SCOTTISH HOME AND HEALTH DEPARTMENT

HIV INFECTION IN SCOTLAND

Report of the Scottish Committee on HIV Infection and Intravenous Drug Misuse

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Introduction

1. In December 1985 reports of 2 studies in Edinburgh revealed a prevalence of Human Immunodeficiency Virus (HIV) antibody seropositivity in intravenous drug misusers which was considerably higher than that previously reported anywhere else in the United Kingdom and higher than in many places in Europe and the United States. (Peutherer et al 1985: Robertson et al 1986.) This was a matter of concern in itself, but especially because the transmission of the virus by the sexual route from intravenous drug misusers could lead to wider spread of HIV infection into the general population, including individuals who are not in the previously recognised at-risk groups.

2. There was therefore an urgent need to determine the reason for this high prevalence and to consider what could be done to contain it. Accordingly, the Chief Medical Officer set up a Scottish Committee drawn from those concerned with HIV related matters and also those concerned with the problem of drug misuse, to undertake this task.

3. Dr D B L McClelland, Director, South East Scotland Regional Blood Transfusion Service, accepted the Chairmanship of the Committee which met for the first time on 27 February 1986.

Terms of Reference

4. The Committee, named the Scottish Committee on HTLV III (later HIV) Infection and Intravenous Drug Misuse (SCHIIDM), was given the following terms of reference: "To review the extent of infection by the HTLV III virus in Scotland, particularly amongst intravenous drug misusers and to consider what steps should be taken to contain the spread of infection and to allay public concern".

Membership of SCHIIDM

5. Chairman

Dr D B L McClelland	Director, South East Scotland Regional Blood Transfusion Service

Members

Dr R Antebi	Consultant Psychiatrist, Duke Street Hospital, Glasgow
Dr J V Basson	Consultant Psychiatrist, Royal Edinburgh Hospital
Dr G E Bath	Community Medicine Specialist Lothian Health Board, Edinburgh
Dr J E Berkeley	Community Medicine Specialist, Grampian Health Board, Aberdeen (from 28 August 1986)
Dr R P Brettle	Consultant Physician, ID Unit, City Hospital, Edinburgh
Dr J A N Emslie	Consultant Epidemiologist, Communicable Diseases (Scotland) Unit Ruchill Hospital, Glasgow

Mr Andy Fox	Project Leader, Bridge Project, 17 River Street, Ayr
Dr D H Kennedy	Consultant Physician, ID Unit, Ruchill Hospital, Glasgow
Dr J F Peutherer	Senior Lecturer in Virology, University of Edinburgh
Dr J R Robertson	General Practitioner West Granton Medical Group 1 Muirhouse Avenue, Edinburgh
Dr R G Small	Chief Administrative Medical Officer, Tayside Health Board, Dundee
Dr J M Sommerville	Consultant in Genito-Urinary Medicine Glasgow Royal Infirmary
Mr T Steele	Rector, Johnstone High School

Secretariat

Dr R G Covell, Medical Secretary,	Senior Medical Officer, Scottish Home and Health Department
Mrs F K Neep, Administrative Secretary, (until 14 July 1986)	Scottish Home and Health Department
Miss S DiCiacca, Administrative Secretary, (from 14 July 1986)	Scottish Home and Health Department

SHHD and CSA

Dr A D McIntyre	Principal Medical Officer, SHHD
Dr R M Melville	Senior Medical Officer, SHHD
Mr A M Macpherson	Assistant Secretary, SHHD
Mr L C Cunning	Principal, SHHD
Mr K W McKay	Assistant Secretary, Police Division, SHHD
Mr S C Mitchell	Director, Scottish Health Education Group, (SHEG)

Invited to Attend

Dr D Black	Senior Medical Officer, DHSS
Mr T U S Murray	AIDS Unit, DHSS
Mr D Liddell	Co-Researcher, Standing Committee on Drug Abuse (SCODA) Edinburgh Drugs Field Study
Dr Andrew Moss	Department of Epidemiology, San Francisco General Hospital
Dr John Marks	Consultant Psychiatrist, Halton Hospital, Runcorn
Dr Elizabeth Tylden	Consultant Psychiatrist, Lambeth, London

Approach

6. Guidance was given by the Chief Medical Officer before the first meeting of the Committee. Though the issue of the availability of needles and syringes had received so much media interest, he advised that this should be considered in a wider context. There was a need for an informed and balanced view of the whole problem of HIV infection and drug misuse. While the Committee would find it difficult to make recommendations quickly any interim guidance would be welcome. It

should be remembered that the Expert Advisory Group (EAGA) and the Advisory Council on the Misuse of Drugs (ACMD) would have to be kept informed of the Committee's deliberations because the Scottish experience with HIV infection was apparently different to that in the rest of the United Kingdom.

7. The Committee concentrated on the areas of activity relevant to the spread of infection among drug misusers, conscious of the need to avoid tackling the entire problem of drug misuse. The first priority was to acquire a good knowledge of existing work in the drug field and to determine ways in which these efforts might be particularly directed and strengthened in relation to the HIV problem. The second was to develop a clear understanding and opinion about the size of the public health problem posed by the HIV infection including appraisal of the prospects for various forms of prevention and treatment because of the possibility that this might alter the approach to the drug problem. Later it became clear that consideration had to be given to the future resource implications for Scotland of HIV infection in the drug misusing population.

Method of Working

8. The Committee decided to appoint Sub Groups to examine specifically the areas of health education and counselling; the work of agencies providing help for drug misusers; and the implications of Methadone therapy.

9. Speakers from outside the Committee have been: Dr D Black, Senior Medical Officer, DHSS, accompanied by Mr T U S Murray, AIDS Unit, DHSS; Mr D Liddell, Co-Researcher, Standing Conference on Drug Abuse (SCODA), Edinburgh Drugs Field Study; Dr John Marks, Consultant Psychiatrist, Merseyside; Dr Elizabeth Tylden, Consultant Psychiatrist, Lambeth, London. Also invited to attend and contribute was Dr Andrew Moss, Department of Epidemiology, San Francisco General Hospital, who is in this country to study the epidemiology of HIV infection in intravenous drug misusers in collaboration with Prof Michael Adler at the Middlesex Hospital, London. A paper "Limiting LAV/HTLV III virus transmission in injecting drug misusers" submitted by Mr Derek Ogg, Scottish Aids Monitor, was considered by the Committee.

10. In April Dr McClelland and Dr Covell visited Amsterdam to obtain, at first hand, an impression of the management of drug misuse and infection among users in that country. A report was submitted to the Committee.

11. The Committee met on 4 occasions, in February, April, June and August 1986.

12. Following the first meeting a preliminary report was sent to the Chief Medical Officer recommending that limited steps be taken to permit practitioners to provide clean injecting equipment to certain patients. This report is attached as appendix 1.

AIDS, HIV Infection and Drug Misuse

13. AIDS is the most severe manifestation of infection with the human immune deficiency virus (HIV). The condition is fatal; the virus destroys the body's immune system and sufferers usually die within 12 to 18 months as a result of repeated severe infections. Various forms of

cancer are common and in some patients the virus also affects the brain causing dementia. Since 1981 490 cases of AIDS had been registered in the United Kingdom up until 31 August 1986. Of these cases 12 were reported from Scotland and 6 of these have died. Four of those reported from England were intravenous drug misusers, 3 men and one woman and 5 were heterosexual contacts of infected persons. To date no Scottish cases of AIDS have been reported who are intravenous drug misusers or heterosexual contacts. For every case of AIDS there is a large number of individuals who are infected by the virus but do not have symptoms. These symptomless virus carriers are nevertheless infectious, probably for life, and many will eventually develop AIDS.

14. AIDS was initially recognised as a condition mainly affecting homosexual men and to a lesser extent injecting drug misusers and recipients of blood products. The disease acquired the label of a "gay plague" and this stigmatisation has in some countries hindered a rapid public health response to a major new problem. It cannot be overemphasised that spread of HIV is not restricted to those groups originally recognised as being at risk, and that it represents a serious threat to the general population.

15. The main methods of transmission of HIV are through sexual contact with an infected person, male or female; the sharing of infected needles and syringes by drug misusers; from an infected mother to her child before, during or after birth. The risk of contracting AIDS in the UK from infected blood transfusion or blood products has been virtually eliminated by screening of blood donations and by heat treatment of blood products. Whilst the virus has been found on occasion in both tears and saliva, there are no known instances of the infection having been transmitted by contact with these fluids.

16. The misuse of drugs spans a very wide range of behaviour from experimental use through occasional recreational use and regular but non-addicted use, to addiction. In much of England and Wales it appears that experimentation usually does not involve injection but in Scotland the first use of hard drugs is usually by injection. There may be progression downhill from experimentation to addiction but patterns of drug use are extremely variable and many individuals may inject only occasionally. The number of experimental, recreational or regular users is much greater than the number recognised as being addicted. Many of these individuals do not seek help and their drug misuse is not recognised.

17. Since HIV infections can be transmitted by even a single injection with an infected needle, any misuse of drugs which involves shared injecting equipment is hazardous. Sharing becomes extremely dangerous if the prevalence of HIV infection in the drug-using community is high.

18. Infection with HIV poses a much greater threat to the life of the individual than the misuse of drugs. The infection is likely to be asymptomatic for about 3 years but thereafter each year about 10% of infected patients will progress to AIDS and will die. There is at present no indication that this relentless process will eventually slow down, so it must be predicted that the eventual mortality among those who become infected will be very high.

19. Drug use occurs mainly among young people. They are sexually active and are likely to have sexual contact with partners who may well not be involved in drug misuse. In addition, it is known that drug misusers, male and female, frequently turn to prostitution as a source of income to finance their drug purchases. There is therefore a serious risk that infected drug misusers will spread HIV beyond the presently recognised high risk groups and into the sexually active general population. Very extensive spread by heterosexual contacts has already occurred in a number of African countries.

20. The Committee proceeded on the assumption that no vaccine will be available for 3-5 years and that effective chemotherapy for HIV infection is also a remote prospect, although life-prolonging supportive therapies may become available. There is therefore an urgent need to contain the spread of HIV infection among drug misusers not only to limit the harm caused to drug misusers themselves but also to protect the health of the general public. The gravity of the problem is such that on balance the containment of the spread of the virus is a higher priority in management than the prevention of drug misuse. Abstinence however must remain an important aim.

Present Extent of HIV Infection Among IDM in Scotland

21. Since October 1985, virus laboratories and the Blood Transfusion Service have been asked to report HIV antibody positive cases to the Communicable Diseases (Scotland) Unit (CD(S)U). Of the 795 reports of HIV antibody positivity received up to 30 June 1986, 511 (64%) were from individuals reported to be injecting drug misusers (IDM). The Tables in Appendix 2 show the geographical distribution of these HIV positive reports and the transmission categories of the infected persons. Five separate studies in Scotland have shown the following results.

Location	Type of Sampling	No	% Pos.	
Glasgow	Samples from IDM sent to regional virus laboratory	606	4.5	(Follett et al 1986)
Dundee	Samples from IDM sent to regional virus laboratory	129	39	(Small, personal communication 1986)
Edinburgh	Samples sent from suspected IDM attending Edinburgh Royal Infirmary	106	38	(Peutherer et al 1985)
Edinburgh	IDM attending a general practice	164	51	(Robertson et al 1986)
Edinburgh	IDM attending a self-referral clinic Oct 1985 to May 1986	94	54	(Brettle et al 1986)

22. These studies show moreover that no patient appears to have had detectable HIV antibody before mid 1983 and that the number of antibody positive patients detected rose very rapidly during 1984 and 1985.

23. The Scottish situation is markedly different from that reported from England and Wales where, up to January 1986, IDM represented only 54 out of 2,081 reports of HIV positivity (2.6%) received by the Public Health Laboratory Service (PHLS), and only 11% of IDM sera tested were HIV antibody positive. Enquiries were made of the relevant authorities in several northern English cities in July 1986 and it was striking that at that time there were still virtually no HIV seropositive individuals among a large number of drug misusers who had been tested by the PHLS laboratories (see Appendix 3). These included a substantial number of patients known by the local drug dependency units to be injecting regularly. In Newcastle, at least 2 of the 4 positives were thought to have been infected in Scotland.

24. The rapid spread of HIV in drug misusers in Scotland is far from unique, since there is now extensive evidence from many centres throughout Europe and the United States to show that upwards of 50% of IDM tested are infected with HIV. (Appendix 3) In Italy, Spain and New York the pattern of rapid spread of infection among IDM, similar to that seen in Edinburgh, has been documented. In Italy, the virus appears to have been introduced about 2 years earlier than in Edinburgh, and HIV antibody positivity in drug misusers there rose from 6% in 1980 to 76% in 1985. The first case of AIDS in a drug misuser in Italy was reported in 1984 and by late 1985, 50% of all new AIDS cases there were in drug misusers. (Angarano et al 1985) The WHO collaborating centre in Paris reports that in Europe overall a rising proportion of AIDS cases is occurring in drug misusers (3% in 1985, 10% so far in 1986). Thus there is strong evidence of an emerging epidemic of AIDS among drug misusers in Europe and this seems certain to involve Scotland heavily.

25. At present we do not have an adequate estimate of the total number of IDM in Scotland. Neither do we know to what extent the population in the studies described is truly representative of the IDM populations in each area. Further epidemiological studies are urgently needed. We can therefore only attempt a rough and ready estimate of the number of HIV-infected IDM as follows:

26. The 2 studies carried out by SCODA estimated that in 1983 there were 4,300 heroin misusers in Glasgow and 2,000 in Edinburgh in 1985. How many heroin misusers there are in Dundee and the rest of Scotland is unknown but those members of the Committee who are concerned in the management of drug misuse estimate that the total number of heroin users in Scotland is likely to be 10,000, of whom 80-90% inject regularly or occasionally. Above this a large number (estimated to be several thousand) are injecting a wide variety of drugs other than heroin.

27. If it is assumed that 7,000 of this total are in the West, with a prevalence of HIV infection of 4.5% and 3,000 are in the East (prevalence of infection 50%) there would be at least 1,800 IDM in Scotland presently infected with HIV. This figure would increase sharply with even a modest rise in prevalence of infection, especially if this affected the large population in the West.

Progression to Clinical Disease Among Those Already Infected

28. Several large cohort studies are being conducted in the United States involving homosexual men and there are at least 2 such studies on IDM. All these studies show that once seropositives appear in a population, following a latent period of 2-3 years, the annual incidence rate in the infected population is up to 10%. (Appendix 4) No studies yet show a levelling off of this trend and there is little evidence at present to suggest that in an individual who has become infected, the rate of progression to clinical disease is reduced by alteration of possible co-factor behaviour, such as contact with multiple sexual partners. There is some preliminary evidence that reduced use of injected opiates may confer some benefit (Des Jarlais et al 1986).

Estimate of Likely Numbers of AIDS Cases In Drugs Misusers in Scotland

29. From the data available in Scotland and the other studies referred to it is possible to make a crude estimate of the number of cases of AIDS which could be expected to result from those patients who are already infected with the virus. Assuming that the first patient became infected in 1983 and that 1,800 persons are now infected, the first AIDS cases in IDM would be predicted to occur in 1986 and by 1989-90, each year 144 new cases (8% of 1,800) would be expected. It should be emphasised that these projections take no account of new HIV infections which will occur, nor of HIV infections other than those in IDM.

Factors Affecting the Further Spread of HIV Infection Among IDM

Shared Injecting Equipment

30. A number of studies now provide strong evidence that sharing of needles is the principal route of spread of HIV among injecting drug misusers. The risk of becoming infected is related to the duration of injecting drug misuse, the frequency of needle sharing and the number of people with whom an individual shares. (Appendix 5) As the prevalence of infection in the drug misusing community rises, the risk of infection from any single needle sharing episode also rises. The experience of Eastern Scotland, Italy, Spain and New York indicates clearly that once HIV is introduced into a community it spreads rapidly to the majority of IDMs.

31. Possible explanations for the rapid spread of infection in Edinburgh and for the very different situation which appears to exist in other UK cities were carefully considered by the Committee, since an understanding of the factors responsible would help in designing effective preventive measures. Members of the Committee involved in the management of drug misusers considered that several factors were important. First, in Edinburgh the emphasis of police activity has been on discouraging the sale of syringes and needles, and removing these items from individuals found in possession of them. The resultant non-availability of sterile equipment in the city, appears to have contributed to extensive sharing of equipment. Second, there has been a prevailing medical opposition to maintenance prescribing, and a generally low level of investment in provision of a medical drug-dependency service which may have led many drug users to sever contacts with hospital clinics or other medical agencies, or to avoid seeking professional assistance. The impression was gained that in other cities in the UK police activity may be less intensive, there may be less difficulty in obtaining injecting equipment, and that substitution prescribing is more widely practised. This was

certainly true of the Merseyside Region about which Dr John Marks provided information for the Committee.

32. Information on the management of drug misuse and HIV infection prevention was also obtained from Amsterdam where there is a liberal approach to maintenance prescribing. The city Public Health Department has a large professional staff dealing full-time with drug misusers through mobile units and fixed clinics dispensing methadone, and since mid-1985 needles and syringes have been made freely available on a one-for-one exchange basis in an attempt to reduce sharing of equipment. There are so far no data to show how effectively the Amsterdam approach will contain the spread of HIV, but it does appear that it allows a high level of contact between drug misusers and the professional services, permitting the effective delivery of health education information.

33. There are other possible explanations for the difference between Edinburgh and other cities in the UK. It may be that the virus was introduced earlier to the drug misusing community and has thus had more time to spread, or perhaps the extent of HIV infection among drug misusers elsewhere in the UK has so far been underestimated. A full understanding will require further extensive research studies. The Committee was, however, unanimous in agreeing that while these studies should be initiated, preventive action must be taken as rapidly as possible on the basis of what we already know now about the risks of needle sharing.

Heterosexual Spread and Prostitution

34. From a number of studies it appears that female partners of infected males become infected (Franzen et al 1986, Padian et al 1986, Redfield et al 1985, 1986) at a rate of 3-5% per year (Moss, A, personal communication) and preliminary data from the City Hospital Clinic, Edinburgh show that 10% of non-drug using heterosexual partners of infected IDM are now infected (Brettle, R P, personal communication).

35. In several African countries heterosexual contact is a major route of spread of HIV and there are well documented reports of heterosexual transmission from the United States and Europe. Several reports show a high prevalence of infection among female prostitutes and many prostitutes who also inject are infected. It is therefore an essential part of any health education and prevention campaign to emphasise the risks of heterosexual spread and provide drug misusers with the appropriate advice on safe sex practices, in particular the use of condoms. It will be especially important to get this message to those involved in prostitution whether male or female.

Spread to Infants

36. IDM are no less fertile than non-IDM persons of comparable age (Robertson et al 1986) Reported studies do not yet permit a firm conclusion about the frequency with which infants born to seropositive mothers will become infected, nor of the overall prognosis in this group of infants. However, the data available suggest that at least 50% of such infants will be infected, with a high mortality. To date in Edinburgh alone, 20 seropositive infants, born to seropositive drug misusing mothers, are being followed-up. (Brettle, R P, personal communication)

37. Drug misusers must be informed and counselled about this risk and the appropriate birth control advice should be readily available to them. The need for special arrangements to care for infected infants must be recognised, and staff and facilities provided for the detection of infected infants, and their early and longer term care.

38. From the information available to it, the Committee proposed a broad approach to the prevention of HIV infection which is reflected in its recommendations. The salient considerations leading to these are given briefly below.

39. Objectives of a campaign to prevent spread of HIV

1. to reduce, as far as possible, any experimentation with drugs and especially to prevent experimentation by injecting drugs, because of the high risk of infection from even occasional use;

2. to persuade those who will not stop using drugs that they must abandon injection and use a safer route of administration;

3. to persuade those who will not stop injecting that they must inject using sterile, non-shared equipment and hygienic injection practice;

4. to provide all possible encouragement and support to help individuals to stop drug misuse or to prolong periods of remission from misuse;

5. to educate all misusers about the extent of the risk of spreading the virus to heterosexual partners, and the high risk of producing an infected baby with a very poor prognosis, and to give practical advice about safe sex and birth control.

40. Requirements for achieving these objectives

1. All drug misusers must be brought into contact with sources of the necessary advice and practical support, and must be motivated to take effective personal action. This is likely to be achieved only within a framework of service provisions which offer a comprehensive approach to the many complicated social, financial, legal, psychiatric and other problems which afflict many misusers. The services must be seen by the misusers as offering support and assistance rather than having the sole objective of stopping drug misuse, and the services must have sufficient resources to seek clients actively within the community and to be able to cope with the likely increase in demand which will result.

2. Substitution prescribing is likely to be a necessary part of the means used to attract clients to services and to establish safer drug taking practices: its use for these means should be accepted.

3. Practical steps must be taken to provide sterile injecting equipment to addicts who are unwilling to stop injecting. A way must be found to do this, otherwise advice given on this vital issue will be clearly seen to be unsupported by the commitment to implement it.

4. Staff working with drug misusers will require adequate training and continuing access to sources of expert support in handling the problems arising from HIV infection, AIDS and the resultant anxieties. A recent study from England indicates the important role the general practitioner already has in providing care for opiate misusers. (Glanz and Taylor 1986)

Two issues are contentious and require further comment.

Substitution Prescribing

41. The committee recognised that there is a wide diversity of opinion among drug misuse specialists about the value of substitution prescribing in the management of the problems of dependency and addiction. However it was agreed by the majority of members that substitution prescribing could help in persuading some patients to give up injecting drugs and should be used when considered necessary to achieve this goal. It was also agreed (and felt very strongly by some) that the availability of substitution prescriptions is an important means by which some drug misusers can be brought into contact with services.

Wider Availability of Sterile Injecting Equipment

42. Drug misusers who will not stop injecting must be told how to inject without the risk of acquiring or spreading HIV. This advice, if it is to be taken seriously, must be supported by the ready availability of sterile injecting equipment. The criticism has been made that better provision of sterile equipment to regular injectors would have no effect on the experimental or occasional injector using borrowed equipment. However, it is likely that with better supplies, such an individual would be exposed to equipment which has been shared much less.

43. Provision of injecting equipment has also been criticised as an action which condones drug abuse. It has been suggested that if equipment is more widely available, this may offer encouragement to experiment with injection, and concern has been expressed that the careless disposal of used and possibly infected equipment would be a health hazard, for example to children or refuse workers.

44. The Committee considered these arguments and noted the evidence available to date from Amsterdam, which has a large needle/syringe exchange programme. It was reported that in 1985 100,000 sets of injecting equipment had been distributed on a one-for-one exchange basis. About 90% of units issued were said to have been returned. The City health authorities reported no increase in the number of needle-stick accidents occurring in the general public. The number of addicts who used intravenous injection in Amsterdam did not increase in 1985. (Buning et al 1986)

45. It was also noted that in New York, (Des Jarlais et al 1985) have reported that contrary to popular expectation, drug misusers are showing an increased degree of awareness and concern about the risks of shared needles, and are taking exceptional steps to obtain clean supplies. These observations give grounds for optimism that drug users could be motivated to participate in a needle-exchange scheme.

46. The possible methods of distribution which were considered were through pharmacies (which could sell at retail prices), through the

community-based drug agencies or by practitioners seeing drug misusers in clinics, general practice or elsewhere.

47. The Committee's conclusion was that, at least for the present, needle/syringe distribution should be undertaken only in a situation where other advice, medical if necessary, was available and should be accompanied by instruction on safe injecting methods, safe sex, etc. An exchange system was considered essential in an area like Edinburgh where there would be a real risk that discarded needles would be infected. Discussions with the non-statutory drug agencies indicated that they would not be willing, at present, to undertake needle/syringe distribution. The recommendation reflects these considerations. However, the extension of equipment provision, perhaps through pharmacies, should not be excluded from consideration in future, especially if this could be operated as an exchange scheme linked in some way with an appropriate drug misuse agency.

Costs of Treatment and Prevention

48. To provide some basis for estimating the possible costs of caring for patients involved in this epidemic, the Committee referred to the study by Johnson et al 1986. This refers to the Bloomsbury Health Authority in London. Based on a prediction that 54 persons with AIDS would be alive and requiring treatment by the end of 1986, Johnson estimated the cost of additional services as £388,000 revenue and £472,000 capital (for the establishment of an eight-bedded in-patient unit). Set against the projections of possible AIDS cases for Scotland, these figures provide some indication of the financial costs to be anticipated. It was also pointed out by these workers that even at the most conservative estimates, the total cost of care for a single patient (£6,800) represents more than half of the annual salary of a full-time health educator or counsellor. Expenditure now on epidemic control measures is therefore likely to reduce the social and financial costs which will arise from providing terminal care for large numbers of young people. It should be noted that the Bloomsbury figures are substantially lower than those produced by 2 American studies, and that further investigation of costs are needed reflecting the Scottish situation.

The Need for Epidemiological Surveillance and Further Research on the HIV Epidemic in Scottish IDM

49. The East of Scotland faces a problem which is at present unique in the UK but which threatens the rest of the country. It is vitally important to obtain the best possible understanding of this epidemic to assist in planning and evaluating preventive measures and in planning future provision for care of infected patients.

50. The Committee received from its members 2 outline study proposals to address 2 important aspects of the problem. These relate to recommendations 15c and 16 respectively. The Committee felt that where appropriate the Scottish Home and Health Department (SHHD) should consider requesting proposals for additional investigations to provide essential epidemiological data.

51. The potential importance of studies to monitor spread of the epidemic is illustrated by data recently released by the US Army, showing a disturbingly high prevalence of infection in military recruit applicants (1.5/1,000) with an unexpected male to female ration of 3 to 1. This

should be compared with the overall case ratio in the USA of 13 males to 1 female. This finding indicates that an unexpectedly rapid heterosexual spread may already be established in the United States. (MMWR 1986)

Recommendations

52. Prevention of Spread of HIV Infection: Approach to Individual Injecting Drug Misusers

1. The following recommendations should be implemented as a matter of urgency:

a. Injecting drug misusers who cannot or will not abstain from misuse must be educated in safer drug taking practices. It is of the utmost importance that those who continue to inject are persuaded to use clean equipment and never to share it. Clean equipment should therefore not be denied to those who cannot be dissuaded from injection. In this connection authorities should be reminded that threat to life of the spread of HIV infection is greater than that of drug misuse. On balance, the prevention of spread should take priority over any perceived risk of increased drug misuse.

b. Practitioners should be informed that it may be an appropriate part of the management of individual patients, in the interests of limiting the spread of infection, to issue needles and syringes and that this should be done on a one-for-one exchange basis for a needle and syringe. This should be linked with a simple reminder to practitioners that tests for drugs in the urine which can be used in the surgery are available and with the warning that any drugs which were being given to the patient could be crushed up and injected. Testing for HIV antibodies, with appropriate pre-counselling should be offered to those who are given this equipment.

c. Substitution prescription should be considered for those patients for whom it is judged that it will assist in reducing or stopping injection. It should also be considered as a means of establishing and maintaining effective contact with injecting drug misusers.

d. All drug misusers must be given advice on "safe sex" with particular emphasis on the use of condoms. Family planning advice should be readily available, linked to counselling about the grave risk to an infant born to infected parents.

Organisation of Preventive Measures to Contain the Spread of HIV Infection

2. Health boards should identify an appropriate individual to be responsible for co-ordinating action in connection with the AIDS epidemic, including both the prevention of infection and provision for the management of clinical disease, and who would relate to a person appointed to carry these responsibilities at national level.

3. Health boards should re-examine all the provisions in their area for dealing with the drug misuse problem to ensure that these services are adequate to meet the additional problem of HIV spread. This will include the use of outreach workers to contact the very large proportion of IV drug misusers who have not yet been identified and the effective marketing of health education and counselling and may require expansion of specialist facilities within the health service in the management of drug dependency problems.

4. A clinician should be identified in each Health Board with overall responsibility for drug misuse problems including support for the non-statutory drug misuse agencies and also to provide advice to boards in relation to further service requirements. In the larger health boards, especially those with existing substantial drug misuse problems, new appointments will be necessary to cover this task.

5. The Committee wishes to emphasise the extent to which reliance is now placed on the non-statutory drug agencies in the attack on the drug misuse problem in Scotland and recommends that urgent steps be taken to ensure that sufficient extra funding is made available to permit these agencies to cope with the additional workload required to control spread of HIV infection in injecting drug misusers.

6. Additionally the Committee recommends that, with the impending hand-over of management of the non-statutory drug agencies from SHHD to health boards, appropriate steps be taken urgently to provide security of tenure for key staff in these bodies to avoid loss of personnel and decline in morale. In this connection the Committee welcomed the Minister's recent announcement that "those who are working in this difficult field should (therefore) be assured that there will be support funds for worthwhile projects and initiatives for some years to come" but emphasised the long term nature of the problem.

7. The Committee recommends that the responsibilities of the general practitioner be re-emphasised in regard to the treatment and prevention of drug misuse and related HIV problems. Health Boards should provide active encouragement to general practitioners to deal with patients with drug problems and should ensure that adequate sources of advice and opportunities for referral of patients are made available to them.

8. There should be established one or more resource centres based in existing clinical units which have experience in clinical care of HIV infection and in counselling. The centre(s) should provide a scientific and clinical database on HIV infection and be able to provide a consultation service to health care and other workers including those in the drug misuse field.

9. An extensive programme of educational workshops, seminars, etc, on HIV related problems should be established and effectively marketed. These should specifically be aimed at health care and other staffs who may encounter such problems in their work. SHEG should provide training materials for these educational workshops.

10. SHEG should provide a range of health education materials related to HIV infection and drug misuse. The Committee identified an urgent need for the rapid provision of low cost materials using all appropriate media designed to communicate effectively with drug misusers and to meet particular local needs eg geographical and client related.

11. The Committee recommends that it should be a high priority for the Scottish Education Department to ensure that information about AIDS and the transmission of HIV by needle sharing and by sexual contact should be built into the health education provided in schools.

12. Police policies in relation to individual drug misusers should be reviewed to ensure so far as possible that they do not prejudice the infection control measures recommended.

Epidemiological Surveillance of HIV Infection

13. Comprehensive and effective epidemiological surveillance should be undertaken by CD(S)U. The Director should be asked as a matter of urgency to advise CMO on further steps to improve the surveillance programme indicating the resources required.

14. The objectives of surveillance should include:

a. The establishment of arrangements with laboratories in Scotland to provide regular reports of antibody testing containing sufficient data for continuing epidemiological assessment.

b. The complete reporting of all cases of AIDS in Scotland and (insofar as it is possible) of other HIV related clinical conditions.

c. The design and implementation of serial point-prevalence studies to monitor spread of HIV infection.

d. The maintenance of an up-to-date information service on national and international epidemiological trends in HIV infection.

Epidemiological Surveillance of the Injecting Drug Misuse Problem

15. Studies should be commissioned by SHHD on the following aspects:

a. The continuing assessment of the extent of drug misuse in Scotland and in particular an attempt to assess the numbers of presently unidentified drug misusers. Such studies have already been undertaken by SCODA in Glasgow and Edinburgh (commissioned by SHHD) and should be re-instituted.

b. Comparative studies in a number of UK centres aimed at clarifying local factors which may contribute to the spread of HIV infection in injecting drug misusers. Factors

studied should include injecting practices, availability of equipment, Police activity and sentencing policies.

c. Prospective studies to elucidate further the natural history of HIV infection in various groups of intravenous drug misusers, their contacts and their offspring.

Forecasting and Resource Requirements

16. Studies should be undertaken to establish, on the basis of the currently available data, the likely increase in the infected population and the likely incidence rate of clinical AIDS and other HIV-related conditions including opportunistic infections.

17. Estimates should be developed of the likely resource requirements for the clinical care of these patients.

Public Concern

18. The problem of HIV infection and AIDS should be put into perspective by sustained educational efforts to dispel fears of casual spread of the disease. Public health education campaigns should however emphasise the known methods of transmission and in particular the risk of casual sex, to avoid complacency, especially over heterosexual transmission of HIV.

At the first meeting of the Scottish Committee on HTLV III Infection and Intravenous Drug Misuse on 27 February it was agreed that not enough was yet understood about the relationship of sharing needles and syringes by intravenous drug misusers and the spread of HTLV III infection for the Committee to make a recommendation for their wide distribution in Scotland. More research needs to be done to establish the extent to which needle sharing increases the risk of infection and whether in places where the issue of needles and syringes have been introduced there is evidence of lower prevalence of infection. It is important also to attempt to determine whether or not sharing is or is not related to the availability of syringes and needles.

It was accepted nevertheless that it is important to safeguard the position of medical practitioners who think that it is necessary and responsible to issue needles and syringes to their patients. The Committee therefore recommended as a first step that, subject to legal clearance, such practitioners be encouraged to do so and that this should be done on a one to one exchange basis for a used needle and syringe. This should be linked with a simple reminder that a test for opiates in the urine which can be used in the surgery is available and with the warning that any drugs which were being given to the patient could be crushed up and injected. It was also agreed that testing for HTLV III antibodies with appropriate pre-counselling should be offered to those who were given needles.

The point was also made that this recommendation was particularly valid as a preventive measure in Glasgow and other areas where the prevalence of HTLV III infection in intravenous drug misusers was apparently still relatively low. If it was to be implemented it should therefore be implemented as soon as possible.

HUMAN IMMUNODEFICIENCY VIRUS (HIV) INFECTION - SCOTLAND, AUGUST 1983 - JUNE 1986

TABLE 1

Numbers (and Percentage Distribution) of Persons reported to the CD(S) Unit by Scottish Laboratories as HIV-antibody Positive

1A: All persons (M : F ratio = 2.8 : 1.0)

Reporting Unit(s)	Male		Female		Not Stated	Total No (%)	
Aberdeen	15	(2.6)	1	(0.5)	-	16	(2.0)
Dundee	68	(11.9)	31	(15.2)	-	99	(12.5)
Edinburgh	330	(57.9)	131	(64.2)	21	482	(60.6)
Glasgow	139	(24.4)	37	(18.1)	-	176	(22.1)
Inverness	6	(1.1)	2	(1.0)	-	8	(1.0)
SNBTS	12	(2.1)	2	(1.0)	-	14	(1.8)
Scotland	570 (71.7)	(100.0)	204 (25.7)	(100.0)	21 (2.6)	795 (100.0)	(100.0)

SNBTS - Scottish National Blood Transfusion Service

1B : IVDM-associated Cases (M : F ratio = 1.9 : 1.0)

Reporting Unit(s)	Male		Female		Not Stated	Total No (%)	
Aberdeen	3	(0.9)	1	(0.6)	-	4	(0.8)
Dundee	61	(18.2)	28	(16.2)	-	89	(17.4)
Edinburgh	239	(71.3)	109	(63.0)	3	351	(68.7)
Glasgow	25	(7.5)	34	(19.6)	-	59	(11.5)
Inverness	-		1	(0.6)	-	1	(0.2)
SNBTS	7	(2.1)	-		-	7	(1.4)
Scotland	335 (65.6)	(100.0)	173 (33.8)	(100.0)	3 (0.6)	511 (100.0)	(100.0)

IVDM = Intravenous Drug Misuse

TABLE 2

Numbers of HIV-antibody Positive Persons reported to the CD(S) Unit by Scottish Laboratories, August 1983-June 1986

Distribution by Transmission Category and Sex Groups

Transmission Category	Male		Female		Not Stated	Total No	(%)
Homo/bi-sexual male	122	(21.4)	-		-	122	(15.3)
IV drug misuser	330	(57.9)	170	(83.3)	3	503	(63.3)
Haemophiliac	73	(12.8)	-		-	73	(9.2)
Heterosexual contact	1	(0.2)	7	(3.4)	-	8	(1.0)
Infant/child	5*	(0.9)	3*	(1.5)	-	8*	(1.0)
Recipient of blood transfusion/products	1	(0.2)	2	(1.0)	-	3	(0.4)
African origin	-		2	(1.0)	-	2	(0.3)
Other/not known	38	(6.6)	20	(9.8)	18	76	(9.5)
TOTAL	570	(100.0)	204	(100.0)	21	795	(100.0)

* at least one parent identified as misusing IV drugs

PREVALENCE OF HIV ANTIBODY IN DRUG MISUSERS

TABLE 1 - UNITED KINGDOM

	Reference	Percentage Positive and Sample Size
Lothian	Peutherer et al. Lancet 2, 1129, 1985	38% of 106
	Robertson et al. Brit Med J, 292, 527, 1986	51% of 164
Tayside	Small, personal communication, 1986	39% of 251
Glasgow	Follett et al, 1986. Lancet 1, 446, 1986	4.5% of 600
South London	Webb et al. Brit Med J, 292, 1202, 1986	0.6% of 146
"UK"	Jesson et al. Lancet 1, 155, 1986	10% of 239
Newcastle on Tyne	Codd A, personal communication, July 1986	1% of 400
Manchester	Craske J, personal communication, July 1986	0% of approx 100
Liverpool	Turner, personal communication, July 1986	0% of approx 200
Southport	Brierly, personal communication, July 1986	0% of 36 known injectors

TABLE 2 PREVALENCE OF HIV ANTIBODY IN DRUG MISUSERS OTHER EUROPEAN COUNTRIES

		Reference	Date of Sampling	Percentage Positive and Sample Size
Italy:	Milan	Ferroni et al. Lancet 2, 52, 1985	1979/81	0.7% of 139
			1984/5:	29% of 271
		Lazzarin et al. Poster 173. International Conference, Paris*, 1986	1985:	60%
	Bari	Angarano et al. Lancet 2, 1302, 1985	1980:	4% of 68
			1985:	76% of 59
	Rome	Titti et al. Poster 170. International Conference, Paris, 1986	1985	28% of 207
Spain:	Valencia	Rodrigo et al. Lancet 1, 156, 1985	1985	48% of 75
	Bilbao	Esparza et al. Poster 164, International Conference, Paris, 1986	1984/5	50% of 479
France:	Paris	Bouchard et al. Poster 175. International Conference, Paris, 1986	1985	64% of 113
	Tours	Goudeau et al. Poster 169. International Conference, Paris, 1986	1982/3	0% of 52
			1985	17% of 125
	Toulouse	Federlin et al. Poster 168. International Conference, Paris, 1986	1985	51% of 402
Switzerland:	Geneva	Hirschel B et al. Poster 166. International Conference, Paris, 1986	1981	7% of 131
			1985	52% of 131
Ireland:	Dublin	Shattock A G et al. Poster 143. International Conference Paris, 1986		27% of 451
Austria:	Tyrol	Fuchs et al. Lancet 1, 1506, 1986	1985	44% of 37

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Infant/child	5*	(0.9)	3*	(1.5)	-	8*	(1.0)
Recipient of blood transfusion/products	1	(0.2)	2	(1.0)	-	3	(0.4)
African origin	-		2	(1.0)	-	2	(0.3)
Other/not known	38	(6.6)	20	(9.8)	18	76	(9.5)
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Recipient of blood transfusion/products	1	(0.2)	2	(1.0)	-	3	(0.4)
African origin	-		2	(1.0)	-	2	(0.3)
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APPENDIX 3

PREVALENCE OF HIV ANTIBODY IN DRUG MISUSERS

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Ireland:	Dublin	Shattock A G et al. Poster 143. International Conference Paris, 1986		27% of 451
Austria:	Tyrol	Fuchs et al. Lancet 1, 1506, 1986	1985	44% of 37

* References are to presentations at the Second International Conference on AIDS, Paris, 23-25 June 1986

TABLE 3 PREVALENCE OF HIV ANTIBODY IN DRUG MISUSERS IN THE UNITED STATES OF AMERICA

	Reference	Date of Sampling	Percentage Positive and Sample Size
New Jersey	Weiss et al. Poster p44. International Conference Atlanta 1985*	1984	50%
New York City	Cohen et al. Poster p44. International Conference Atlanta 1985*		59% of 273
	Spira et al. Poster w-69	1984-5	72% of 71
Chicago	Spira et al. Poster w-69	1984-5	11% of 35
Denver	Cohn DL) Personal communications	1985	5% of 76
	Norotny T) cited	1985	2% of 262
Detroit	Hill H) in 'HIV Seroprevalence in defined Groups, United States, 1984-1986', Compiled by Surveillance and Evaluation Branch CDC, Atlanta, USA	1986	2% of 100
San Francisco	Chaisson et al. Amer J. Public Health in press	1984-85	10% of 281

* References are to presentations at the first International Conference on AIDS, Atlanta USA. April 14-17 1985.

COHORT STUDIES SHOWING THE RATE OF PROGRESS TO AIDS OR OTHER HIV-RELATED CLINICAL CONDITIONS IN HIV-INFECTED PERSON

Population Studied	Incidence Rate of AIDS or HIV Related Conditions		Refere
omosexual men in Manhattan	3 year AIDS incidence	34%	Goedert J
omosexual men in Washington	3 year AIDS incidence	17%	Science 23
omosexual men in Denmark	3 year AIDS incidence	8%	1986
[illegible] misusers in New York	3 year AIDS incidence	12.5%	
emophiliacs in Pennsylvania	3 year AIDS incidence	12.8%	
omosexual men in New York	18 month AIDS incidence	6.1%	Stevens C J A M A 2 1986
omosexual men in London	3 year AIDS incidence	12%	Weber J N
	3 year PGL** incidence	48%	Lancet 1, 1986
omosexual men in San Francisco	6 year AIDS incidence	30%	Rutherfor communicat Internation
	6 year incidence of some clinical manifestation of HIV infection	65%	Conference Paris 1986*
omosexuals, bisexuals and terosexuals - USA	Over 1½ years, deterioration in Walter Reed staging classification	91%	Redfield R Internation Conference Paris 1986*
omosexual men in San Francisco	1 year AIDS incidence		Moss A R
	men with 0 or 1 partner	2%	Poster 681
	2 or more partners	9%	Internation Conference Paris 1986
omosexual men in British Columbia	1 year AIDS incidence	3.3-4.4%	Boyko W J Poster 161 Internation Conference Paris 1986

References are to presentations at the Second International Conference o Paris 1986.

PGL: persistent generalised lymphadenopathy.

APPENDIX 5

REPORTS WHICH DEMONSTRATE THE ROLE OF NEEDLE SHARING IN THE SPREAD OF HIV INFECTION AMONG DRUG MISUSERS

Population Referred to	Reference
Edinburgh	Brettle R P. Brit Med J 292, 1671, 1986
Edinburgh	Robertson J R, et al. Lancet 1, 1436, 1986
Paris	Vittecqo D, et al. Lancet 1, 1280, 1986
San Francisco	Chaisson R E, et al. Amer J Public Health in Press
Bilbao	Merino F, et al. Poster 164, Internat. Conference 1986*
Toulouse	Federlin M, et al. Poster 168, Internat. Conference, 1986*
Rome	Costigliola P, et al. Poster 171. Internat. Conference, 1986*
Paris	Bouchard I, et al. Poster 175. Internat. Conference, 1986*
New Jersey, Washington and New Orleans	Ginzburg H M, et al. Poster 177. Internat. Conference, 1986*
New Jersey	Weiss S H, et al. Poster 204. Internat. Conference 1986*

* References are to presentations at the Second International Conference on AIDS, Paris, June 23-25, 1986.

ANGARO G, PASTORE G, MONNO L, SANTANTONIO T et al. Rapid Spread of Infection Among Drug Addicts in Italy. Lancet 2, 1302, 1985.

BRETTLE R P, DAVIDSON J, DAVIDSON S J, GRAY J M N et al. HTLV-III antibodies in an Edinburgh Clinic. Lancet 1, 1099, 1986.

BUNING E C, COUTINHO R A, VAN BRUSSEL G H A, VAN SATEN G W et al. Preventing AIDS in Drug Addicts in Amsterdam. Lancet 1, 1435, 1986.

DES JARLAIS D C, FRIEDMAN S R, and HOPKINS W. Risk Reduction for the Acquired Immune Deficiency Syndrome Among Intravenous Drug Users. Annals of Internal Medicine 103, 755, 1985.

DES JARLAIS D C. HTLV-III/LAV-Associated Disease Progression and Co-Factors in a Cohort of New York IV Drug Abusers. Communication 197 Second International Conference on AIDS, Paris June 23-25 1986.

FOLLETT E A C, McINTYRE A, O'DONNEL B, CLEMENTS G B et al. HTLV-III Antibody in Drug Abusers in the West of Scotland: The Edinburgh Connection. Lancet I, 446, 1986.

FRANZEN C, JERTBORN M and BIBERFELD G. Four Generations of Heterosexual Transmission of LAV/HTLV III in A Small Swedish Town. Poster 199. Second International Conference on AIDS, Paris June 23-25 1986.

GLANZ A, and TAYLOR C. Findings of a National Survey of the Role of General Practitioners in the Treatment of Opiate Misuse: the Extent of Contact with Opiate Misusers. British Medical Journal 293, 427, 1986.

JOHNSON A M, ADLER M W, CROWN J M. The Acquired Immune Deficiency Syndrome and Epidemic of Infection with Human Immunodeficiency Virus: Costs of Care and Prevention in an Inner London District. British Medical Journal, 293, 489, 1986.

Morbidity and Mortality Weekly Reports (CDC). Human T-Lymphotropic Virus Type III/Lymphadenopathy Associated Virus Antibody Prevalence in US Military Recruit Applicants. MMWR 35, 421, 1986.

PADIAN N S, WINKELSTEIN W, RUTHERFORD G W, O'MALLEY P M et al. The Heterosexual Spread of AIDS virus in San Francisco: Female Partners of Bisexual Men. Poster 212. Presented at International Conference on AIDS, Paris June 23-25 1986.

PEUTHERER J F, EDMONDS E, SIMMONDS P, DICKSON J D et al. HTLV-III Antibody in Edinburgh Drug Addicts. Lancet 2, 1129, 1985.

REDFIELD R, MARKHAM P D, SALAHUDDIN S Z, CRAIG WRIGHT D et al. Heterosexually Acquired HTLV-III/LAV Disease (AIDS-related Complex and AIDS) Epidemiologic Evidence for Female to Male Transmission. Journal of the American Medical Association 254, 2094, 1985.

REDFIELD R R, WRIGHT D C, MARKHAM P D, SALAHUDDIN S Z et al. Letter. Journal of the American Medical Association 255, 1705.

ROBERTSON J R, BUCKNALL A B V, WELSBY P D et al. Epidemic of AIDS Related Virus (HTLV III/LAV) Infection Among Intravenous Drug Abusers. British Medical Journal, 292, 527, 1986.

ROBERTSON J R, AND BUCKNALL A B V. Incidence and Outcome of Pregnancy in A Cohort of 50 Female Heroin Users. Submitted for publication.

ROBERTSON J R, BUCKNALL A B V and WIGGINS P. Regional Variations in HIV Antibody Seropositivity in British Intravenous Drug Users. Lancet 1, 1435, 1986.