TBC 5 &
TBC 19

hep008

RESTRICTED - POLICY

To Mr Hollebon PS(H)

From Roger Scofield

Date 22 December 1994

see attached copy list

HEPATITIS C - THE GOVERNMENT'S RESPONSE

SYNOPSIS

1 This paper seeks to identify the action which should be taken by the Department to assist those who have been infected with hepatitis C (HCV) as a result of blood transfusion or the use of blood products for the treatment of haemophilia. It includes a recommendation to undertake a "look-back" programme to identify those at risk. The submission is being made in parallel with proposals to strengthen the position on the NBA's plans for the future of the National Blood Service.

BACKGROUND

2 About 3000 people with haemophilia and about a further 3000 people who had blood transfusions prior to September 1991 are believed to have been infected with HCV as a result of NHS treatment. The Department has denied negligence and Ministers have refused calls for compensation. A note is provided at **Annex A** which describes the transmission of hepatitis C and explains the timing of the introduction of testing for the virus. It also estimates the numbers of recipients infected.

Pressure for action

3 It has been known for at least five years that some people will have been infected through NHS treatment and we have expected at any time a campaign to be mounted along the lines of that for HIV. In recent weeks there has been increased media interest and a series of EDMs, an adjournement debate, and a large number of PQs and PO cases. Writs have been taken out against a former regional transfusion centre and we are aware of others being prepared.

4 In addition to the concerns of those directly affected certain solicitors are seeking to establish themselves in the field of medical negligence, local MPs are pressing the cases of their constituents and the Swiss drug company Roche have recently been granted a licence for the first drug approved for use in the treatment of hepatitis C.

Panorama programme

5 Panorama are proposing to screen a programme on HCV and blood transfusions 9 January 1995. This is likely to claim that many people may have been infected through blood transfusions but remain unaware of it. They will be pressing for Government action

to identify those at risk and asking why action was not taken earlier to screen blood donations. A number of staff from the Blood Transfusion Service in England, Scotland and Eire have been interviewed for the programme. It is known that some feel strongly that action should be taken to identify patients at risk. Whilst there are satisfactory answers to the main claims, (eg. see para. 2 of Annex A and paras. 11 and 12 below) the programme is likely to bring increased pressure from MPs, the media and the public for action to be taken.

Haemophilia Society

6 In September the Haemophilia Society, which represents the interests of about 4500 members who have haemophilia, issued a statement saying that they were not proposing to pursue any financial claim against the Department but they did wish to see a series of actions taken to ensure that those affected received the best treatment possible. Following a conference the Society modified their position to call for financial help for those suffering from actual illness.

The legal position

7 The Department's lawyers have not yet taken Counsel's advice on whether any case exists for negligence. Officials have taken the line throughout that everything has been done that could have been and that they acted on the advice of the Advisory Committee for Virological Safety of Blood (ACVSB - the predecessor of the MSBT) which was set up specifically in order to provide Ministers with advice on blood safety. It is planned to assemble the key documents and to seek Counsel's opinion in the New Year. Meanwhile action is in hand to ensure that any writs taken out against any component part of the transfusion service are co-ordinated by the NBA centrally.

8 Meanwhile our lawyers have advised that Secretary of State may have a duty of care to do whatever can reasonably be done to identify, inform, counsel and treat any who may have become infected as a result of NHS treatment. This is not entirely clear; nor is it an absolute duty but in circumstance where:

* SofS acknowledges a broad responsibility for public health and the care of those in need of medical treatment;
* and is in the habit of issuing warnings concerning action to be taken to safeguard health and of seeking to identify those who are in particular danger of suffering ill health;
* and if there is action that can be taken to identify those who may be at risk;
* and having identified them there is action that could be taken to assist them;
* then if no such action is taken the SofS might have a case to answer.

ACTION THAT CAN BE TAKEN

9 There are a number of actions which can be taken short of financial assistence. They include:

i) identifying those at risk, informing them and providing appropriate counselling and care;
ii) ensuring that appropriate treatment is available for them;
iii) undertaking research into the best forms of treatment and management of the disease.
iv) support of any self-help initiatives.

These will be considered in turn.

Identification of those who are at risk

10 The majority of those who were being treated for haemophilia prior to 1985,(after which blood products were routinely heat treated) are assumed to have been infected. They are nearly all under the care of haemophilia centres. Some individuals have been found to have contracted HCV and this has been traced to blood transfusions they have had prior to September 1991. After that date all donations of blood were tested for HCV.

11 It is possible to identify others who may be at risk because they received blood from donors who it was subsequently found were HCV positive. This process is known as "look-back". Until recently it was considered that lookback to identify recipients of blood transfusion who are at risk would be technically difficult; and as there was no effective treatment, to inform people they were at risk, when there was nothing that could be done about it, would increase distress without any benefit.

12 The position has changed on both counts. There is now some confidence that many, but not all, recipients of blood infected with hepatitis C can be identified and some treatment regimes using interferon alpha have been licensed. The Advisory Committee on the Microbiological Safety of Blood and Tissue for Transplantation (MSBT) at its meeting 15 December agreed to advise Ministers of the four Health departments that:

i. In MSBT's view there is a duty of care towards those infected with HCV as a result of NHS treatment. It follows that procedures should be put in place to identify those patients at risk;

ii. Whatever is done should be done equally and uniformly throughout the UK;

iii. Guidance should be drawn up as soon as possible:

a) on procedures for identifying those at risk, and

b) While it was for the medical practitioner responsible for each patient identified as at risk to decide what should be made known to the patient about his/her risk status, and to decide whether

and what treatment should be advised, guidance on the counselling and treatment options would be desirable."

13 The MSBT further advised that if Ministers agree to a "look back" programme an ad hoc Working Party should be established to provide the necessary guidance. The Working Party would be drawn from members of the MSBT and the Advisory Group on Hepatitis.

14 The position is futher complicated as earlier in the month officials in Scotland, having carried out a pilot research study and satisfied themselves that a look-back exercise on Scottish patients would be feasible and practicable advised their Ministers that they had a clear legal duty to undertake such a programme, whether other Health Departments did so or not. It is understood that Lord Fraser has decided to instruct the SNBTS to go ahead with such work immediately since he considers that any delay could put Ministers into a legally untenable situation. He will be writing to PS(H) and other Health Ministers. For one part of the UK to proceed to a look back on its own would be untenable. It is vital if the risk to legal challenge is to be minimised to maintain maximum commonality between policies throughout the UK.

Treatment

15 50% of sufferers from hepatitis may progress to chronic hepatitis with varying degrees of ill health - it can cause liver damage and mortality. Perhaps 20% of infected patients will develop cirrhosis, a progressive destruction of the liver, that may take 20 to 30 years. In addition a small proportion will develop primary liver cancer after a further time. Certain patient groups may have a worse prognosis and a more rapid disease progression, eg. immunosuppressed patients, those co-infected with HIV and/or hepatitis B, and possibly haemophiliacs.

16 Until recently there has been no widely accepted treatment for hepatitis C. Interferon alpha is the only extensively studied agent shown to be effective but results are disappointing. In approximately 50% of patients with chronic hepatitis C treated with interferon alpha there is evidence of the virus being cleared from the body. While relapse rates are high some 20 to 25% of patients currently being treated have a sustained response. Advances in the treatment of viral disorders are expeceted in the next few years that may improve response rates.

17 There will be advantage if good practice guidance can be prepared and made widely available to ensure that those affected may be given appropriate treatment. Consideration also needs to be given to ensuring that those infected through NHS treatment get access to treatment.

18 Further information about treatment and access is set out at **Annex B**. Annexes B and C are likely to be of most interest to medical copy addressees.

Research

19 There are a number of areas of research which may need to be considered as part of a response package. This might be directed to the understanding of hepatitis C and its most effective treatment and management. A note is included in **Annex B.**

Support for self-help initiatives

20 The Haemophilia Society has already submitted a bid for S64 support of a research programme they are setting up to identify the best way to help society members who are infected with HCV. The Department has already made a payment in 1994/95 to allow the project to get started but has not yet confirmed that they will provide funds for the full three years. This will be put forward as a high priority case within the next few weeks and Ministers will be invited to give approval, if necessary in advance of the normal cycle.

21 This is only one example of ways in which the Department can help a self help group. Transfusion recipients have no similar organisation working for them.

IMPLICATIONS FOR OTHER GROUPS OF PEOPLE INFECTED WITH HCV

22 The above actions are proposed because of the duty of care that Ministers may have for those infected through NHS treatment. It must be acknowledged that once treatment is available for any group all others with the same condition, irrespective of the source of their infection will expect access to the same facilities. The largest such group is those who have become infected through drug use involving the sharing of needles.

23 **Annex C** provides a note on the numbers of people infected with hepatitis C from all sources. It explains that the number of people infected in the UK is not known but offers a general figure in the region of 100,000. The largest numbers will be in intravenous drug misusers some of whom may have only injected occassionally and several years ago. Any estimate must therefore be treated with caution; some have suggested it may be as high as 400,000. There are already pressures to test all drug misusers and to offer treatment wherever appropriate and any special programme for those infected by NHS treatment would add to the pressure. This would have significant but as yet unquantifiable effects on costs and resources. They would have to be contained within existing programme costs.

Cost Implications

24 It is very difficult to get any estimate of the cost of the action proposed. The look-back exercise will have little direct cash cost for the Transfusion Service in identifying those at risk. The cost of the follow up counselling and treatment would have to come out of present programme costs and no separate provision has been made for this. Assuming all 6000 people infected as a result of NHS treatment were to receive interferon treatment then the cost of the drugs could be as high as £12m

25 In practice it is likely to be very much less than this. Some patients are already receiving treatment. Others would be unsuitable for it and as yet there is no evidence to show that its use on those who are asymptomatic is beneficial.

26 The cost of extending the same treatment to all those who are suffering from hepatitis C from whatever source cannot be even "guestimated at this stage". Such cost would need to include increased numbers of consultants.

CONCLUSION

27 The Department cannot dispute that a number of people have been infected through NHS treatment but deny negligence. The case does not have the same exceptional circumstances as did the HIV infection where those affected were all expected to die very shortly and were subjected to significant social problems including ostracism. Ministers have therefore made clear that they have no plans to introduce a payments scheme. There are practical steps that can be undertaken to assist those affected and those at risk.

28 In particular both the Departments lawyers and the MSBT advise that there is a duty of care towards those who may be at risk. Ministers have been advised by the MSBT that procedures should be put in place to identify those patients at risk and that this should be done on a UK wide basis. Subject to Ministers' agreement an ad hoc Working Party would be set up to put together guidance on counselling and treatment options.

29 In addition to the identification of patients at risk steps should be taken to ensure that treatment is made available and that consideration is given to any additional research which might be required to improve the treatment and management of those affected. The Department should also give sympathetic consideration to appropriate requests for support from any self help groups which might be able to provide cost effective assistence to their members.

ACTION PROPOSED

30 Since it is known that Lord Fraser is writing to PS(H) and colleagues informing them that the SNBTS will be going ahead with look-back immediately it may be best for PS(H) to wait for that letter and then to press for a UK wide approach. Although it may be necessary to accept that the Scots will make a start on their part of the exercise immediately, it may be possible to use this as some form of pilot for the wider task.

31 If Ministers accept MSBT's advice, then PS/(H) may wish to instruct Dr Metters, the Committee's Chairman, to set up without delay the ad hoc Working Party the Committee proposed. Officials will discuss with MSBT any other action which needs to be taken, including research.

32 Ministers will be in a stronger position to respond to any future calls for action and questions about the Government's response once such decisions have been taken.

Panorama Programme - Handling

33 Minister has already decided not to appear on the Panorama programme. A statement will be made instead in answer to the three questions posed. It may be appropriate to let it be known that the Health departments do intend to undertake a look-back exercise and that a Working Party has been convened to draw up suitable guidance so that it can be put in hand as soon as possible. Consideration is being given to what guidance needs to be given to GPs and other medical practitioners to deal with any enquiries from worried patients who may or may not have cause for concern.

SUBMISSION

34 Is PS(H) content? Does he wish to hold an urgent meeting with officials?

35 Copies of this submission have been sent for information to the Chief Medical Officers of the territorial Health Departments.

R M T Scofield
CA OPU
EH303 Ext GRO-C

HEPATITIS C – THE GOVERNMENT'S RESPONSE

COPY LIST

Mr Mogford PS/SofS
Mr Taylor PS/M(H)
Miss Woodeson PS/PS(L)
Ms Roughton PS/Perm Sec
Ms Probert PS/CE
Dr Harvey PS/CMO
Mr Shaw DCA
Mr Heppell HSSG
Dr Metters DCMO
Dr Winyard DMed
Miss Christopherson DI
Dr Rejman HC(M)1
Dr Nicholas HP(M)
Mr Blake SolB4
Mr Milledge SolC2
Mr Dobson NCIA FLIP
Mrs Griffin RD2
Mr Murphy PMD Comms
Mr Kelly CA OPU2
Mr Paley FCIA FLIP
Mr Burrage CA OPU2
Miss Greaves ID

plus the CMOs from the territorial Health departments

ANNEX A

HEPATITIS C AND TRANSMISSION BY BLOOD AND BLOOD PRODUCTS

History

1. It has been known for several decades that Hepatitis could be transmitted by blood. In the early 1970's, test kits were developed which identified donors capable of transmitting Hepatitis B. However even when blood was screened by these methods, some recipients of blood and blood products continued to develop Hepatitis. Hepatitis A was excluded by testing in a few cases, but anyway this was considered to be transmissible only by the faeco-oral route. The third type of Hepatitis was therefore called non A non B Hepatitis. A test for this virus was developed in 1989, when this form of Hepatitis was called Hepatitis C.

2. The original tests were very poor, with only 16% positives being correct. The test has been improved considerably since then, and also confirmatory tests became available. The testing was considered by the Advisory Committee for Virological Safety of Blood (ACVSB - predecessor of the MSBT) and following their advice testing was introduced in the UK on 1 September 1991. Some other countries introduced the test earlier, but the ACVSB considered the deficiency in sensitivity and specificity to be too great.

Haemophilia

3. Prior to the mid 60's, haemophiliacs had a markedly reduced life expectancy, with 5% of severe haemophiliacs reaching the age of 40. From the mid 60's onwards, cryoprecipitate and later specific factor 8 and factor 9 were produced. Immediately prior to the onset of AIDS in haemophiliacs in the early 1980's, the life expectancy of haemophiliacs had almost reached the normal for western males.

4. The occurrence of Hepatitis C (then called non A non B) in haemophiliacs was recognised from the late 60's onwards. Paid donors has a higher incidence of Hepatitis C than did unpaid donors, and this was demonstrated by a lower incidence in haemophiliacs who were treated with individual donations of cryoprecipitate. However, where an individual had multiple treatment with cryoprecipitate (20 individual donations on each occasion), and later with specific factor 8 (from pools of donations of up to 20,000) it became obvious that all haemophiliacs would become infected.

5. Hepatitis C is particularly common among drug abusers, and it was felt that these primarily contributed to the infection. In 1982 trials were started using some heat treated factor 8 to try to reduce the incidence of Hepatitis C. These early trials were only partially successful and so the technique was dropped and was re-introduced in late 1984 to destroy HIV.

6. It is probable that all haemophiliacs who were treated before 1985 would have been infected with Hepatitis C. Since 1985, all factor 8 and factor 9 has been treated to destroy HIV and Hepatitis C. A very small number of haemophiliacs who have been treated only with cryoprecipitate after 1985 and before September 1991 may have become infected with Hepatitis C.

Blood Transfusion

7. Blood transfusion recipients received individual donations, and because of the relatively low incidence of Hepatitis C in blood donors generally, only a small proportion will have become Hepatitis C infected. (No blood is imported into the UK and so no paid donors are involved). The first significant reduction in the risk of Hepatitis C transmission via blood was when in 1983 exclusion criteria were set up to reduce the risk of HIV transmission, prior to the availability of HIV screening tests. Among the exclusion categories were drug abusers and homosexuals. There have been several writs received by regional transfusion centres, which have primarily referred to the time between 1989 when HCV tests first became available and September 1991 when screening was introduced in the UK.

Numbers Involved

8. In 1993 there were 5,400 haemophilia A patients and 1,100 haemophilia B patients registered with the haemophilia centres giving a total of 6,500. 1,100 are HIV positive. Approximately 800 are under 10 and so are unlikely to have had any treatment prior to 1985. Only approximately half of the patients required treatment in any given year, and some have never been treated at all. At a guess this would leave approximately 3,000 individuals who are Hepatitis C positive but not HIV positive.

9. In 1993 there were 126 deaths in patients with haemophilia, of whom 59 died of AIDS and 12 died of liver disease. Of these 12 patients 8 were also HIV positive, and there is substantial evidence that patients with both HIV and HCV are more likely to go onto severe liver disease. The number dying of liver disease has increased over the last few years, and it is difficult to predict whether we have now reached a plateau.

10. The blood transfusion consultants committee on transmitted disease, suggest that 3,000 blood transfusion recipients are alive who are Hepatitis C positive. The Department has no better figures than this.

ANNEX B

HEPATITIS C

Treatment

Interferon

1. Interferon alpha (IFNα) is the only extensively studied agent shown to be effective, but results are disappointing. It has generally been used in patients with HCV with chronic active hepatitis in an attempt to prevent progressive liver disease. In approximately 50% of patients with chronic hepatitis C treated with IFNα, serum aminotransferase values are normal and HCV RNA is undetectable by the end of therapy. This response usually occurs before twelve weeks. Relapse rates are high, with perhaps 50% of those responding relapsing within the first year of stopping treatment and a small number relapsing during the second or third years. Only 20-25% of patients currently being treated for hepatitis C have a sustained response to IFNα. Different trials have used different doses of IFNα which has to be given by subcutaneous injection three times a week for six months. The effectiveness of higher doses of IFNα or an extended period of treatment are currently being evaluated, as is the use of IFNα in combination with other antiviral agents.

Cost implications

2. Roche have recently received a product licence for the use of IFNα in chronic hepatitis C. Their prescribing information recommends induction with 6 million IU three times weekly for three months followed by maintenance with 3 million IU three times a week in responders (normalised ALT). The cost of 3 million IU of IFNα is given as £16.96 which would put the cost for an individual patient using the proposed regime for six months of £1,984.23. This could be reduced to around £1652.60 overall if treatment on non-responders was terminated after three months. With present results, the cost-benefit ratio is high as 4-5 patients have to be treated to obtain one sustained response. There are no long term follow up studies. There is no information on the benefits of early treatment, although it may be advocated by some, and could be an area for research.

Improving access to (testing and) treatment

3. Since any lookback study for hepatitis C among transfusion recipients and subsequent referral for treatment is likely to raise expectation that similar treatment will be offered to those infected by other means, the question of improving access for screening and treatment is essentially one of resources. This would require purchasers to assess the implications for their own populations and then ascribe the testing and treatment of hepatitis C the appropriate level of

priority. It is possible that priority levels might not rate equally among different purchasers resulting in an unequal approach to treatment etc. There is the danger that there might be calls for 'ring-fenced' monies for hepatitis C as there were for HIV/AIDS. There is also the question as to whether the current specialist units could cope adequately with increased referrals. Haemophiliacs are another group who are asking for increased provision of services.

Research

4. Possible areas of research could be:-

i) Seroprevalence study - this would probably need to be fairly large and could be expensive. The British Liver Trust have sought funding for this from ASPU. A study might be cheaper if commissioned from the PHLS and if it were possible to access any existing sera banks. PHLS are currently developing methods for economic detection of anti-HCV in serum by 'serum pooling' strategies, research funded by DH.

ii) Use of interferon - trials with IFNα in chronic hepatitis C have mostly been on patients with more severe liver damage (usually with chronic active hepatitis); there have been no controlled trials in the so-called 'asymptomatic carriers' or on those with lesser liver damage. I am not aware of any clear indications for the use of IFNα and the Roche prescribing information for its use in "chronic hepatitis C" leaves this wide open.

iii) there could be more research into genotypes and their relation to disease progression and the response or not to interferon

iv) a follow-up evaluation of asymptomatic carriers with apparently mild disease

v) more basic science into possible measures of infectivity in individual patients, of understanding the mechanism of viral persistence in those who have acquired hepatitis C and of the mechanisms of hepatitis C virus induced liver damage.

vi) no vaccine against hepatitis C is likely for several years; the recent court ruling in favour of Chiron may cause some investigators to withdraw from this field.

RESTRICTED – POLICY

ANNEX C

HEPATITIS C

1. There are many uncertainties about hepatitis C but in terms of the numbers infected, the proposed lookback in patients who may have received blood from an infected donor will only be the tip of the iceberg.

Number of hepatitis C patients

2. The short answer to the number of HCV infected patients is we do not know. Perhaps only 10% of those who become infected with hepatitis C develop jaundice and hence acquisition is most often not detected. Unlike hepatitis B where, when infection is acquired in adults, only 2–10% fail to eliminate the virus after a year, it is now thought that a persisting viraemia occurs in around 80% of those infected with hepatitis C.

Seroprevalence

3. There have been no large population seroprevalence studies in the UK. It is understood this may well be a point made in the forthcoming 'Panorama' programme, though criticism may be levelled at PHLS rather than at the Department. Currently there is no simple test to detect antigen in the blood and tests for anti-HCV would not distinguished between those with past and those with current infection, but any results would obviously be helpful in assessing the magnitude of the problem.

Data from blood donations

4. In the first two months after routine blood screening for hepatitis C was introduced, 24 of 36,843 (0.06%) donations at the North London Blood Transfusion Centre were confirmed as anti-HCV positive (a further 44 (0.12%) were indeterminate). In the first four months of screening Trent found 40 of 69,473 (0.058%) of all donors were anti-HCV positive, and in the first year of screening 16 or 25346 (0.063%) new donors were anti-HCV positive. In the N London and Trent studies 46% and 53% respectively of HCV infected blood donors reported previous use of injected drugs which was felt to be the likely route of transmission. It was the largest single risk factor.

5. Because of requests for voluntary self exclusion, primarily for HIV risk activities but also because of hepatitis, blood donors are a group who are less likely to have injected drugs than the general population. Further, as some other groups who are at risk of hepatitis C will not donate blood (eg those on dialysis or those in receipt of blood or blood products) the overall prevalence of anti-HCV in the population is likely to be greater than the 0.06% indicated in the two small transfusion studies.

Injecting drug misusers

6. The largest group at risk of carrying hepatitis C will be injecting drug users, both current users and those who may have injected drugs in the past, sometimes the distant past and only for a short period. There is evidence to suggest that perhaps between 50-80% of intravenous drug users will test positive for anti-HCV. Rates vary with geographical area.

7. The Advisory Council on the Misuse of Drugs (ACMD) are taking an active interest in HCV in injecting drug users with some of its members pressing for testing for all past and present users. They are asking DH to arrange a days workshop so that the issues can be fully discussed. Although the number of injecting drug users (both past and present) is not known, one ACMD member, who has been active in organising a survey of test results performed by drug treatment agencies in various parts of the country and who is pressing for more treatment for those found positive, laid before ACMD a paper which estimated that the number of intravenous drug users that may have been infected with HCV in the UK could be around 400,000-500,000. How this figure was derived was not explained.

8. The Health of the Nation Key Area Handbook: *HIV/AIDS and Sexual Health* states in para 4.1.4, "The preliminary results of the National Survey of Sexual Attitudes and Lifestyles show that less than 1% of the population reported having injected drugs (other than those medically prescribed) in the last five years - a total of roughly 100,000 in England and Wales. More than half of these reported sharing equipment." These figures are only for the last five years and will not include those who may have injected 10-15 years ago when sharing of equipment may have been higher before needle exchange schemes existed and before the risks of HIV transmission were appreciated.

9. Whichever way this is looked at there may be well over 100,000 intravenous drug users infected with HCV with increasing pressure for testing of this group and referral for treatment. The survey referred to above showed there was difficulty in obtaining tests in some areas and of the onward referral for treatment of many of those found to be positive. Lookback testing and treatment of blood recipients will raise expectations amongst those pressing for testing and treatment of drug misusers. Intravenous drug users would place the heaviest burden on resources for testing and treatment. One ACMD member has called for ring fenced monies to treat HCV in drug misusers.

Haemodialysis units

10. The prevalence of anti-HCV is raised in those undergoing renal haemodialysis with rates varying between 4% and 47% in studies around the world. Higher figures relate to countries where the underlying prevalence of hepatitis C in the population is high and where infection control procedures may not be good. Accuracy of some data may be questioned because insensitive assays were used. Most studies show a relationship

between HCV seropositivity and previous blood transfusion but intra-unit spread is also known to occur and prevalence rates can alter considerably over time even now blood is screened for anti-HCV.

11. In one UK unit 9 of 66 (14%) patients on maintenance haemodialysis were found to be anti-HCV positive and in two cases seroconversion was documented by examination of earlier sera. Many had had previous blood transfusion (median number of eight units). The question of the 'duty of care' for those infected as a result of intra-unit spread might be seen as similar to that for those infected as a result of blood transfusion.

Health care workers

12. Health care workers will be at occupational risk of acquiring HCV from infected patients. The risk appears to lie intermediate between the high risk of acquiring hepatitis B and the low risk of HIV. It will be higher among certain health care workers such as surgeons, dentists etc where the risk of exposure is greater. There has been little work on individual groups in the UK. Again the NHS may be seen as having a 'duty of care' for those infected in its service.

Sexual, household and vertical transmission

13. In general perinatal, sexual and household transmission are relatively less efficient modes of transmission. Transmission may depend upon the concentrations of circulating virus which are generally thought to be low in infected people. Overall perinatal transmission may be around 5% (this compares with around 90-95% transmission from hepatitis B e-antigen positive mothers to their babies that would occur in the absence of prophylactic therapy). Screening of sera derived from GUM clinics show low seroprevalence rates usually only in the order of 1-2%. Homosexuals, and heterosexuals with multiple partners may be at increased risk of acquiring HCV. Transmission may occur through sharing razor blades etc and has been reported after tattooing etc.

Overall numbers

14. Precise numbers for those infected with HCV are not known and estimates difficult. I believe the British Liver Trust suggest prevalence rates of between 0.1 to 1.0% and these are the figures that are likely to be quoted on the 'Panorama' programme. Whilst the 'true figure' might be expected to be nearer the 0.1 end, the uncertainty about the number of iv drug abusers who may have become infected over the last twenty or so years means it could be considerably higher.