

UK Health Departments

AIDS/HIV Infected Health Care Workers:

Guidance on the Management of Infected Health Care Workers
and Patient Notification

CONTENTS

Page

Summary of key points and recommendations

- 1 Introduction
- 2 Current estimates of the risk of transmission
- 3 General principles of blood-borne virus infection control and exposure prone procedures
- 4 The duties and obligations of health care workers who are or may be infected with HIV
- 5 The responsibilities of employers and commissioning bodies
- 6 The role and responsibilities of the occupational health service and HIV physicians
- 7 The role of the UK Advisory Panel
- 8 When a patient notification exercise should be conducted
- 9 Care of the health care worker
- 10 Confidentiality concerning the infected health care worker
- 11 Practical guidance on notifying patients

Abbreviations

References

Annexes:

- A Regulatory bodies' statements on professional responsibilities
- B UK Advisory Panel remit and constitution
- C Examples of UKAP advice on exposure prone procedures
- D Sources of advice and support

Further copies of this guidance can be obtained from:

Department of Health, PO Box 410, Wetherby, LS23 7LN or it can be photocopied freely provided its source is acknowledged.

It is also available on the Department of Health's Internet website at <http://www.open.gov.uk/doh/aids.htm>

Summary of Key Points and Recommendations

Management of infected health care workers

1. These guidelines apply to all health care workers in the NHS and private sectors, including visiting health care workers and students. **(Paragraph 1.1)**
2. All health care workers are under an overriding ethical as well as a legal duty to protect the health and safety of their patients. They also have a right to expect that their confidentiality will be respected and protected. **(Paragraph 1.4)**
3. The majority of procedures in the health care setting pose no risk of transmission of the human immunodeficiency virus (HIV) from an infected health care worker to a patient. **(Paragraph 1.5)**
4. Provided appropriate infection control precautions¹ are adhered to scrupulously, the circumstances in which HIV could be transmitted from a health care worker to a patient are limited to exposure prone procedures in which injury to the health care worker could result in the worker's blood contaminating the patient's open tissues. HIV infected health care workers must not perform any exposure prone procedures. **(Paragraphs 1.6, 3.2 and 3.4)**
5. The Expert Advisory Group on AIDS recommends that as far as is reasonable and practicable, patients who may have been at risk by having exposure prone procedures performed by an HIV infected worker should be notified, offered pre-test discussion appropriate to their risk of exposure and an HIV antibody test. **(Paragraph 1.7)**
6. The Department of Health commissioned an independent review of the risk of transmission from an HIV infected health care worker to a patient. A working group set up to consider this concluded that there is a real, though very low, risk of HIV transmission during exposure prone procedures. The review identified a subgroup of exposure prone procedures during which, by analogy with data on hepatitis B transmission from infected health care workers to their patients, HIV transmission might be more likely to occur, though the risk is still low. This subgroup will be referred to as higher risk exposure prone procedures. **(Paragraph 2.2)**
7. HIV infected health care workers must not rely on their own assessment of the risk they pose to patients. **(Paragraph 4.4)**
8. A health care worker who has any reason to believe they may have been exposed to infection with HIV, in whatever circumstances, must promptly seek and follow confidential professional advice on whether they should be tested for HIV. Failure to do so may breach the duty of care to patients. **(Paragraph 4.5)**
9. Examples of how a person in the UK may have been exposed to HIV infection include if they have:
 - engaged in unprotected sexual intercourse between men;
 - shared injecting equipment whilst misusing drugs;

- had unprotected heterosexual intercourse in, or with a person who had been exposed in, a country where transmission of HIV through sexual intercourse between men and women is common;
- engaged in invasive medical, surgical, dental or midwifery procedures in parts of the world where infection control precautions may have been inadequate;
- had a significant occupational exposure to HIV infected material in any circumstances.

Additionally, a person who is aware that they had unprotected sexual intercourse with someone in any of the above categories may also have been exposed to HIV infection. **(Paragraph 4.6)**

10. Health care workers who are infected with HIV must promptly seek appropriate expert medical and occupational health advice. If no consultant occupational physician is available locally, consideration should be given to contacting one elsewhere. Those who perform or who may be expected to perform exposure prone procedures must obtain further expert advice about modification or limitation of their work practices to avoid exposure prone procedures. Procedures which are thought to be exposure prone must not be performed whilst expert advice is sought. **(Paragraph 4.7)**
11. If there is uncertainty whether an HIV infected worker has performed exposure prone procedures, a detailed occupational health assessment should be arranged. The UK Advisory Panel for Health Care Workers Infected with Blood-borne Viruses (UKAP) can be consulted by the occupational health physician, the health care worker or a physician on their behalf if there is doubt. The health care worker's identity should not be disclosed to the UKAP. **(Paragraph 4.8)**
12. If it is believed that exposure prone procedures have been performed, the infected health care worker or their chosen representative (eg the occupational or HIV physician) should inform the district director of public health (DPH) on a strictly confidential basis. The DPH or their delegated person (eg consultant in communicable disease control (CCDC)) will in turn make an appraisal of the situation and consult the UKAP if necessary, particularly if it seems clear that exposure prone procedures have been performed and before proceeding with patient notification. The medical director of an employing trust should also be informed in confidence at this stage. **(Paragraph 4.9)**
13. HIV infected health care workers who do not perform exposure prone procedures but who continue to provide clinical care to patients must remain under regular medical and occupational health supervision. They should follow appropriate occupational health advice, especially if their circumstances change. **(Paragraph 4.10)**
14. Health care workers who know or have good reason to believe (having taken steps to confirm the facts as far as practicable) that an HIV infected worker is practising in a way which places patients at risk, or has done so in the past, must inform an appropriate person in the infected worker's employing authority (eg a consultant occupational health physician) or, where appropriate, the relevant regulatory body. The DPH should also be informed in confidence. The UKAP can be asked to advise when the need for such notification is unclear. Such cases are likely to arise very rarely. Wherever possible the health care worker should be informed before information is passed to an employer or regulatory body. **(Paragraph 4.13)**
15. All employers in the health care setting should maintain the awareness of new and existing staff (including Agency and locum staff and visiting health care workers) of this guidance and of the professional regulatory bodies' statements of ethical responsibilities, and occupational health

guidance for HIV/AIDS infected health care workers. **(Paragraph 5.1)**

16. Where an employer or member of staff is aware of the health status of an infected health care worker, there is a duty to keep any such information confidential. **(Paragraph 5.3)**
17. Employers should assure infected health care workers that their status and rights as employees will be safeguarded so far as practicable. Where necessary, employers should make every effort to arrange suitable alternative work and retraining opportunities, or where appropriate, early retirement, for HIV infected health care workers, in accordance with good general principles of occupational health practice. **(Paragraph 5.4)**
18. All matters arising from and relating to the employment of HIV infected health care workers should be coordinated through a specialist occupational health physician. **(Paragraph 6.1)**
19. Patient safety and public confidence are paramount and dependent on the HIV infected, or potentially infected, health care worker observing their duty of self-declaration to an occupational physician. Employers should promote a climate which encourages such confidential disclosure. It is extremely important that HIV infected health care workers receive the same rights of confidentiality as any patient seeking or receiving medical care. **(Paragraphs 4.6 and 6.7)**

Patient Notification Exercises

20. Notification of patients identified as having been exposed to a risk of HIV infection by an infected health care worker is considered necessary:
 - . to provide the patients with information about the nature of the risk to which they have been exposed;
 - . to detect HIV infection, provide care, and advice on measures to prevent onward HIV transmission;
 - . to collect valid data to augment existing estimates of the risk of HIV transmission from an infected worker to patients during exposure prone procedures. **(Paragraph 8.1)**
21. All patients who have undergone any exposure prone procedure performed by an infected health care worker (including students) should, as far as practicable, be notified of this. They should all be informed that there is a real, though very low risk they have been exposed to HIV infection and offered HIV testing. Those patients who have undergone higher risk exposure prone procedures should be informed that they may have been exposed to a higher though still low risk, and encouraged to have an HIV test. **(Paragraphs 8.2 and 11.28)**
22. The decision about the need for a patient notification exercise should rest with the DPH who is best placed to assess all the contributing factors and to guide NHS trusts and others as to appropriate action needed. The DPH or delegated person (eg CCDC) should consult the UKAP before setting up an incident team and implementing a patient notification exercise. **(Paragraph 8.5)**

Confidentiality

23. Every effort should be made to avoid disclosure of the infected worker's identity, or information which would allow deductive disclosure. This may include the use of a media injunction to prevent publication or other disclosure of a worker's identity. **(Paragraphs 10.2, 11.44 and**

11.46)

24. The fact that the infected worker has died, or has already been identified publicly, does not mean that duties of confidentiality are at an end. (**Paragraph 10.5**)

1. INTRODUCTION

- 1.1 These guidelines apply to all health care workers in the NHS and private sectors: including visiting health care workers in any health care setting and students in training for whom there may be implications for future career options.
- 1.2 In March 1994, the UK Health Departments published guidance from the Expert Advisory Group on AIDS, *AIDS/HIV Infected Health Care Workers: Guidance on the Management of Infected Health Care Workers*. That guidance has now been revised to reflect changes in the NHS, experience of patient notification exercises and the report of a working group set up to consider an independent review* of the risk of transmission of HIV from an infected health care worker to a patient, commissioned by the Department of Health.
- 1.3 This revised guidance continues to endorse the ethical guidance in the statements from the professional regulatory bodies [see Annex A], clarifies the duties of HIV infected health care workers (HCWs), their medical advisers and employers, and outlines the procedures which should be followed if a patient notification exercise is being considered. It also incorporates guidance on the management of patient notification exercises and supersedes *AIDS/HIV Infected Health Care Workers: Practical Guidance on Notifying Patients* published by UK Health Departments in April 1993.
- 1.4 All health care workers are under an overriding ethical as well as a legal duty to protect the health and safety of their patients. They also have a right to expect that their confidentiality will be respected and protected.
- 1.5 The majority of procedures in the health care setting pose no risk of transmission of the human immunodeficiency virus (HIV) from an infected health care worker to a patient.
- 1.6 Provided appropriate infection control precautions¹ are adhered to scrupulously, the circumstances in which HIV could be transmitted from an infected health care worker to a patient are limited to exposure prone procedures in which injury to the health care worker could result in the worker's blood contaminating the patient's open tissue. HIV infected health care workers must not perform any exposure prone procedures [see 3.2 and 3.3]. The majority of health care workers do not perform exposure prone procedures.
- 1.7 The Expert Advisory Group on AIDS (EAGA) recommends that as far as is reasonable and practicable, patients who may have been at risk by having exposure prone procedures performed by an HIV infected worker should be notified, offered pre-test discussion appropriate to their risk of exposure and an HIV antibody test.
- 1.8 The recommendations in this guidance reflect the need to protect patients, to retain public confidence and the importance of providing safeguards for the confidentiality and employment rights of HIV infected health care workers.

2. CURRENT ESTIMATES OF THE RISK OF TRANSMISSION

- 2.1 A number of documented cases of hepatitis B virus infection have occurred in patients operated

*This review was carried out by the London School of Hygiene and Tropical Medicine.

on by hepatitis B infected health care workers. It is plausible that HIV could be transmitted under similar circumstances, although the risk of HIV transmission is considerably less than for hepatitis B in other situations - for example after needlestick injury.

- 2.2 The Department of Health commissioned an independent review of the risk of transmission from an HIV infected health worker to a patient. A working group set up to consider this concluded that there is a real, though very low, risk of HIV transmission during exposure prone procedures. The review identified a subgroup of exposure prone procedures during which, by analogy with data on hepatitis B transmission from infected health care workers to their patients, HIV transmission might be more likely to occur, though the risk is still low. This subgroup will be referred to as higher risk exposure prone procedures [see 3.8].
- 2.3 The US Centers for Disease Control and Prevention have reported transmission of HIV to patients during dental procedures carried out by one dentist with AIDS². More recently, transmission of HIV from an infected orthopaedic surgeon to a patient was reported from France³.
- 2.4 All other retrospective studies worldwide of patients exposed to the potential risk of transmission of HIV during exposure prone procedures have failed to identify any who have become infected by this route⁴. The data available from patient notification exercises supports the conclusion that the overall risk of transmission of HIV from infected health care workers to patients is very low. In the UK by the end of 1997, post exposure HIV tests from patient notification exercises failed to show transmission of HIV to any of 1261 patients who had higher risk exposure prone procedures performed on them by HIV infected health care workers.
- 2.5 The evidence indicates that there is a far greater risk of transmission of HIV from infected patients **to** health care workers than **from** infected workers to patients. Up to December 1997, there had been 95 cases worldwide of health care workers in whom seroconversion was documented after occupational exposure to HIV. Four of these were cases where transmission occurred in the UK⁵.
- 2.6 The Department of Health, EAGA and the UK Advisory Panel for Health Care Workers Infected with Blood-borne Viruses (UKAP) [see Section 7 and Annex B] will continue to evaluate the epidemiological evidence on the risks of transmission, informed by results from properly documented patient notification exercises when these are considered necessary.

3. **GENERAL PRINCIPLES OF BLOOD-BORNE VIRUS INFECTION CONTROL AND EXPOSURE PRONE PROCEDURES**

- 3.1 The Health Departments have published revised guidance for clinical health care workers on protection against infection with blood-borne viruses¹. This guidance should be followed to minimise the risk of blood-borne virus transmission to health care workers from patients. The measures recommended will serve also to minimise the risk of transmission from infected workers to patients, and from patient to patient.
- 3.2 All breaches of the skin or epithelia by sharp instruments are by definition invasive. Most clinical procedures, including many which are invasive, do not provide an opportunity for the blood of the health care worker to come into contact with the patient's open tissues. Provided the general measures to prevent occupational transmission of blood-borne viruses are scrupulously adhered to at all times (see box below) most clinical procedures pose **no** risk of transmission of HIV from an infected health care worker to a patient, and can safely be performed. Those

procedures where such an opportunity **does** exist are described as exposure prone [see 3.3] and must not be performed by a health care worker who is HIV infected.

General measures to prevent occupational transmission of blood-borne viruses [BOX]

To minimise the risk of transmission of blood-borne viruses from infected patients to health care workers, and from infected health care workers to patients:-

1. Apply good basic hygiene practices with regular hand washing, before and after contact with each patient, and before putting on and after removing gloves. Change gloves between patients.
 2. For **all** clinical procedures, cover existing wounds, skin lesions and all breaks in exposed skin with waterproof dressings, or with gloves if hands extensively affected.
 3. Health care workers with chronic skin disease such as eczema should avoid those invasive procedures which involve sharp instruments or needles when their skin lesions are active or if there are extensive breaks in the skin surface. A non-intact skin surface provides a potential route for blood-borne virus transmission, and blood-skin contact is common through glove puncture which may go unnoticed.
 4. Use protective clothing as appropriate, including protection of mucous membrane of eyes, mouth and nose from blood and body fluid splashes. Avoid wearing open footwear in situations where blood may be spilt, or where sharp instruments or needles are handled.
 5. Prevent puncture wounds, cuts and abrasions and if present, ensure that they are not exposed (see 2).
 6. Avoid sharps usage wherever possible and consider the use of alternative instruments, cutting diathermy and laser.
 7. Where sharps usage is essential, exercise particular care in handling and disposal, following approved procedures and using approved sharps disposal containers.
 8. Clear up spillages of blood and other body fluids promptly and disinfect surfaces.
 9. Follow approved procedures for sterilisation and disinfection of instruments and equipment.
 10. Follow approved procedures for safe disposal of contaminated waste.
- 3.3 **Exposure prone procedures** are those invasive procedures where there is a risk that injury to the worker may result in the exposure of the patient's open tissues to the blood of the worker. These include procedures where the worker's gloved hands may be in contact with sharp instruments, needle tips or sharp tissues (eg spicules of bone or teeth) inside a patient's open body cavity, wound or confined anatomical space where the hands or fingertips may not be completely visible at all times.
- 3.4 The working practices of HIV infected workers may vary, and need to be considered individually. When there is any doubt expert advice should be sought in the first instance from a consultant occupational health physician who may in turn wish to consult the UKAP. Some examples of advice given by UKAP about exposure prone procedures are provided at Annex C. These may

serve as a guide but cannot be seen as generally applicable for the reason given above.

3.5 Procedures where the hands and fingertips of the worker are visible and outside the patient's body at all times, and internal examinations or procedures that do not involve possible injury to the worker's gloved hands from sharp instruments and/or tissues, are considered not to be exposure prone provided routine infection control procedures are adhered to at all times¹ [and see box]. Examples of such procedures include:

- . taking blood (venepuncture);
- . setting up and maintaining IV lines or central lines (provided any skin tunnelling procedure used for the latter is performed in a non-exposure prone manner - see Annex C);
- . minor surface suturing;
- . the incision of abscesses;
- . routine vaginal or rectal examinations;
- . simple endoscopic procedures.

The final decision about the type of work that may be undertaken by an infected health care worker should be made on an individual basis, in conjunction with a specialist occupational physician, taking into account the specific circumstances including working practices of the worker concerned.

3.6 The decision whether an HIV infected worker should continue to perform a procedure which itself is not exposure prone should take into account the risk of complications arising which necessitate the performance of an exposure prone procedure; only reasonably predictable complications need to be considered in this context.

3.7 The likelihood of injury to the health care worker and consequent possible risk to the patient depends on a number of factors which include not only the type and circumstances of the procedure, but also the skill and fitness to practise of the health care worker and patient circumstances (eg restless/agitated).

3.8 Those exposure prone procedures most frequently associated with transmission of hepatitis B from infected surgeons to patients are likely to pose a higher risk of HIV transmission to patients when performed by HIV infected health care workers. Such procedures are referred to in this document as higher risk exposure prone procedures [see 2.2]. Examples have been open cardiothoracic surgical procedures including sternal opening and closure, and major gynaecological surgical procedures, eg caesarian section, hysterectomy. Cardiothoracic and major gynaecological surgery also have relatively high rates of needlestick injury of health care workers which may explain the greater risk of exposure of patients to their blood. Although most such research has been US-based⁶, a small UK study showed similar conclusions⁷.

3.9 The distinction between exposure prone procedures in general and the sub-group which may be in a higher risk category is relevant only to the pre-test discussion offered to patients in notification exercises about their individual exposure risk [see 11.28]. HIV infected health care workers are unfit to perform **all** categories of exposure prone procedure.

4. **THE DUTIES AND OBLIGATIONS OF HEALTH CARE WORKERS WHO ARE OR MAY BE INFECTED WITH HIV**

4.1 The current statements of the General Medical Council, General Dental Council and the United Kingdom Central Council for Nursing, Midwifery and Health Visiting about the ethical responsibilities of health care workers towards their patients are set out at Annex A. These responsibilities are equally applicable to all other professional groups not covered by these regulatory bodies. All doctors, dentists, nurses, midwives, health visitors and other professionals who have direct clinical care of patients, have a duty to keep themselves informed and updated on the codes of professional conduct and guidelines on HIV infection laid down by their regulatory bodies.

4.2 In addition, students should be made aware of these statements and of the contents of this guidance [see para 1.1].

4.3 All health care workers are under an overriding ethical as well as a legal duty to protect the health and safety of their patients. Under the Health and Safety at Work etc. Act 1974, health care workers who are employees have a legal duty to take reasonable care for the health and safety of themselves and of others, and to co-operate with their employer in health and safety matters. Self employed health care workers have general duties to conduct their work so that they and others are not exposed to health and safety risks. The Employment Medical Advisory Service of the Health and Safety Executive (HSE) is able to act as a liaison point between health care employers and their employees, and HSE. It may also be approached by infected health care workers wishing to seek advice on health and safety issues.

4.4 HIV infected health care workers must not rely on their own assessment of the risk they pose to patients.

4.5 A health care worker who has any reason to believe they may have been exposed to infection with HIV, in whatever circumstances, must promptly seek and follow confidential professional advice on whether they should be tested for HIV. Failure to do so may breach the duty of care to patients.

4.6 Examples of how a person in the UK may have been exposed to HIV infection include if they have:

- engaged in unprotected sexual intercourse between men;
- shared injecting equipment whilst misusing drugs;
- had unprotected heterosexual intercourse in, or with a person who had been exposed in, a country where transmission of HIV through sexual intercourse between men and women is common;
- engaged in invasive medical, surgical, dental or midwifery procedures in parts of the world where infection control precautions may have been inadequate;
- had a significant occupational exposure to HIV infected material in any circumstances.

Additionally, a person who is aware that they had unprotected sexual intercourse with someone in any of the above categories may also have been exposed to HIV infection.

- 4.7 HIV infected health care workers must promptly seek and follow appropriate expert medical and occupational health advice. If there is no consultant occupational physician available locally, consideration should be given to contacting one elsewhere. Those who may perform exposure prone procedures must obtain further expert advice about modification or limitation of their working practices to avoid exposure prone procedures. Procedures which are thought to be exposure prone must not be performed whilst expert advice is sought [see Section 6].
- 4.8 If there is uncertainty whether an HIV infected worker has performed exposure prone procedures, a detailed occupational health assessment should be arranged. The UKAP can be consulted by the occupational health physician, the health care worker or a physician on their behalf if there is doubt. The health care worker's identity should not be disclosed to the UKAP (any correspondence can be anonymised or pseudonyms used).
- 4.9 If it is believed that exposure prone procedures have been performed, the infected health care worker or their chosen representative (eg the occupational or HIV physician) should inform the Director of Public Health (DPH) on a strictly confidential basis. The DPH or their delegated person (eg consultant in communicable disease control (CCDC)) will in turn make an appraisal of the situation and consult the UKAP if necessary, particularly if it seems clear that exposure prone procedures have been performed and before proceeding with patient notification. The medical director of an employing trust also should be informed in confidence at this stage [see Section 8].
- 4.10 HIV infected health care workers who do not perform exposure prone procedures but who continue to provide clinical care to patients must remain under regular medical and occupational health supervision. They should follow appropriate occupational health advice, especially if their circumstances change [see Section 6].
- 4.11 Once any health care worker has AIDS, closer and more frequent occupational health supervision is indicated. As well as providing support to the worker, the aim of this is to detect at the earliest opportunity any physical or psychological impairment of such a degree as may render a worker unfit to practise, or may place their health at risk.
- 4.12 HIV infected health care workers applying for new posts should complete health questionnaires honestly. HIV infection is a medical condition about which an occupational physician should be informed, verbally if preferred. Details will remain confidential to the occupational health department, as for other medical conditions disclosed in confidence to occupational health practitioners [see 6.7 and 6.8].
- 4.13 Health care workers who know or have good reason to believe (having taken steps to confirm the facts as far as practicable) that an HIV infected worker is practising in a way which places patients at risk, or has done so in the past, must inform an appropriate person in the health care worker's employing authority (eg a consultant occupational physician) or, where appropriate, the relevant regulatory body. The DPH should also be informed in confidence. The UKAP can be asked to advise when the need for such notification is unclear. Such cases are likely to arise very rarely. Wherever possible the health care worker should be informed before information is passed to an employer or regulatory body.

5. **THE RESPONSIBILITIES OF EMPLOYERS AND COMMISSIONING BODIES**

- 5.1 All employers in the health care setting should maintain the awareness of new and existing staff (including Agency and locum staff and visiting health care workers) of this guidance and of the professional regulatory bodies' statements of ethical responsibilities, and occupational health guidance for HIV/AIDS infected health care workers. This may include issuing regular reminders. Commissioners may wish to stipulate this when placing service agreements with trusts. This advice is also applicable to the private sector. Under the Control of Substances Hazardous to Health (COSHH) Regulations 1994, employees must receive suitable and sufficient information, instruction and training on the risks and precautions to be taken¹.
- 5.2 All students should have this guidance and the relevant professional statements brought to their attention by medical, dental, nursing and midwifery schools, colleges and universities [see 1.1]. Each training establishment should identify a nominated officer with whom students may discuss their concerns in confidence. In addition, all students should be appropriately trained in procedures and precautions to minimise the risk of occupational blood-borne virus transmission. All these issues should be addressed before there is clinical contact with patients.
- 5.3 Where an employer or member of staff is aware of the health status of an infected health care worker, there is a duty to keep any such information confidential. They are not legally entitled to disclose the information unless that individual consents, or in exceptional circumstances [see 4.13 and Section 10]. A decision to disclose without consent should be carefully weighed as authorities or persons taking such action may be required to justify their decision.
- 5.4 Employers should assure infected health care workers that their status and rights as employees will be safeguarded so far as practicable. Where necessary, employers should make every effort to arrange suitable alternative work and retraining opportunities, or where appropriate, early retirement for HIV infected workers, in accordance with good general principles of occupational health practice.
- 5.5 The Disability Discrimination Act 1995 makes it unlawful to discriminate against disabled persons including those with symptomatic AIDS or HIV infection in any area of employment, unless the employer has justification, a material and substantial reason. The restriction of such a worker for the purpose of protecting patients from risk of infection, such as the requirement to refrain from performing exposure prone procedures, would justify discrimination. However the employer who knows that the worker is disabled has a duty to make reasonable adjustment, eg by moving the worker to a post, if available, where exposure prone procedures could be avoided. Asymptomatic HIV infection does not bring the worker within the protection of the Disability Discrimination Act. The NHS Executive letter EL(96)70 refers to the general implications of the Act for the NHS.
- 5.6 The NHS Injury Benefits Scheme (or HPSS Injury Benefits Scheme in Northern Ireland) provides temporary or permanent benefits for all NHS employees who lose remuneration because of an injury or disease attributable to their NHS employment. The scheme is also available to general medical and dental practitioners working in the NHS. Under the terms of the scheme it must be established whether on balance of probabilities the injury or disease was acquired during the course of NHS work.
- 5.7 Although HIV is not a prescribed disease under the Social Security Acts, health care workers who have acquired HIV infection because of exposure to HIV infected material in the workplace may be able to claim Industrial Injuries Disablement Benefit where there has been an accident arising out of and in the course of employment, eg a needlestick injury.

6. **THE ROLE AND RESPONSIBILITIES OF THE OCCUPATIONAL HEALTH SERVICE AND HIV PHYSICIANS**

- 6.1 All matters arising from and relating to the employment of HIV infected health care workers should be coordinated through a specialist occupational health physician.
- 6.2 The HIV physician providing the necessary regular care to an infected worker should liaise with the occupational health physician and preferably they should jointly manage the case.
- 6.3 Occupational health services which do not employ a specialist occupational physician should refer individuals to such a physician in another unit. The Association of National Health Service Occupational Physicians (ANHOPS) [see Annex D] has issued guidance to its members and has given a list of specialist occupational physicians who can be contacted by those working in occupational medicine in the field. The close involvement of occupational health departments in developing local procedures for managing HIV infected health care workers is strongly recommended.
- 6.4 It is recommended that all health authorities, boards and trusts should identify a suitable specialist occupational health physician who should also be available for consultation by general medical and dental practitioners and their employees, and should liaise with local private health care providers and offer them such a service if they wish.
- 6.5 If such arrangements do not exist, the Faculty of Occupational Medicine or ANHOPS [see Annex D] will also put independent contractors and other non NHS staff in touch with a specialist occupational health physician. Alternatively, the physician looking after the worker may contact the UKAP for advice.
- 6.6 Whilst the occupational health physician has responsibility for occupational medical management and assessment, where a physician is not immediately available, some infected health care workers may initially seek advice from an occupational health nurse. The nurse should make every effort to arrange for the health care worker to see the occupational health physician as soon as possible. If necessary the occupational health nurse should seek confidential advice directly from the UKAP. As for any other referral to the UKAP, identification of the worker should be avoided.
- 6.7 Patient safety and public confidence are paramount and dependent on the HIV infected, or potentially infected, health care worker observing their duty of self-declaration to an occupational physician. Employers should promote a climate which encourages such confidential disclosure. It is extremely important that HIV infected health care workers receive the same rights of confidentiality as any patient seeking or receiving medical care. Occupational health practitioners, who work within strict guidelines with respect to confidentiality, have a key role in this process, since they are able to act as an advocate for the health care worker and adviser to the employing authority. They should adopt a proactive role in helping health care workers to assess if they have been at risk of HIV infection [see 4.6] and encourage them to be tested for HIV if appropriate [see 4.5].
- 6.8 Occupational health notes are held separately from other hospital notes and can be accessed only by occupational health practitioners, who are obliged ethically and professionally not to release notes or information without the consent of the individual. Conversely, occupational health practitioners do not have access to hospital notes. There are occasions when an employer may

need to be advised that a change in duties should take place, but HIV status itself normally would not be disclosed without the health care worker's consent. However it may be necessary in the public interest for the employer to have access to confidential information where patients are or may have been at risk.

- 6.9 Occupational physicians are well placed to act as advocates for the worker on issues of retraining and redeployment, or, if indicated, medical retirement. Occupational health departments could develop local policies for the management of infected health care workers' future employment.

7. **THE ROLE OF THE UK ADVISORY PANEL**

- 7.1 UKAP was originally set up under the aegis of EAGA. Details of its general remit are provided in Annex B.

- 7.2 It advises as a committee and is available to be consulted through its Department of Health secretariat:

- . when the general guidelines in this document cannot be applied to individual cases;
- . where there is doubt about whether exposure prone procedures have been performed;
- . when an HIV-related patient notification exercise is being considered;
- . when assistance is required to help decide if any of the exposure prone procedures performed need to be regarded as "higher risk" for the purpose of tailoring the information provided to patients notified about their exposure and encouraging the uptake of HIV testing [see 2.2, 3.8, 3.9 and 11.28];
- . when health care workers or their professional advocates dispute local advice;
- . if advice is needed about modification of working practices to avoid exposure prone procedures prospectively;
- . where special circumstances exist.

- 7.3 The UKAP can also advise individual health care workers or their professional advocates on how to obtain guidance on working practices.

- 7.4 Those seeking the advice of the UKAP should ensure the anonymity of the referred health care worker and should avoid the use of personal identifiers.

8. **WHEN A PATIENT NOTIFICATION EXERCISE SHOULD BE CONDUCTED**

- 8.1 Notification of patients identified as having been exposed to a risk of HIV infection by an infected health care worker is considered necessary:

- to provide the patients with information about the nature of the risk to which they have been exposed;

- to detect any HIV infection, provide care to the infected person and advice on measures to prevent onward HIV transmission;
 - to collect valid data to augment existing estimates of the risk of HIV transmission from an infected worker to patients during exposure prone procedures.
- 8.2 All patients who have undergone any exposure prone procedure performed by an infected health care worker (including students) should, as far as practicable, be notified of this.
- 8.3 If a DPH is informed by a health care worker or their advocate that exposure prone procedures may have been performed, he or she should make a careful appraisal of the facts, seeking relevant specialist (including occupational health) advice. It may be helpful to review some records of those treated by the infected health care worker to assess the range of procedures performed. The need for patient notification will also depend on the specific circumstances of each case and the perceived risk of transmission. Specialist epidemiological and virological advice can also be sought. This process should involve as few other people as possible, on a strictly confidential "need to know" basis.
- 8.4 The number of individuals who know the identity of the infected worker should be kept to a minimum at all stages. The consent of the infected worker to disclosure should be obtained where possible.
- 8.5 The decision about the need for a patient notification exercise should rest with the DPH who is best placed to assess all the contributing factors and to guide NHS trusts and others as to appropriate action needed. The DPH or delegated person (eg CCDC) should consult the UKAP before setting up an incident team and implementing a patient notification exercise. If more than one district is involved, it may be appropriate for the regional epidemiologist(s) to become involved at this stage.
- 8.6 The UKAP can also be consulted if there is doubt about the need for a patient notification exercise. This may arise if there is difficulty in reaching a local conclusion about which, if any, procedures are exposure prone.

Incident Teams

- 8.7 If the UKAP concur that a patient notification exercise is necessary, a small incident team should be set up locally. The DPH or delegated person (eg CCDC) should promptly notify in confidence the DPH covering any other employing authority involved in the exercise. They should also inform the regional epidemiologist, who can assist in facilitating liaison and coordinating activities across boundaries, the PHLS Communicable Disease Surveillance Centre (for cases in England, Wales and N.Ireland) or the Scottish Centre for Infection and Environmental Health [see Annex D]. Consideration should be given also to the need for a multi-district incident team. The lead district should be identified, and the roles of members of local as well as multi-district teams should be clarified at the outset. It may not be necessary for all members of the team(s) to be aware of the identity of the infected worker [see 8.4].

9. CARE OF THE HEALTH CARE WORKER

- 9.1 The interests of the health care worker and their family are very important. Where possible, the health care worker should be kept informed of decisions about the patient notification exercise. With their family, they may need immediate practical or psychological support including

measures to protect privacy. If the health care worker has been only recently diagnosed as HIV infected, in addition to access to counselling, specialist medical advice will be needed including a consideration of antiretroviral drug therapy.

- 9.2 It is important to make every effort to keep the health care worker's confidence during the assessment period and afterwards. Assurances should be given about measures to protect their identity [see 8.4, 8.7 and 10.2], and that an injunction to prevent publication of their name will be sought on their behalf as necessary [see 11.45].
- 9.3 The worker or their family may wish to seek their own independent legal advice and no obstacle to this should be presented. If they do seek legal advice it will be helpful for the authority's legal advisers to keep in regular contact with those representing the health care worker.
- 9.4 Infected health care workers who normally perform exposure prone procedures as part of their duties will need to modify their practice or seek retraining or redeployment. Advice on the former can be obtained in the first instance from a specialist occupational health physician [see Section 6] who may wish to take advice from the UKAP. The Director of Human Resources and/or the Regional Postgraduate Dean should be approached for advice on retraining and redeployment issues or alternative careers.
- 9.5 It is important that staff who are involved in managing the incident, particularly the DPH, do not act as personal advisers or advocates for the health care worker. A specialist occupational health physician may be the most appropriate person to represent the workers' interests [see 6.1,6.2 and 6.9].

10. CONFIDENTIALITY CONCERNING THE INFECTED HEALTH CARE WORKER

- 10.1 There is a general duty to preserve the confidentiality of medical information and records. Breach of the duty is very damaging for the individuals concerned, and it undermines the confidence of the public and of health care workers in the assurances about confidentiality which are given to those who come forward for examination or treatment. In dealing with the media, and in preparing press releases where necessary, it should be stressed that individuals who have been examined or treated in confidence are entitled to have their confidence respected.
- 10.2 Every effort should be made to avoid disclosure of the infected worker's identity, or information which would allow deductive disclosure. This should include the use of a media injunction as necessary to prevent publication or other disclosure of a worker's identity [see 11.45]. The use of personal identifiers in correspondence and requests for laboratory tests should be avoided and care taken to ensure that the number of people who know the worker's identity is kept to a minimum [see 8.4]. Any unauthorised disclosure about the HIV status of an employee or patient constitutes a breach of confidence and may lead to disciplinary action or legal proceedings. Employers should make this known to staff, to deter open speculation about the identity of an infected health care worker.
- 10.3 The duty of confidentiality, however, is not absolute. Legally, the identity of infected individuals may be disclosed with their consent, or without consent in exceptional circumstances where it is considered necessary for the purpose of treatment, or prevention of spread of infection. Any such disclosure may need to be justified.

- 10.4 In balancing duty to the infected health care worker and the wider duty to the public, complex ethical issues may arise. As in other areas of medical practice, a health care worker disclosing information about another health care worker may be required to justify their decision to do this. The need for disclosure must be carefully weighed and where there is any doubt the health care worker considering such disclosure may wish to seek advice from his or her professional body.
- 10.5 The fact that the infected worker has died, or has already been identified publicly, does not mean that duties of confidentiality are at an end.

11. PRACTICAL GUIDANCE ON NOTIFYING PATIENTS

- 11.1 The overall objective is to identify the exposed patient population, that is, all patients upon whom the worker performed any exposure prone procedure during the period when he/she was likely to have been HIV infected. The decision on how far to look back should be taken by the DPH in light of individual circumstances and epidemiological information.
- 11.2 The following information and investigations will be helpful in managing the patient notification exercise. The cooperation of the health care worker will be needed, and should be sought in as sensitive a manner as possible, preferably by his or her own physician:
- . confirmation of the date of diagnosis. Steps should be taken to ensure that there is no doubt that the worker is HIV infected, including repeat testing in a UK laboratory if appropriate;
 - . a carefully documented clinical history should be constructed (including dates, places and results of tests for HIV antibody, HIV viral load, and CD4 cell counts) and used to assemble a record of the course of HIV infection;
 - . if recent estimates of the worker's CD4 cell count and HIV viral load are not available, it will be helpful to obtain them;
 - . the existence of any previously stored specimens (including those obtained for other purposes, eg hepatitis B serology) should be investigated. Testing of these may be useful for dating the onset of infection or should the health care worker have died, may be of value for further investigations;
 - . after first seeking specialist virological advice on specimen collection and processing, specimens suitable for HIV isolation and gene sequencing should be obtained from the worker and securely stored, in anticipation of a possible need for investigation at a later date;
 - . the employment history of the health care worker;
 - . the nature of the duties performed while likely to have been HIV infected;
 - . the types of procedure performed and their approximate numbers.
- 11.3 Ideally the bulk of the clinical history should be obtained from the health care worker. If for any reason this is not possible or appropriate, the history may require reconstruction or supplementation from other data sources after appropriate consent has been obtained. These may include hospital in-patient or out-patient notes, general practice records and the health care

worker's partner and family.

11.4 Although it is unlikely that the date of the **onset** of the worker's infection with HIV will be known, in some cases the clinical history may indicate when this was likely to have occurred. Patients who have undergone exposure prone procedures after this date should, as far as practicable, be notified.

11.5 Where the duration of infection is unknown, where a clinical history cannot be obtained or if the health care worker has AIDS or has died, it is currently recommended that patients who have undergone exposure prone procedures during the preceding 10 years be notified where practicable.

Identification of exposed patients

11.6 Patient identification normally should be conducted swiftly. However, there may be circumstances where it is considered advantageous to adopt a more measured approach to patient identification, and involve fewer personnel. This approach may help to reduce the risk of attracting attention to unusual activity of staff who are not involved, and possibly of the media. For example, if a major public holiday is imminent it may be prudent to postpone embarking on the patient identification process until immediately afterwards. A balance should be sought between expediency and risking unnecessary public anxiety.

11.7 The patient identification process will require the assistance of the medical records officer and setting up a small team who in some circumstances may need to work out of hours and over weekends as necessary. There may be practical difficulties in tracking medical records, whether manual or computer based, as well as inaccuracies or omissions within the records themselves. If at all possible patient identification should be complete before any public announcement is made to reduce unwarranted public anxiety. In practice, particularly when large numbers of patients are concerned and if the media have become aware, this may not be possible.

11.8 The number of people who need to know the identity of the worker should be kept as small as possible [see 8.4 and 8.7], even though a larger number of people may need to know that there is an incident. In some cases for example, it may be possible for staff who do not know the worker's identity to perform a preliminary search of records for particular exposure prone procedures. These records may then be searched for procedures performed by the infected worker by those who know the worker's identity.

11.9 Depending on the particular circumstances patient identification may include:

- . checking operating theatre, delivery room, accident and emergency department records, dental records, and hospital or departmental computer records. It will often be necessary to use several sources, and data will require amalgamation and cross-checking;
- . abstracting the following patient details: full name, date of birth, hospital number or other identifier, last known address/telephone number, date of death if known to have died, name and address of GP, date(s) and type and full name/description of procedure(s) performed by the health care worker, and the role played;
- . further examination of records of patients known to have died, including review of death entry records.

11.10 When more than one district is involved, these activities should take place according to a

timescale agreed by the multi-district incident team. The regional epidemiologist(s) can play an important role in coordination and facilitation of liaison.

- 11.11 At the start of the patient notification exercise the procedures which the health care worker is known to have performed (or to have been likely to have performed) should be reviewed and a working categorisation (not exposure prone; exposure prone; higher risk exposure prone) formulated.
- 11.12 It is important that procedures are described in sufficient detail to allow their categorisation by degree of exposure to risk. Any abbreviations should be used with care to avoid misinterpretation.
- 11.13 Once patient identification is complete, a list of patients' names and procedures should be given in confidence to the incident team.

Contacting patients

- 11.14 In deciding how best to contact patients and the information to be given, a number of factors need to be borne in mind:
- . the numbers likely to be involved;
 - . the profile of the patients who may require notification;
 - . the type of operation or procedure undertaken.
- 11.15 As a general principle it is preferable for patients to be personally contacted by a counsellor, health advisor or other relevant health professional before any press announcement is made and every effort should be made to do so.
- 11.16 In large scale patient notification exercises it may be judged neither reasonable nor practicable to contact exposed patients personally, in which case they should be contacted by other means such as by letter [see 11.17-20].
- 11.17 For elderly or other more vulnerable patients, for example those receiving psychiatric care, who may be disproportionately worried by receiving a letter, it may be preferable to write to the GP first asking them to decide whether it is appropriate to inform the patient. However not all such cases are likely to be identifiable during the patient identification process.

Writing to patients

- 11.18 If possible letters to patients should be sent so that they arrive before or on the day of any planned press statement. The addresses should be checked and letters sent by first class post marked strictly private and confidential. If letters are sent directly to patients it may also be helpful to write to local GPs at the same time to inform them that a patient notification exercise is underway.
- 11.19 It is helpful to enclose a pre-paid envelope and reply slip for the patient/GP to return, to confirm they have received the letter. This assists with the documentation and further handling of the incident.
- 11.20 Apart from containing the number of any local general helpline the letters should, if possible,

contain a separate helpline number for those who have had exposure prone procedures performed by the health care worker. Patients receiving a letter may be very anxious to discuss the situation or arrange to have an HIV test at the earliest opportunity.

- 11.21 Most patients' addresses should be available from the case notes, but more up to date addresses may be obtained from the health authority, health board or health and social services board, although identifying a new address when the patient has moved out of the area can take some time. Where the authority or board has no record of a particular patient they may possibly be traced through the NHS Central Registry at Southport or Edinburgh, or the Central Services Agency in Northern Ireland.

Staff in the hospital

- 11.22 Staff in the hospital may also be worried and concerned about the issues surrounding HIV or AIDS, the effect of the exercise on their relationships with patients, or because they know or worked with the health care worker. They may also be contacted by worried patients. It is recommended that appropriate staff are briefed by the incident team about the exercise, initially on a strictly need to know basis, or more widely if details have entered the public domain or are likely to do so. The identity of the infected worker should not be revealed or discussed [see 8.4 and 10.2].

General security and confidentiality of records

- 11.23 The general conditions applying to confidential information about patients are equally valid in notification exercises. This includes not only the names of patients being contacted but also the names of those who have phoned the helplines. It therefore is important to restrict access to the local incident room or to any other place where confidential records may be held. In addition general heightened security measures will be necessary as there may be unauthorised attempts to gain access to this information.
- 11.24 Documents which include details that can directly identify the health care worker or patients ideally should not be left on the hard disk of an unattended computer. If they are, they should be protected by passwords which should be changed regularly. All hard copy files and diskettes must be properly locked away in a secure place when not in use, and access to these should be limited to as few people as practicably possible.
- 11.25 If there is any doubt about security during electronic transmission, this route should not be used.

Telephone helplines

- 11.26 If details about an infected health care worker incident have entered or are likely to enter the public domain, health authorities may wish to consider setting up a general helpline in addition to the specific helpline offered to patients contacted in the lookback. This will help avoid the hospital switchboard becoming jammed. It may be appropriate to contract existing local HIV helplines to help provide such a service. The National AIDS Helpline can also provide help and advice. Any local helpline should also take account of the particular needs of people whose first language is not English.
- 11.27 If establishing a local helpline it is useful to bear the following in mind:

- the telephone company should be contacted immediately the decision to set up a general

helpline has been made;

- . large numbers of telephone lines can take 24-48 hours to establish. If necessary start with as many lines as can be made available at the time and then introduce more once available. Lines can be decommissioned as demand subsides;
- . the number of calls can be very large. At the start of larger incidents in the past helplines often had to deal with 300-400 calls an hour. This may, in part, have been due to the public alarm provoked by the widespread publicity given to their existence;
- . the desirability of publicising a general helpline number should be balanced against the possibility that this may provoke needless alarm and that members of the public may feel they ought to contact it;
- . lines should ideally operate from 8am to midnight in the first instance, and over the weekend. An answerphone with a reassuring message including the National AIDS helpline number should be in operation overnight;
- . helplines should not be routed through the main hospital switchboard, otherwise they will become jammed;
- . staff manning any helpline will need briefing and discussions with the incident team, so that they are able to reassure callers that any patient who is considered to have been placed at risk of HIV infection will be notified individually, counselled, and offered testing. Depending on the complexity of the case finding process, this may not be until after an evaluation phase has been completed;
- . when patient identification is not complete callers should be told that they will be contacted, if appropriate, once their records have been checked;
- . if patient identification is complete and a patient calls a helpline insisting that they have been treated by the worker whose identity is in the public domain but there is no record of this, their views must be respected;
- . in the event that helplines are continually blocked experience has shown some people phone or come directly to the hospital. Switchboard and reception staff may require briefing and should know where to refer them. Such patients should be seen by a well briefed staff member on site as soon as possible.

Pre-test discussion and testing of patients

- 11.28 Patients who have had an exposure prone procedure performed by an HIV infected health care worker should be informed that there is a real, though very low, risk of infection and should be offered an HIV test. Those patients who have undergone exposure prone procedures which have regularly been implicated in transmission of hepatitis B from infected health care workers to patients - higher risk exposure prone procedures - should be informed that they may have been exposed to a higher though still low risk, and encouraged to have an HIV test. The UKAP can be asked to advise if there is difficulty in deciding whether any of the exposure prone procedures need to be regarded as higher risk exposure prone procedures [see 3.8].
- 11.29 Many people considering whether to have an HIV test may require reassurance concerning any effect this may have on their insurance. The Association of British Insurers has recommended to

its members that for life insurance proposals they no longer ask whether the applicant has had counselling or a negative test for HIV infection. Insurers continue to be entitled to ask about any positive HIV test result in connection with a life insurance application.

- 11.30 Arrangements should be in place for voluntary confidential HIV testing of patients who have undergone exposure prone procedures. Staff responsible for pre-test discussion will need to explain that occasionally a second specimen may be needed and that this does not necessarily indicate that HIV infection is present.
- 11.31 A large number of patients may decide to be tested for HIV infection. Such testing must be undertaken by an accredited laboratory with the facilities and experience to handle a heavy demand for testing, and which participates in a quality assurance scheme for HIV testing. The local PHLS or teaching hospital laboratory is usually best placed to offer such testing and its director should be consulted before any local arrangements are made. The laboratory director will also arrange for confirmatory testing and HIV gene sequence investigations where these are required.
- 11.32 If the patient's exposure prone procedure occurred less than three months earlier, the HIV test should be repeated at least three months following the procedure. This is because of the "window period" between infection with HIV and appearance of HIV antibody.
- 11.33 The results of the test must be made available to the patient as soon as possible, ideally by the person who provided pre-test discussion if available.
- 11.34 Depending on circumstances, it may be helpful if the laboratory forms accompanying patients' specimens are marked with an agreed code. This will allow any peripheral laboratories to recognise tests which relate to a particular incident and will facilitate the rapid reporting of results.
- 11.35 Any initially reactive test results should be discussed with a reference laboratory as a matter of urgency so that confirmatory HIV tests can be rapidly completed.
- 11.36 Laboratories should report relevant HIV test results to the incident team for incorporation into the patient notification database.

Further investigation of HIV positive results

- 11.37 In any exercise of this nature it is possible that unrelated positive test results may be obtained. This has occurred on several occasions including once in the UK, but further investigation revealed significant other risk factors for HIV and viral DNA sequencing ruled out the possibility of infection by the health care worker. A repeat blood specimen should be collected from such patients and tested in a reference laboratory [see Annex D].
- 11.38 If the presence of HIV infection is confirmed the patient should promptly be referred to a specialist HIV physician for clinical management. The following investigations should also be undertaken:
- . the senior investigator should personally undertake a detailed record review to document the exposure prone procedure and to confirm that the HIV infected patient was exposed to the HIV infected worker. Copies of the relevant records should be made and securely stored;
 - . if the patient received any blood or blood products, the National Blood Service should

be asked to investigate the donors;

- . the infected patient should be interviewed by an experienced clinician or counsellor in order to obtain a detailed history of risk factors for HIV infection;
- . specimens suitable for HIV isolation and HIV gene sequencing should be obtained from the infected patient and securely stored;
- . consideration should be given to arranging for HIV testing of the patient's sexual partner(s);
- . specialist epidemiological and virological advice on further investigation should be sought.

Dealing with the media

- 11.39 A nominated press officer should be part of the incident team from the start of the exercise. If at all possible he or she should have experience of working with the national media and should liaise with both the Regional Press Officer and the Department of Health Press Officer if appropriate [see Annex D].
- 11.40 External pressure should be resisted and should not be permitted to prompt inappropriate action in haste, although it is accepted that public concern may influence the speed with which the case finding process is undertaken [see 11.6 and 11.7]. Unnecessary or inappropriate notification (eg patients who have not undergone an exposure prone procedure) can cause unjustifiable distress, and detract from the value and acceptability of properly targeted patient notification exercises.
- 11.41 In the event of media interest or other external enquiries during the period of evaluation prior to a patient notification exercise, the DPH should acknowledge that a case is being investigated. If necessary the media should be told that when the evaluation is complete anyone who is considered to have been at risk will be notified individually, counselled and offered HIV testing. At the same time an assurance should be given that the overall risk is considered very low.
- 11.42 A public announcement can give rise to unnecessary public alarm and may result in the loss of confidentiality for exposed patients and the infected health care worker. A public announcement is not always necessary. In some incidents involving small numbers of patients no such announcement has been made. An announcement may be necessary if, for instance, wide knowledge of the incident within a hospital or trust means that it is likely to become known to the media and public. Although desirable, it is often not possible to complete patient identification or to contact patients before any public announcement is made. This needs to be decided on a case by case basis as local circumstances may vary.
- 11.43 A media statement should be held in readiness at all times, reviewed regularly, for use in the event of media enquiries.
- 11.44 An ideal scenario exists when all exposed patients have been identified and contacted, so that if necessary a press statement could be used to confirm, if the media enquire, that all patients exposed to risk have been informed and others need have no cause for concern.
- 11.45 If, however, a proactive public announcement is judged necessary, it will normally be made through a press release. This should be as informative as possible whilst avoiding the inclusion of information which could lead to deductive disclosure of the health care worker's identity. The health care worker should not be named [see Section 10]. It should:
- . refer to "a health care worker" unless more explicit information about the worker's profession has already entered the public domain;
 - . include details of arrangements which are being or have been made to contact patients;
 - . reassure that all patients who may have been exposed to risk will be or have been contacted individually, and offered HIV testing as appropriate.

In addition, the "Notes for Editors" might state that a media injunction will be sought and invoked if necessary, to prevent any publication or other disclosure of the worker's identity.

- 11.46 If details of an incident are in the public domain, NHS and other relevant authorities may consider that in order to deal effectively with the potentially large number of media enquiries, they should hold a press conference. A medically qualified person, usually the DPH or a deputy, should be present, along with senior managers and the incident team's nominated press officer. Public announcements where indicated should not be delayed if it proves difficult to assemble all relevant persons for a press conference. Press conferences may need to be held more than once if there is further media interest.
- 11.47 If it is known that an HIV infected worker has worked for a number of different authorities, any public announcements should ideally be made by all the authorities concerned at the same time. The multi-district incident team [see 8.7] should issue a statement which covers all districts, or if separate communications are necessary, ensure that the content and timing of these are consistent.

Reviewing the outcome

- 11.48 Once the incident is over, the head of the incident team should correlate the master list of patients, appropriately coded, and details of the procedure undergone with the HIV antibody test results. The completed dataset should be archived at the PHLS AIDS Centre at CDSC or the Scottish Centre for Infection and Environmental Health [see Annex D] and a summary sent to the secretariat of the UK Advisory Panel [see Annex B]. This will be collated with data from all similar look back studies to assist in further epidemiological assessment.
- 11.49 In all cases it is helpful, when the exercise is complete, to evaluate how it was managed, identify pressure points or problems and refine the local action plan accordingly.
- 11.50 The Department of Health would be grateful if the heads of incident team would consider sending final reports to the UKAP secretariat to assist in the further development of this guidance.

ABBREVIATIONS

ANHOPS	The Association of NHS Occupational Physicians
BBV	blood-borne virus
CCDC	consultant in communicable disease control
CDSC	Communicable Disease Surveillance Centre
COSHH	Control of Substances Hazardous to Health Regulations 1994
DPH	director of public health
EAGA	Expert Advisory Group on AIDS
EPP	exposure prone procedure
HCW	health care worker
HIV	human immunodeficiency virus
HSE	Health & Safety Executive
PHLS	Public Health Laboratory Service
UKAP	UK Advisory Panel for Health Care Workers Infected With Blood-borne Viruses

REFERENCES

1. Guidance for Clinical Health Care Workers: Protection Against Infection with Blood-borne Viruses. Recommendations of the Expert Advisory Group on AIDS and the Advisory Group on Hepatitis: UK Health Departments April 1998.
2. Ciesielski C, Marianos D, Ou CY, Dumbaugh R, Witte J, Berkelman R et al. Transmission of HIV in a dental practice. *Ann Int Med* 1992; 116: 798 - 805.
3. Transmission of HIV from an infected surgeon to a patient in France - *Communicable Disease Report Weekly*. January 24 1997, 7 (4): 17.
4. Robert L, Chamberland ME, Cleveland JL et al. Investigations of patients of health care workers infected with HIV. The Centers for Disease Control and Prevention Database. *Ann Int Med* 1995;122: 653-657.
5. Occupational Transmission of HIV: Summary of Published Reports: December 1997 edition. PHLS AIDS & STD Centre at the Communicable Disease Surveillance Centre and Collaborators.
6. Tokars JI, Bell DM, Culver DH et al. Percutaneous injuries during surgical procedures. *JAMA* 1992; 267: 2899 - 2904.
7. Smith ER, Tilzey AJ, Banatvala JE. Hepatitis B vaccine uptake among surgeons at a London teaching hospital: how well are we doing? *Ann RCS Eng* 1996; 78: 447-9.

REGULATORY BODIES' STATEMENTS ON PROFESSIONAL RESPONSIBILITIES

1. GENERAL MEDICAL COUNCIL

The GMC Statement, *HIV Infection and AIDS: the Ethical Considerations*, was first sent to all registered medical practitioners in August 1988, and in April 1991 was sent to those who had obtained full registration since 1988. A revised version was sent in June 1993, and this was re-circulated to doctors as part of the series of booklets *Duties of a Doctor* in 1995.

In 1997 it was superseded by the booklet *Serious Communicable Diseases*. This term applies to any disease which may be transmitted from human to human and which may result in death or serious illness. It particularly concerns, but is not limited to, infections such as HIV, tuberculosis and hepatitis B and C.

Excerpts relevant to health care workers with HIV/AIDS are as follows:

Responsibilities of doctors who have been exposed to a serious communicable disease

29. *If you have any reason to believe that you have been exposed to a serious communicable disease you must seek and follow professional advice without delay on whether you should undergo testing and, if so, which tests are appropriate. Further guidance on your responsibilities if your health may put patients at risk is included in our booklet Good Medical Practice.*
30. *If you acquire a serious communicable disease you must promptly seek and follow advice from a suitably qualified colleague - such as a consultant in occupational health, infectious diseases or public health on:*
 - *Whether, and in what ways, you should modify your professional practice;*
 - *Whether you should inform your current employer, your previous employers or any prospective employer, about your condition.*
31. *You must not rely on your own assessment of the risks you pose to patients.*
32. *If you have a serious communicable disease and continue in professional practice you must have appropriate medical supervision.*
33. *If you apply for a new post you must complete health questionnaires honestly and fully.*

Treating colleagues with serious communicable diseases

34. *If you are treating a doctor or other health care worker with a serious communicable disease you must provide the confidentiality and support to which every patient is entitled.*
35. *If you know, or have good reason to believe, that a medical colleague or health care worker who has, or may have, a serious communicable disease, is practising, or has practised, in a way which places patients at risk, you must inform an appropriate person in the health care*

worker's employing authority, for example an occupational health physician, or where appropriate the relevant regulatory body. Such cases are likely to arise very rarely. Wherever possible you should inform the health care worker concerned before passing information to an employer or regulatory body.

2. GENERAL DENTAL COUNCIL

Extract from *Maintaining Standards Guidance to dentists on professional and personal conduct. November 1997.*

This guidance was sent to all registered dental practitioners in December 1997 and replaces the guidance entitled *Professional Conduct and Fitness to Practise*.

Dealing with Cross-Infection

- 4.1 *There has always existed the risk of cross-infection in dental treatment. Therefore, a dentist has a duty to take appropriate precautions to protect patients and other members of the dental team from that risk. The publicity surrounding the spread of HIV infection has served to highlight the precautions which a dentist should already have been taking and which are now more important than ever. Detailed guidance on cross-infection control has been issued by the Health Departments and the British Dental Association, and is endorsed by the Council.*

It is unethical for a dentist to refuse to treat a patient solely on the grounds that the person has a blood borne virus or any other transmissible disease or infection.

Failure to employ adequate methods of cross-infection control would almost certainly render a dentist liable to a charge of serious professional misconduct.

Dealing with Transmissible Disease

- 4.2 *A dentist who is aware of being infected with a blood borne virus or any other transmissible disease or infection which might jeopardise the wellbeing of patients and takes no action is behaving unethically. The Council would take the same view if a dentist took no action when having reason to believe that such infection may be present.*

It is the responsibility of a dentist in either situation to obtain medical advice which may result in appropriate testing and, if a dentist is found to be infected, regular medical supervision. The medical advice may include the necessity to cease the practice of dentistry altogether, to exclude exposure prone procedures or to modify practice in some other way.

Failure to obtain such advice or to act upon it would almost certainly lead to a charge of serious professional misconduct.

3. UNITED KINGDOM CENTRAL COUNCIL FOR NURSING, MIDWIFERY AND HEALTH VISITING (UKCC)

Extract from: Registrar's Letter 4/1994 Annex 1 *ACQUIRED IMMUNE DEFICIENCY SYNDROME AND HUMAN IMMUNO DEFICIENCY VIRUS INFECTION (AIDS AND HIV INFECTION) The Council's Position Statement.*

The Council's Code of Professional Conduct

2. *The 'Code of Professional Conduct for the Nurse, Midwife and Health Visitor' is a statement to the profession of the primacy of the interests of patients and clients. Its introductory paragraph states the requirement that each registered nurse, midwife and health visitor safeguard the interest of individual patients and clients. It goes on to indicate to all persons on the register maintained by the Council that, in the exercise of their personal professional accountability, they must 'act always in such a manner as to promote and safeguard the interests and well-being of patients and clients'.*

The Responsibility of Individual Practitioners with HIV Infection

13. *Although the risk of transmission of HIV infection from a practitioner to a patient is remote, and, on the available evidence much less than the risk of patient to practitioner transmission, the risk must be taken seriously. The Department of Health in England have commissioned a study to evaluate this risk. It is incumbent on the person who is HIV positive to ensure that she or he is assessed regularly by her or his medical advisers and complies with the advice received.*
14. *Similarly, a nurse, midwife or health visitor who believes that she or he may have been exposed to infection with HIV, in whatever circumstances, should seek specialist medical advice and diagnostic testing, if applicable. She or he must then adhere to the specialist medical advice received. Each practitioner must consider very carefully their personal accountability as defined in the Code of Professional Conduct and remember that she or he has an overriding ethical duty of care to patients.*

UK ADVISORY PANEL REMIT AND CONSTITUTION

1. Remit and Tasks of the UKAP

The UK Advisory Panel was set up originally under the aegis of the UK Health Departments' Expert Advisory Group on AIDS in 1991, and in 1993 its remit was extended to consider health care workers infected with all blood-borne viruses.

The tasks of the UKAP are:

- . to establish and update as necessary, criteria on which local advice on modifying working practices may be based;
- . to provide supplementary specialist occupational advice to physicians of health care workers infected with blood-borne viruses, occupational physicians and professional bodies;
- . to advise individual health care workers or their advocates how to obtain guidance on working practices;
- . to advise directors of public health on patient notification exercises where these are indicated of patients treated by health care workers with other blood-borne viruses as appropriate;
- . to keep under review the literature on transmission of blood-borne viruses in health care settings and advise the Expert Advisory Group on AIDS and the Advisory Group on Hepatitis on the need for revision of guidelines as necessary.

2. Constitution of the UKAP

The Panel is chaired by a lay (non-medical) person.

The following specialities are represented:

Anaesthetics
Dentistry
Epidemiology
General Practice
Hepatology
HIV Disease
Midwifery
Nursing
Obstetrics and Gynaecology
Occupational Health
Public Health
Surgery
Virology

Lay members in addition to the Chairman are also appointed.

The Secretariat is provided by the Communicable Diseases Branch of the Department of Health.

3. Contact with the UKAP

Directors of public health, regional epidemiologists, physicians, occupational health practitioners and others wishing to obtain the UKAP's advice should contact the Medical Secretary by letter, or by telephone if urgent. Any information which may identify the infected health care worker should be withheld. Confidentiality of all information concerning individual referrals will be maintained by the secretariat and members of the UKAP.

Cases are considered by selected members of the UKAP according to the health care worker's area of work. Experts from other specialties not represented on the UKAP are co-opted to advise as necessary.

Address of secretariat

Department of Health

Room 724

Wellington House

133-155 Waterloo Road

London SE1 8UG

Telephone: 0171- 972 4378 (Medical Secretariat)

0171-972 4163 (Administrative Secretariat)

EXAMPLES OF UKAP ADVICE ON EXPOSURE PRONE PROCEDURES

1. The UKAP has been making recommendations about the working practices of health care workers (HCWs) infected with HIV since the end of 1991, and HCWs infected with other blood-borne viruses (BBVs) since September 1993. Advice for occupational physicians arises from individual queries, cases or general issues which have been referred to the UKAP since its inception.

Exposure prone procedure criteria

2. Judgements are made by occupational physicians, or in conjunction with the UKAP where doubt or difficulty exists, about whether any procedure is or is not exposure prone against the following criteria:

Exposure prone procedures (EPPs) are those where there is a risk that injury to the worker may result in exposure of the patient's open tissues to the blood of the worker. These procedures include those where the worker's gloved hands may be in contact with sharp instruments, needle tips or sharp tissues (spicules of bone or teeth) inside a patient's open body cavity, wound or confined anatomical space where the hands or fingertips may not be completely visible at all times.

3. Occupational physicians and others who need to make decisions about the working practices of infected HCWs may find the advice helpful. In some cases this advice may help clarify matters, and in others may direct the reader to seek further specific advice about the individual case under consideration.

Cautionary note

4. Until now, the UKAP has not favoured issuing guidance about what areas or particular procedures of medical, nursing or midwifery practice involve exposure prone procedures. This is because individual working practices may vary between hospitals and between HCWs. Advice for one HCW may not always be applicable to another. This list must therefore be interpreted with caution, as it provides examples only and is not exhaustive.

Examples of advice given by UKAP

5. The following advice has been given by UKAP in relation to specialities and procedures:

5.1 Accident and Emergency

A+E staff who are restricted from performing EPPs should not provide pre-hospital trauma care (see **Paramedics**).

These staff should not physically examine or otherwise handle acute trauma patients with open tissues because of the unpredictable risk of injury from sharp tissues such as fractured bones. Cover from colleagues who are allowed to perform exposure prone procedures would be needed at all times to avoid this eventuality.

Other exposure prone procedures which may arise in an A+E setting would include rectal examination in presence of pelvic fracture, deep suturing to arrest haemorrhage and internal cardiac massage. In addition, situations where risk of biting of health care workers' fingers is considered significant (such as a violent patient or during an epileptic fit) should be avoided where possible unless the EPP restricted worker is the only person available to provide an immediate life saving intervention. Mouth to mouth resuscitation should not be withheld if the EPP restricted worker is the only immediately available person competent to provide this, but ideally should be delegated to a colleague not restricted from performing EPPs. (see **Resuscitation**).

5.2. Anaesthetics

Procedures performed purely percutaneously are not exposure prone, nor have endotracheal intubation nor the use of a laryngeal mask been considered so. Arterial cutdown involving tissue dissection has been considered exposure prone. Skin tunnelling (used in some pain control procedures) may or may not be exposure prone depending on whether the operator's fingers are at any time concealed in the patient's tissues in the presence of a sharp instrument. It is considered possible to perform a skin tunnelling procedure in a non-exposure prone manner.

5.3. Bone Marrow transplants

Not exposure prone.

5.4. Cardiology

Percutaneous procedures including angiography/cardiac catheterisation are not exposure prone, provided cutdown is not performed to obtain vascular access. Arterial cutdown involving tissue dissection is considered exposure prone. Implantation of permanent pacemakers (for which a skin tunnelling technique is used to site the pacemaker device subcutaneously) may or may not be exposure prone. This will depend on whether the operator's fingers are or are not concealed from view in the patient's tissues in the presence of sharp instruments during the procedure [see 5.2].

5.5 Chiropodists - see Podiatrists

5.6 Dentistry (including hygienists)

The majority of procedures in dentistry are exposure prone, with the exception of examination using a

mouth mirror only.

5.7 Ear, Nose and Throat Surgery (Otolaryngology)

ENT surgical procedures generally should be regarded as exposure prone with the exception of simple ear or nasal procedures, and procedures performed using endoscopes (flexible and rigid) **provided fingertips are always visible**. Non-exposure prone ear procedures include - stapedectomy/stapedotomy, insertion of ventilation tubes and insertion of a titanium screw for a bone anchored hearing aid.

5.8 Endoscopy

Simple endoscopic procedures (eg gastroscopy, bronchoscopy) have not been considered exposure prone but should be avoided by EPP restricted health care workers if a significant risk of biting of the worker's fingers is deemed to be present such as in a violent or fitting patient.

In general there is a risk that surgical endoscopic procedures (eg cystoscopy, laparoscopy - see below) may escalate due to complications which may not have been foreseen and may necessitate an open exposure prone procedure. The need for cover from a colleague who is allowed to perform exposure prone procedures should be considered as a contingency.

5.9 General Practice

Exposure prone procedures are rare in General Practice. Possible areas where they may be encountered are minor surgery, obstetrics and trauma situations. See relevant sections for procedures.

5.10 Gynaecology (see also Laparoscopy)

Open surgical procedures are exposure prone. Many minor gynaecological procedures are not considered exposure prone, examples include dilatation & curettage (D&C), suction termination of pregnancy, colposcopy, surgical insertion of depot contraceptive implants/devices, fitting intrauterine contraceptive devices (coils), and vaginal egg collection **provided fingers remain visible at all times when sharp instruments are in use**.

Performing **cone biopsies** with a scalpel (and with the necessary suturing of the cervix) would be exposure prone. Cone biopsies performed with a loop or laser would not in themselves be classified as exposure prone, but if local anaesthetic was administered to the cervix other than under direct vision ie with fingers concealed in the vagina, then the latter would be an exposure prone procedure.

5.11 Haemodialysis/Haemofiltration

See **Renal Medicine**.

5.12 Laparoscopy

Mostly non-exposure prone because fingers are never concealed in the patient's tissues. Exceptions are, exposure prone if main trochar inserted using an open procedure, as for example in a patient who has had previous abdominal surgery. Also exposure prone if rectus sheath closed at port sites using J-needle, and fingers rather than needle holders and forceps are used.

In general there is a risk that a therapeutic, rather than a diagnostic, laparoscopy may escalate due to complications which may not have been foreseen necessitating an open exposure prone procedure. The

need for cover from a colleague who is allowed to perform EPPs should be considered as a contingency.

5.13 Midwifery

Simple vaginal delivery and the use of scissors to make an episiotomy cut are not exposure prone. Infiltration of local anaesthetic prior to episiotomy, suturing of an episiotomy and attaching sharp scalp electrodes to baby's head are considered exposure prone.

5.14. Minor Surgery

In the context of GP minor surgery and elsewhere: excision of lipomata and sebaceous cysts should not be performed by an EPP restricted HCW. Any more complex procedures which are occasionally performed in GPs' surgeries by doctors with appropriate experience, such as herniorrhaphy, are exposure prone also.

5.15 Needlestick/Occupational Exposure to HIV

Health care workers need not refrain from performing exposure prone procedures pending follow up of occupational exposure to an HIV infected source. The combined risks of contracting HIV infection from the source patient, and then transmitting this to another patient during an exposure prone procedure is so low as to be considered negligible. However in the event of the worker being diagnosed HIV positive, such procedures must cease in accordance with this guidance.

5.16 Nursing

General nursing procedures do not include exposure prone procedures. The duties of operating theatre nurses should be considered individually. See also sections on **Accident and Emergency, Resuscitation and Renal Medicine/Nursing.**

5.17 Obstetrics/ Midwifery

See midwifery. Obstetricians may also perform other surgical procedures, many of which will be obviously exposure prone according to the criteria.

5.18 Operating Department Assistant/ Technician

General duties do not normally include exposure prone procedures.

5.19 Ophthalmology

With the exception of orbital surgery which is usually performed by maxillo-facial surgeons (who perform many other EPPs), routine ophthalmological surgical procedures are not exposure prone as the operator's fingers are not concealed in the patient's tissues. Exceptions may occur in some acute trauma cases, which should be avoided by EPP restricted surgeons.

5.20 Orthodontics

Because of the presence of sharp wires on fixed orthodontic appliances which may cause injury to the orthodontist's fingers inside the mouth, and the need for oral examination which may involve the use of sharp instruments, it would be difficult for a worker unfit for EPPs to pursue a career in orthodontics. See also **Dentistry** as some orthodontists perform general dental procedures, the majority of which are exposure prone.

5.21 Paediatrics

Neither general nor neonatal/special care paediatrics has been considered likely to involve any exposure prone procedures, with the exception of cutdown to obtain vascular access (involving tissue dissection). Paediatric surgeons do perform EPPs.

5.22 Paramedics

In contrast to other emergency workers, a paramedic's primary function is to provide care to patients. Direct patient care including intravenous cannulation is not a risk to patients as it is not exposure prone; however, paramedics who are EPP restricted should not perform duties at emergency sites because of risk of injury due to the unpredictability of the situation.

5.23 Pathology

In the event of injury to an EPP restricted pathologist performing a post mortem examination, the risk to other workers handling the same body subsequently is so remote that no restriction is recommended.

5.24 Podiatrists

For podiatrists who are not trained in and do not perform surgical techniques, routine procedures are not exposure prone. EPP restricted podiatrists should not train in surgical techniques, nor should an EPP restricted surgical podiatrist continue to perform surgery. Prior to formalising criteria for exposure prone procedures, the UKAP agreed with a representative from the podiatry profession that there was risk that injury to a podiatrist could result in contamination of a patient's open tissues with the podiatrist's blood.

5.25 Radiology

Arterial cutdown involving tissue dissection should not be performed by EPP restricted workers. All percutaneous procedures, including imaging of the vascular tree, biliary system and renal system, drainage procedures and biopsies as appropriate, are not exposure prone procedures.

5.26 Renal Medicine

Obtaining vascular access at the femoral site in a distressed patient may constitute an exposure prone procedure as the risk of injury to the HCW may be significant. This is more likely to be a problem for haemofiltration (often performed in an emergency) than for haemodialysis (more likely to be instigated electively and patients less likely to be distressed than those who need haemofiltration).

The working practices of those staff who supervise haemofiltration and haemodialysis circuits do not include exposure prone procedures.

5.27 Resuscitation

Unless an equally competent colleague who is allowed to perform exposure prone procedures is present, EPP restricted HCWs **should** provide immediate life saving mouth to mouth resuscitation if they are competent so to do; potential benefit to the patient greatly outweighs the small risk of BBV transmission in these circumstances.

5.28 Surgery (see also Laparoscopy, Minor Surgery)

Open surgical procedures are exposure prone. This applies equally to major organ retrieval because of the risk of contamination of the organ during the procedure and the potential risk to the recipient.

SOURCES OF ADVICE AND SUPPORT

1. **The PHLS Virus Reference Division** at the Central Public Health Laboratory, 61 Colindale Avenue, London NW9 5HT (0181-200 4400) can:
 - . provide facilities for rapid confirmatory testing of specimens initially reactive for anti-HIV antibody;
 - . advise on the collection of specimens for HIV gene sequencing and make provision for the long term storage of specimens;
 - . arrange for any necessary molecular investigations to be conducted in collaboration with other experts.
2. **The PHLS AIDS Centre at the Communicable Disease Surveillance Centre (CDSC)**, 61 Colindale Avenue, London NW9 5EQ (0181-200 6868) and/or regional epidemiologists can provide:
 - . background scientific information on the outcome of patient notification exercises which have been conducted;
 - . field advice and support to any incident team established to manage such an incident, including help with drafting model letters and information sheets for GPs and exposed patients;
 - . facilities for collating HIV test results from widely scattered laboratories and forwarding them to the incident team co-ordinating a patient notification exercise;
 - . advice on the investigation of HIV infected persons in whom risk factors for infection have not been identified;
 - . advice on the selection of suitable "control" HIV infected persons, should HIV gene sequencing investigations be considered necessary.
3. **The Scottish Centre for Infection and Environmental Health**, Clifton House, Clifton Place, Glasgow G3 7LN (Tel: 0141-300 1100) can provide similar advice to the above in Scotland.
4. **The National AIDS Helpline, Tel: 0800-567 123**. This English language service offers confidential advice, information and referrals on all aspects of HIV and AIDS. The service is free and lines are open 24 hours a day, 7 days a week. Services are also available in other languages.
5. **Faculty of Occupational Medicine**, Royal College of Physicians, 6 St Andrews Place, Regents Park, London NW1 4LB (Tel: 0171-487 3414).
6. **Medical Secretary to the Association of National Health Service Occupational Physicians (ANHOPs)**, c/o Sheffield Occupational Health Services, Northern General Hospital, Sheffield S5 7AU Tel: (0114-271 4161).
7. **Department of Health Press Office**, Richmond House, 79 Whitehall, London SW1A 2NS (Tel 0171-210 5228).

- 8. Association of British Insurers**, 51 Gresham Street, London EC2V 7HQ
(Tel 0171-600 3333).
- 9. NHS Pensions Agency**, Injury Benefits Manager, 200-220 Broadway, Fleetwood, Lancashire FY7 8LG.
- 10. Employment Medical Advisory Service (EMAS)/Health and Safety Executive (HSE)**
For details of your local EMAS/HSE contact Health and Safety Information,
(Tel: 0541-545500).