay in their being informed that they were infected with HCV. A number of correspondents also mentioned the effect on their families. Some families had to cope with seeing a loved one suffer, physically and emotionally. Other families were financially disadvantaged because partners were unable to take up paid employment since they were caring for a hepatitis C positive relative. Sufferers said they had worried about the risk of infecting their loved ones. Some correspondents mentioned in addition the social stigma of hepatitis C; they did not want their neighbours to know they were infected. Others pointed out that people infected with hepatitis C may have difficulty in obtaining a mortgage or personal insurance, or may be subjected to increased payments.

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[1] The figure excludes patients who were also HIV positive, since HIV of itself causes immunosuppression which renders individuals susceptible to illnesses which they would otherwise be able to combat. The figure, however, includes individuals whose deaths from liver disease may not have involved Hepatitis C: for example, cirrhosis of the liver from another cause.

Development of Heat Treated Products

13. The following paragraphs set out the background and events as presented to us by the various interests involved in this exercise. They relate progress towards a Factor VIII product successfully heat-treated to inactivate HCV, which we now know was the principal cause of NANBH. (In a minority of NANBH cases, other viruses were responsible.) We have also produced a timeline, to be easy to read but still comprehensive - see Annex A.

14. The scientific community world-wide shares information through the publication of papers. Papers are subject to a process of peer review before they are published. Sometimes, information is shared at conferences before a paper has been published.

15. In considering progress towards successful heat treatment to inactivate the causative agent of NANBH, it is worth noting that there are two basic types of heat treatment:

i) wet-heating to a certain temperature, otherwise known as pasteurisation;
ii) dry-heating, which involves freeze-drying a product, then subjecting the dried product to heat. The product is reconstituted with water for use.

16. In both types of heat treatment, crucial factors are the temperature and length of time for which the product is heated. It was apparent to us from the contents of the papers published that subjecting Factor VIII to heat treatment was a far from straightforward matter. Improperly controlled heating of plasma proteins can cause them, in lay terms, to cook; this changes their nature and spoils the product for human use. An additional technical complication arose from the view that the purification of Factor VIII (separation of the Factor VIII component from other material in plasma) was important in working out the process of heat treatment.

17. In 1980, German scientists working for Behringwerke published a report which suggested that pasteurising Factor VIII at 60°C for 10 hours removed the risk of hepatitis B, but that further proof was needed to confirm whether this process was also suitable for inactivating the agent responsible for NANBH (SNBTS submission, ref 36.) Behringwerke obtained a US patent for the process of stabilising Factor VIII in pasteurisation in 1981. Yields from this process were acknowledged to be low – less than 25% of SNBTS's own production yield of Factor VIII. (The product subsequently proved still to be associated with NANBH transmission, albeit at reduced levels). SNBTS research on pasteurisation also began in 1981.

18. In 1982, US scientists at an International Society of Haematology Congress reported that Factor VIII could be heated to 80° C for 10 hours but the resultant product was visibly less soluble than products in clinical use. Furthermore, it was unknown whether this heat treatment actually inactivated the relevant viruses. Chimpanzee studies were planned. (*SNBTS paper ref. 27*).

19. Current Haemophilia Centre Directors have recalled that in 1983, Scotland was approaching self-sufficiency in SNBTS Factor VIII and IX, in accordance with Scottish Health Service Policy that Scotland should be self-supporting in blood products including the routine use of SNBTS Factor VIII and IX concentrates for the treatment of haemophiliacs.

20. In 1983, SNBTS learned that two commercial firms were investigating dry heat treatment of Factor VIII at 60°C. SNBTS carried out preliminary studies on dry heat

treatment of their own Factor VIII product NY in November 1983, and found that it could indeed be heated in this way, but with a lower degree of virus inactivation than they had already obtained in their studies on pasteurisation. They proceeded to clinical trial of a pasteurised product, but the first patient suffered an adverse reaction and the trial was abandoned.

21. In March 1984, HIV was isolated as a blood-borne virus. The focus on heat treatment therefore shifted towards the optimal method to eradicate HIV, since this was now recognised as the biggest threat to haemophiliacs. SNBTS decided to explore further the options available should HIV be found to be sensitive to dry heat treatment. They made further measurements of the behaviour of their Factor VIII product NY when subjected to heat treatment, which were completed in October 1984.

22. In April 1984, Bayer (USA) published a patented method for the pasteurisation of Factor VIII. SNBTS noted that the Plasma Fractionation Laboratory (PFL) in Oxford, which was a pilot plant laboratory for BPL, in 1984 managed to dry-heat their own Factor VIII product 8Y to 80°C for 72 hours. It was expected that this would provide greater protection against HIV. SNBTS noted that this product was 10 times more purified than SNBTS's own Factor VIII NY product, which SNBTS postulated might be the reason why the heat treatment was successful, without spoiling of the product. At that time there was no indication whether this degree of heat treatment would have any effect on hepatitis viruses (and since the causative agent of NANBH had not been isolated, it could not be tested for directly).

23. In November 1984, SNBTS learned of reports that HIV was sensitive to 68°C dry heat for 1 hour. In December 1984 they were able to heat-treat a year's supply of the Factor VIII product NY at 68°C for 2 hours, thus rendering it HIV-safe. In January 1985 they were able to begin dry heat treatment at this temperature for 24 hours, and in the same month SNBTS put into action a process to specify and procure a high accuracy treatment cabinet (basically a kind of oven) to a similar specification to that used by PFL. The first of these cabinets was obtained and put into use in July 1985. By July 1986, SNBTS had enough stocks of Factor VIII NY to stop production but still maintain sufficient supplies to the health service, so they could concentrate on trialling other types of heat treatment.

24. Meanwhile, in March 1985, PFL at Oxford were heat-treating all of their Factor VIII – some at 80°C. In May 1985 Bio Products Laboratory (BPL) in Elstree were doing the same. By September 1985, all PFL/BPL Factor VIII, which amounted to a quarter of the requirement in England and Wales for Factor VIII, was being heat treated at 80°C for 72 hours.

25. SNBTS meanwhile were attempting to produce a Factor VIII product which would withstand dry heat at 80°C without spoiling. In Autumn 1985, they developed a more highly-purified Factor VIII, but it was unable to withstand heat treatment at 80°C. They concluded that it was the process of freeze-drying which was crucial when it came to the tolerance of the product to dry heat, rather than higher levels of purity. In February 1986, SNBTS management endorsed the approach of their scientists to concentrate on 80°C dry heat.

26. In August 1986, SNBTS produced the first trial batches of their new Factor VIII product - called Z8 - treated at 80°C for 72 hours. In September 1986 came a preliminary report that treatment of the BPL Factor VIII product 8Y at 80°C for 72 hours might prevent the transmission of NANBH (*SNBTS paper ref 53*). SNBTS undertook a clinical trial of their own Factor VIII product Z8 in March 1987. In April 1987 they made it available for routine clinical use.

27. While the first production of 80°C dry-heated Factor VIII 8Y in England was March 1985, there was no evidence that the 80°C dry heat treatment was indeed effective against NANBH until the preliminary clinical report was issued in September 1986. The scientists involved would doubtless have been reasonably confident that they were at least heading in the right direction, but they could not know for sure that this form of heat treatment would be effective until after the product had been in clinical use. The full results of this trial were not published until October 1988; SNBTS Factor VIII product Z8 had been in routine clinical use from April 1987. SNBTS say that in 1987 they supplied 89% of Scotland's needs with Z8, and 31% with NY. In 1988, they were able to supply all of Scotland's needs with Z8. In contrast, they estimate that outwith Scotland over half the UK's Factor VIII concentrate requirement in 1988 was still being supplied with products being heat treated at 60-68°C.

28. After the HCV virus was isolated and identified in 1989, results were published in 1993 confirming the clinical safety of both 8Y and Z8 as regards HCV transmission.

Treatment

29. The second part of the remit of this exercise concerns the treatment of haemophiliac patients, and whether they were given sufficient information about the risks of using Factor VIII.

30. It should be said in this context that not all patients treated during the time in question were given SNBTS-produced Factor VIII. A small number were given commercial products or cryoprecipitate (for example, of the six patients first treated between September 1985 and December 1987 who later tested HCV-positive, 2 had been treated solely with cryoprecipitate).

Current Haemophilia Centre Directors recalled that hepatitis and abnormal liver function were well-known risks of Factor VIII and IX concentrates since their introduction in the mid 1970s. They believed that these risks were well-known to the scientific community, concentrates manufacturers, health departments and health boards, healthcare professionals, patients and relevant patient societies including the UK Haemophilia Society and its Scottish branch. They gave their opinion that the risk of hepatitis was a major, widely-publicised factor in pressure from the UK Haemophilia Society on UK Health Departments to progress self-sufficiency in the UK through production of concentrates from UK donor plasma through SNBTS and BPL. They believed that patients and parents were informed of the risk of hepatitis as part of general education on haemophilia and its treatments, including:

- use of educational material, including that produced by the UK Haemophilia Society;
- education for patients and carers about home treatment with factor concentrates (they sent us an excerpt from a document called "Haemophilia Home Therapy", produced in 1980 by Peter Jones, at the time Director of the Newcastle Haemophilia Reference Centre, which contains relevant reference to hepatitis);

- hepatitis warning signs and cross-infection precautions, in haemophilia centre treatment areas;
- national and local meetings of the UK Haemophilia Society.

31. We have seen a copy of the product insert leaflet included with SNBTS Factor VIII product NY. It carried a warning that the product could not be assumed to be virus-free. This document is headed "Human Antihaemophilic Factor – Factor VIII concentrate – HT (Lyophilised)", is dated 5/4/85 and carries the product licence number. It states that "the product has been heat treated at 68°C for twenty-four hours in the dried state but it cannot be assumed that the product is non-infective". It mentions among possible side-effects "the general complications of hepatitis". Patients treating themselves would have been able to refer to this leaflet, since it was packaged with each vial of the product intended for self-administration. However, not every person who takes a medicine at home is guaranteed to read or completely understand the product insert.

32. We have also found some examples of guidance available to clinicians.

In June 1983, the UK Haemophilia Centre Directors Organisation (UKHCDO) wrote to Haemophilia Directors about the risk of AIDS, and set out some recommendations for treatment, including the use of DDAVP [the drug Desmopressin Acetate] in treating mild Haemophilia A and von Willebrand's disease. In December 1984, the UKHCDO issued an "AIDS Advisory Document", which mentioned that dry heat treatment of Factor VIII at 68°C inactivated the AIDS virus, but noted in passing that it was unlikely that the process would completely inactivate Non A Non B Hepatitis. In its Recommendations, it noted that "concentrate is still needed; bleeding is the commonest cause of disability and death ."

There is also relevant material in the 1984 revision of Notes on Transfusion, issued by the DHSS, the Welsh Office and the Scottish Home and Health Department, intended for use by medical staff of hospitals. It describes some of the principles of practice of transfusion with blood and blood products, as well as suggested procedures. This document notes the phenomenon of post-transfusion hepatitis, saying that until suitable tests were available to identify the viruses concerned, there would continue to be a risk associated with the use of blood and blood products.

33. We are extremely grateful to current Haemophilia Centre Directors in Scotland, who met with us to discuss these issues. They felt that from the mid 1970s there had been a widespread awareness of the risks of contracting hepatitis. They recalled a generally-held perception in clinical circles until the late 1980s that NANBH was a mild non-progressive condition. From the mid 1970s, they said, patients were increasingly keen to be prescribed concentrate to allow them to treat themselves at home. Current Haemophilia Directors are obviously unable to speak for their predecessors, but they expressed the view on their own behalf that it was for the individual clinician to recommend a course of action to a particular patient, based on the clinician's assessment of benefits and risks of a particular product. They said their own practice was to give patients and parents current information on the benefits and risks of treatments at their clinic review visits.

34. Current Haemophilia Directors recalled that while there was an awareness of the risks of hepatitis, the main concern in the mid 1980s had been HIV. They said that they believed Haemophilia Centre Directors had at that time given patients advice on avoiding "risk" behaviour to prevent the spread of blood-borne viruses, including use of circulars and

publications by the Haemophilia Society and others. We have obtained a copy of one of these: "AIDS and the Blood: A Practical Guide", written by Dr Peter Jones and distributed by the Haemophilia Society. It contains advice about safe behaviour and advice to patients (and parents of young patients) about examining the possibility of modifying their treatment. It also sets out some of the issues surrounding the heat treatment of blood products, as understood at the time. Current Haemophilia Centre Directors recalled that they or their predecessor directors had liaised with the Scottish Office and SNBTS on the development of new products though not, they said, in a formal advisory capacity.

35. We also asked the Haemophilia Centre Directors to comment on the view that mild haemophilia sufferers might have been put at unnecessary risk through treatment with Factor VIII concentrate, when safer alternatives might have been available. They recalled that different treatments such as cryoprecipitate or desmopressin had indeed been available for so-called "mild" haemophiliacs. These alternatives could themselves produce severe adverse effects (e.g. anaphylactic reactions or thrombosis), so their use had to be a matter of clinical judgement in each case. The Directors took issue with the view that mild haemophiliacs need not be considered clinically serious cases – they explained that although mild haemophiliacs do not suffer spontaneous bleeds, they bleed seriously if subjected to trauma. In such circumstances, their situation can no longer be considered mild and use of factor concentrates would be necessary. There was still a severe risk of death or disability if the bleeding was not stopped quickly and in many cases mild haemophiliacs presented with late bleeds which involved more treatment.

36. On the issue of testing, current Haemophilia Centre directors were quite clear that their general policy was to inform patients previously treated with blood products that they were being tested for hepatitis viruses and that results would normally be discussed at their next review appointment, as with all test results.

Complaints about individual treatment

37. Some correspondents have raised the issue that they are dissatisfied with the treatment they received at the time, and suggest it did not meet with the clinical policy on testing outlined above, but they understand they cannot now make a complaint through NHS complaints procedures for various reasons. This seems an appropriate place to clarify the current complaints procedure. The Scottish Executive's leaflet on The NHS Complaints Procedure makes clear that

"Usually the NHS will only investigate complaints that are either

Made within 6 months of the event; or
Made within 6 months of you realising that you have something to complain about as long as that is not more than 12 months after the event. These time limits may be waived if there are good reasons why you could not complain sooner."

The Directions to NHS Trusts, Health Boards and Special Health Boards on complaints procedures state that where a complaint is not made during the period specified it shall be referred to the complaints officer and if he is of the opinion that -

> (a) having regard to all the circumstances of the case, it would have been unreasonable for the complainant to make the complaint within that period; and

(b) notwithstanding the time that has elapsed since the date on which the matter which is the subject of the complaint occurred, it is still possible to investigate the complaint properly,

the complaint shall be treated as though it had been received within the time limit.

The complaints system does not deal with events about which the complainant is already taking legal action.

Conclusion

38. The facts strongly suggest that SNBTS made very reasonable progress in developing products with reduced viral risk, relative to activity elsewhere. We accept that they were not the first. Scientific knowledge and technical expertise in this area were developing rapidly during the period in question, spurred on by the drive to eliminate HIV. It is worth remembering that commercial products available during the time in question were not proven to be HCV-safe (and many were subsequently withdrawn). We accept SNBTS's assertion that they were able to provide sufficient hepatitis C inactivated Factor VIII to cover the needs of all haemophiliac patients in Scotland by 1988 – we know of no other country which could make the same claim.

39. In relation to information given to patients about the risks involved with their treatment, we accept that knowledge of the effects of HCV would have been limited. We accept that clinicians would have had available to them information about the general risks of blood-borne disease, including hepatitis, and that they would have been able to pass this information on to patients. We accept that it would be good practice to offer people a test for HCV when it became available and to discuss the result with them. We have seen no evidence that clinicians had a policy to test without informing patients. Whether these policies may have failed in the case of any individual patient is outwith the scope of this exercise; we have outlined the complaints procedure in this report and we also note that some patients have started legal proceedings.

HAEMOPHILIACS AND HEPATITIS C

TIMELINE

When	Scotland	England	Scientific Literature
1975			Paper by Italian scientists describes "Asymptomatic liver disease in haemophiliacs", asserts Factor VIII/IX possibly responsible because of large donor pools; also that available methods for universal donor screening unlikely to eliminate risk. (SNBTS ref. 11[2])
June 1978			US paper comments that liver abnormalities in haemophiliacs probably related to treatment with blood products and incidence of HBV. (ref. 13)
Sept 1978			*Lancet* paper identifies factor-concentrate replacement therapy as probably related to high incidence of chronic liver disease among haemophiliacs. (ref. 12)

[2] Subsequent references in this section are all to papers included with the SNBTS submission

1980			German scientists for Behringwerke publish report which suggests that pasteurising Factor VIII at 60°C for 10 hours frees it from hepatitis B risk – says further clinical proof needed for NANBH. (ref. 36)
October 1981	SNBTS begins its own research on pasteurisation.		Behringwerke get US patent for process to stabilise Factor VIII in pasteurisation (heat-treatment of liquid to 60° C). Although HBV was removed through this process. unclear at time whether this was because of purification or heat-treatment. Yields low – less than 25% of SNBTS's own production process of Factor VIII.
August 1982			US scientists at International Society of Haematology Congress report Factor VIII can be heated to 80° C but it was visibly less soluble than products in clinical use and it was unknown whether this heat treatment inactivated the

			relevant viruses. Chimpanzee studies were planned. (ref. 27)
September 1982			Italian scientists suggest non-A non-B chronic hepatitis is non-progressive. (ref. 14)
1982			Abstract in *Hepatology* suggests insidious progression of NANBH.
1982			US: 2 haemophiliacs develop new illness, which subsequently becomes known as AIDS.
1983			Further cases of this illness in recipients of Factor VIII.
1983			Manchester scientists suggest that liver biopsy on haemophiliacs not justified by incidence of liver damage (especially in the absence of proven therapy). Suggests liver disease in haemophiliacs an "overstated problem". (ref. 15)
1983	Scotland self-sufficient in SNBTS Factor VIII NY.		
Late 1983	SNBTS prepare batch of pasteurised		

	Factor VIII for clinical evaluation.		
January 1984	First patient suffers adverse reaction, clinical study abandoned, and R&D programme revised.		
March 1984			HIV isolated.
April 1984			Bayer (USA) publish patented method for pasteurisation of Factor VIII.
June 1984	SNBTS collaborate with US's Alan Johnston on purification for pasteurisation process, in hope that it would improve pasteurisation and perhaps allow greater heat to be applied.		
October 1984	Samples from haemophiliacs at Edinburgh Centre tested using new HIV screening test. SNBTS informed that a number who had only ever received SNBTS products (i.e. none from abroad) are HIV+, indicating contamination of Scottish blood supply.		
November 1984			International Committee on Thrombosis and Hemostasis, concerned at the lack of

			a uniform approach in studies, draws up a protocol.
1984	SNBTS decide to keep trying to develop pasteurisation.	PFL Oxford manage to dry-heat a Factor VIII product ("8Y") to 80°C for 72 hours. Expected to provide greater protection against HIV. 10-times more purified than SNBTS NY product --believed by SNBTS to make the difference. No indication whether 80°C treatment would have an effect on hepatitis viruses. Production of 8Y undertaken with early model of freeze-drier, which was later recognised as crucial in the process. (ref para 7.14 of SNBTS submission)	Clinical studies suggest pasteurisation at 60°C for 10 hrs might be effective against hepatitis viruses (ref. 47).
August 1984 & July 1985			US scientists doing chimpanzee studies claim reduction of hepatitis infectivity following dry heat treatment to 60° C. (ref. 30,31)

Oct-Dec 1984	PFC production suspended during planned upgrade of facilities.		
November 1984	SNBTS scientists learn results of US work, that dry heat treatment at 68° C for one hour inactivates HIV. They already know that NY can withstand this level of heat for 2 hours. Decide to dry heat-treat existing stocks of NY.		
December 1984	All stocks of NY issued by PFC from now on – 12 months' supply – have been dry heat-treated to 68° C for 2 hours – HIV-safe.		
January 1985	SNBTS put into production their developed process to dry-heat Factor VIII to 68° C for 24 hours.		
January 1985	SNBTS order specialised heat treatment oven to specification similar to that used by PFL.		
March 1985		All PFL (Oxford) Factor VIII Heat treated – some at 80°C	
May 1985		All BPL (Elstree) Factor VIII heat	

		treated – some at 80°C	
July 1985	SNBTS receive specialised oven (see above) and put to use.		*Lancet* article and letter suggests that clinical data from humans do not bear out the results of chimpanzee studies.
September 1985		All PFL/BPL Factor VIII (up to 40% of England and Wales requirement) heat treated at 80°C.	
1985			US paper suggests "no indication to alter current therapy patterns because of concern over plasma product-related liver disease", but also points out that some studies suggest more insidious nature of disease than previously thought. (ref. 16)
1985			*Lancet* article by Sheffield scientists concludes chronic persistent hepatitis in haemophiliacs not as benign as hitherto supposed; an "understated problem"; suggests NANBH mainly responsible (ref. 17)
Autumn 1985	SNBTS develop highly-purified Factor VIII, but it does not stand up to dry heat		

	at 80°C – NY samples included as control *do* withstand. They conclude that it is the process of freeze-drying which is important rather than purity, when it comes to tolerance of dry heat. Decide to concentrate on 80°C dry treatment of Factor VIII to increase safety margin for HIV (as this was the overriding concern at the time).		
October 1985	Clinical trial and introduction of DEFIX dry-heated to 80° C for 72 hours. (Safety studies had been needed prior to this due to risks of thrombosis).		
Feb 1986	SNBTS management endorse strategy concentrating on 80° C dry heat (see Autumn 1985).		
August 1986	SNBTS produce first full-scale production trial batches of Factor VIII product Z8 (heated at 80°C for 72 hrs).		
September 1986		PFL/BPL report preliminary clinical data showing their 80° C dry-heat	

		8Y reduced risk of hepatitis transmission, and suggest fuller study be carried out. (ref. 53)	
December 1986	Z8 issued for clinical trials.		
April 1987	Z8 made available for routine clinical use.		
April 1987			Clinical studies redone to fit in with ICTH protocol suggest pasteurisation at 60°C for 10 hours effective. (ref. 48)
1988			French study of 60-68°C dry-heated products suggests heating at this level reduces NANBV contamination by 75%
1988	Look-back study shows that NY heat-treated in November 1984 and Jan/Feb 1985 had been prepared using HIV-infected donations, and that HIV virus had not been transmitted – thus demonstrating efficacy of the process as far as HIV was concerned.		
May 1988			US patent granted to Alan Johnson for purification process

October 1988			Paper published in *Lancet* suggests 8Y (heated at 80°C for 72 hours) free from NANBH C risk (ref 60).
1989			Hepatitis C DNA code isolated (ref. 18)
1990			Letter published in *Lancet* suggests 8Y does not transmit hepatitis C risk (ref 61) and undertakes to continue to follow relevant patients.
1992			Paper by Finnish scientists reports that 68°C/72h dry-heated product had been in use in Finland 1985-1991, but the risk of contracting HCV with that product was now seen to be appreciable, before the advent of screening blood-donors for HCV.
November 1992			Report from UK scientists suggests that haemophiliacs exposed only to "super dry-heated concentrates" (for 72h at 80° C) presented no evidence of HCV infection. (ref. 63)

December 1992			Report on behalf of UK Haemophilia Centre directors confirms that 8Y treatment (dry heat at 80°C for 72 hours) seems to reduce risk of HCV transmission from 90% to 0-11%. (ref 62)
May 1993			Study by Haemophilia directors provides additional evidence that dry heat treatment for 72h at 80°C is effective in preventing HIV and HCV transmission (ref. 64)
January 1994			Paper by Italian scientists suggest heat-treated products (pasteurised or dry-heat treated at 68°C for 72h) effective in reducing risk of transmission of hepatitis C, and looks forward to even more effective virucidal treatment. (ref. 67)

SCOTTISH EXECUTIVE

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Date: July 2000

HAEMOPHILIA AND HEPATITIS C
REPORT OF FACTFINDING EXERCISE

The Minister for Health and Community Care, Susan Deacon, has asked me to pass to the Committee the enclosed report and attachments from the factfinding exercise into heat treatment of blood products in the mid 1980s.

The Minister has also arranged to place a copy of the report in SPICe, and will be answering a Parliamentary question on 5 July to make MSPs aware of it.

She accepts the conclusions of the report that:

- the Scottish National Blood Transfusion Service were indeed behind their counterparts in England in producing a heat–treated product which was subsequently found to have eliminated the hepatitis C virus;
- there were understandable technical reasons why this was the case;
- once SNBTS had managed to develop a suitable heat-treated product, they were quickly able to produce sufficient for domestic demand.

She also notes that the report failed to find evidence of any policy by Haemophilia Centre Directors deliberately to mislead patients about the risks of hepatitis. She cannot deal with individual cases where a patient believes he or she was nevertheless misled, although she

sympathises with any patient who was unable for whatever reason to appreciate the risks of their treatment.

The Minister undertook this exercise after listening to public concern that haemophiliacs might have been exposed to risk in Scotland longer than they should have been. She also undertook to consider whether any further action might be warranted after she had considered the report. The Minister considers it an important principle that the NHS should not pay compensation for non-negligent harm; she acknowledges that medical treatment often necessarily involves a balance of risks. She would like to repeat her expressions of sympathy to haemophiliacs infected through blood products, as indeed to all people who have suffered inadvertent harm through medical treatment.

She considers it is important now to improve understanding of the prevention and treatment of Hepatitis C, which affects many different kinds of people. In 1997, The Scottish Office commissioned the Scottish Needs Assessment Programme to report on various aspects of hepatitis C. The Report will cover epidemiology, prevention, investigations, and treatment and will estimate future implications for the Scottish population and for service needs. The Report is expected to be published this summer and the Minister has asked me to say that the Executive will give urgent consideration to its conclusions at that time.

GILL WYLIE
Private Secretary

DRAFT TEXT OF ARRANGED PARLIAMENTARY QUESTION
For answer at 9.30 a.m. on Wednesday 5 July 2000.

[ ]: To ask the Minister for Health and Community Care when she will release the report of the factfinding exercise into the heat treatment of blood products for haemophiliacs in the mid 1980s.

Minister for Health and Community Care (Susan Deacon): I have arranged for the Health and Community Care Committee to receive a copy of the report today, and for a copy to be placed in the Scottish Parliament Information Centre.

I accept the conclusions of the report that:

- the Scottish National Blood Transfusion Service were indeed behind their counterparts in England in producing a heat–treated product which was subsequently found to have eliminated the hepatitis C virus;
- there were understandable technical reasons why this was the case;
- once SNBTS had managed to develop a suitable heat-treated product, they quickly produced sufficient for domestic demand faster than any other country.

I undertook this exercise after listening to public concern that haemophiliacs might have been exposed to risk in Scotland longer than they should have been. I have great sympathy with haemophiliacs infected through blood products, and indeed with all people who have suffered inadvertent harm through medical treatment. I consider it however an important principle that the NHS should not pay compensation for non-negligent harm. I acknowledge that medical treatment often necessarily involves a balance of risks.

On the broader front of the prevention and treatment of hepatitis C, I now await the report of the Scottish Needs Assessment Programme expected this summer. The Executive will give urgent consideration to its conclusions at that time.

ANNEX D

DRAFT NEWS RELEASE

[to follow from InD]

HAEMOPHILIA/HEPATITIS C – PUBLICATION OF REPORT

DEFENSIVE BRIEFING

NB Cannot discuss position of individuals.

Key aspects of report

Report covers period from Sept 1985 – Dec 1987, when it was alleged that haemophiliacs were put at greater risk than they should have been in Scotland because SNBTS had not developed a heat-treated product which had inactivated the agent causing non A non B Hepatitis – later identified as the hepatitis C virus - whereas their England-based counterparts (the Bio Products Laboratory) had.

Report finds that SNBTS were indeed behind their English counterparts as stated, but finds that this was due to the potential for variation in technical processes (heating, freeze-drying) rather than any lack of effort.

Also notes that efficacy of BPL process only demonstrated years later.

Accepts that SNBTS provided 100% of Scotland's requirements in this particular blood product (Factor VIII) by 1988 – know of no other country self-sufficient so quickly.

(Refer any questions on the general treatment of blood and blood products to SNBTS.)

Report also sets out facts concerning what patients might have been told by their clinician about risks. Accept that some information was available to clinicians; also accept that risks of Non A Non B Hepatitis not as well understood at the time as they are today.

Report does not go far enough?

This exercise commissioned by Ministers after listening to specific concerns about the difference in development of adequate heat treatment between Scotland and England. Remit was made clear and communicated to the Haemophilia Society. Report dealt with blood products for haemophiliacs – not blood transfusions. Little point in a wider exercise – we already **know** it's a tragedy, and we know why it happened.

Testing of Blood Donations to eliminate the virus?

Testing outwith the scope of this exercise. At the time in question, the virus could not be positively identified in a blood donation.

Compensation?

NHS does not pay compensation for non-negligent harm. Executive has great sympathy with these people: acknowledges that medical treatment in general often necessarily involves risk. The risks of not treating haemophiliacs would have been serious indeed. NHS and the scientific community working hard all the time to keep reducing treatment risks.

But were haemophiliac patients aware of risks?

Many patients say that they were not. Cannot comment on individual cases, but medical knowledge on Hepatitis C developed through the 1980s. Risks of the general complications of hepatitis mentioned on product insert leaflet which came with the medication.

Compensation paid to people who contracted HIV through blood products, why not HCV?

HIV was perceived at the time as a certain and almost immediate death sentence. Cannot take it as a precedent for every case where treatment results in unintentional harm. Does not mean a lack of sympathy for people affected by HCV.

What about treatment?

Executive's general policy that treatment should be provided according to clinical need; not based on how someone contracted a condition.

It is the responsibility of health boards to assess local needs for patients with hepatitis C and arrange provision of appropriate support, treatment and care services.

Action by Executive?

In 1997, The Scottish Office commissioned the Scottish Needs Assessment Programme to report on various aspects of hepatitis C;

Report will cover epidemiology, prevention, investigations, and treatment and will estimate future implications for the Scottish population and for service needs. **The report is expected to be published this summer and the Executive will give urgent consideration to its conclusions at that time.**

GENERAL INFORMATION

Hepatitis C Virus
First isolated and identified in 1989.
Viral liver infection transmitted principally via percutaneous exposure to blood, most commonly by sharing contaminated equipment by injecting drug users.
Perinatal and sexual transmission also occur.
No vaccine.
Cumulative total of 8075 confirmed cases to 1998 *among general population*. Majority from central belt of Scotland, remaining 9% from Grampian.
Likely that number of unknown cases exceed the number of known cases several fold.
In most cases initial infection is mild and may be asymptomatic.
Approximately 20% of patients recover completely from infection; a minority progress to chronic liver disease 20 or 30 years after infection.
Responsibility of health boards to assess local needs for patients with hepatitis C and arrange provision of appropriate support, treatment and care services.

Haemophiliacs and Hepatitis C

Around 400 haemophiliacs in Scotland.
29 patients first exposed to blood products during period covered by report - 6 have tested HCV positive.
252 haemophiliacs currently living in Scotland known to be hepatitis C positive; most of them would have contracted the virus before the period in question.
15 haemophiliac patients have died of liver disease since September 1985, includes causes other than hepatitis C but does not include patients who were also HIV-positive.

Prepared by: Christine Dora, Health Care Policy 3
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Date: 26 June 2000