CIRCULAR

NSW HEALTH DEPARTMENT

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HEALTH CARE WORKERS INFECTED WITH HIV, HEPATITIS B OR HEPATITIS C

This circular supersedes Circular 95/8 *HIV and hepatitis B infected health care workers* and is to be read in conjunction with Circular 95/13 *Infection Control Policy,* Circular 98/11 *Management of Health Care Workers Exposed to HIV, Hepatitis B or Hepatitis C;* and 96/40 *Hepatitis B and Health Care Workers.*

This Circular extends policy on health care workers infected with blood borne viruses to include hepatitis C. All health care workers in New South Wales who perform exposure prone procedures, as defined in this Circular, are required to know their blood borne virus status. A HCW who is either HCV PCR positive or HIV positive or HBeAg positive or HBV DNA positive must not perform exposure prone procedures.

Private health care facilities are advised to adopt this policy unless they already have in place equivalent policy on this issue.

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GLOSSARY

EPPs	Exposure prone procedures. EPPs are a subset of invasive procedures (see below). EPPs are those procedures where there is potential for contact between the skin (usually finger or thumb) of the HCW and sharp surgical instruments, needles or sharp tissues (splinters/ pieces of bone/tooth) in body cavities or in poorly visualised or confined body sites including the mouth. Procedures which lack these characteristics are unlikely to pose a risk of transmission of blood borne viruses from infected HCW to patient. Provided they are not conducted in poorly visualised or confined body sites, the following procedures are **not** considered to be exposure prone - oral, vaginal or rectal examinations that do not involve sharp instruments; phlebotomy; administering intramuscular, intradermal or subcutaneous injections; needle biopsies; needle aspirations; lumbar punctures; venous cutdown and angiographic procedures; excision of epidermal or dermal lesions; suturing of superficial skin lacerations; endoscopy; placing and maintaining peripheral and central intravascular lines, nasogastric tubes, rectal tubes and urinary catheters; acupuncture; other procedures that do not involve sharps; or procedures where the use of sharps is superficial, well visualised, and administered to compliant or anaesthetised patients where it is very unlikely that a HCW skin injury would result in exposure of a patient to the HCW's blood or body substances.
HBeAg	Hepatitis B e antigen - marker of high level of infectiousness
HBsAg	Hepatitis B surface antigen - indicates current infection with HBV with some potential to infect others
HBV	Hepatitis B virus
HBV DNA	Hepatitis B virus genetic material - marker of high level of infectiousness
HCV	Hepatitis C virus
HCV RNA	Hepatitis C genetic material - marker of high level of infectiousness
HCW	Health care worker. Persons, including students and trainees, whose activities involve direct contact with patients or with blood or body fluids from patients.
Health care facility	All publicly funded public hospitals, community health services, dental clinics, day procedure centres etc.
HIV	Human immunodeficiency virus
Invasive procedure	Any procedure that pierces the skin or mucous membrane or enters a body cavity or organ. This includes surgical entry into tissues, cavities or organs or repair of traumatic injuries. Exposure prone procedures form a subset of invasive procedures.
PCR	polymerase chain reaction
VMO	Visiting Medical Officer

1 INTRODUCTION

NSW Health is committed to providing an environment which is as safe as possible for patients and HCWs. The blood borne viruses HIV, HBV and HCV are of concern because of their potential for transmission during provision of health care.

This Circular contains policy for use in relation to HCWs infected with HIV, HBV or HCV. It has been developed in accordance with the following principles:

- HCWs and employers have a legal obligation to care for the safety of others in the workplace (this includes other workers, patients and visitors) under the Occupational Health and Safety Act 1983; and
- individual HCWs and health care facilities owe a common law duty of care to their patients.

This Circular provides Area Health Services with the basis for development of detailed policy relevant to their particular setting. It is recommended that professional organisations and private hospitals also use this Circular as a basis for policy development.

It is **not** recommended that employers require evidence of the HIV, HBV or HCV status of HCWs. It should be the goal of all employers and health care facilities to achieve voluntary compliance and self-disclosure, where appropriate, by the establishment and maintenance of an environment in which HCWs know their confidentiality will be protected and they will not suffer unlawful discrimination.

It is the responsibility of Area Health Services to ensure that this Circular is complied with in all facilities under their control and that this Circular is brought to the attention of relevant new and existing HCWs who perform EPPs - including employed staff, VMOs and other independent contractors (including agency staff).

2 RATIONALE

There is a very low, but real, risk of transmission of blood borne viruses from an infected HCW to a patient in Australian health care settings. There is evidence that blood borne viruses can be transmitted from HCWs to patients during EPPs (see below). This evidence is the rationale for the exclusion of infectious HCWs from the performance of EPPs.

2.1 HIV

No known cases of HCW to patient HIV transmission have occurred in Australia. In the international literature the only documented instances of transmission of HIV from an infected HCW to patients involve the cluster of six patients of a Florida dentist[11] and one patient of a French orthopaedic surgeon[12]. Despite this apparently low risk, it is considered that further study is required to more accurately quantify the risk to patients and that all HIV positive HCWs should be considered infectious. At the time of writing there is no evidence in the scientific literature regarding markers of infectious status for HIV, although there have been suggestions that viral load may be such a marker.

2.2 HBV

HBV is the most readily transmitted of the blood borne viruses, and since the early 1970s when testing for HBV commenced, there have been many published reports of clusters of patients infected with HBV by HBV infected HCWs. In one series of reported incidents, all HCWs whose HBeAg status was known and who infected patients, were HBeAg positive[345]. In this series, in 5 of 11 HCWs who resumed practice of EPPs after modification of procedures, further transmission to patients occurred.

A 1997 report[6] documented several cases of probable surgeon to patient transmission of HBV involving four surgeons who did not have detectable serum HBeAg; the surgeons were however shown to be HBV DNA positive, and DNA sequencing showed the HBV DNA carried by the surgeons to be indistinguishable from that found in each surgeon's infected patients. It follows that HBV DNA testing is currently the most sensitive marker of the potential to transmit HBV infection in HCWs who are HBsAg positive and HBeAg negative.

2.3 HCV

Testing for HCV only became available in 1990, so the extent of occupational and nosocomial transmissions of HCV prior to 1990 is unknown. There are recent reports of HCV transmission from 2 cardiothoracic surgeons to patients[7,8]. A 1997 review of the role of PCR testing in defining infectiousness among people infected with HCV indicates extremely low probability of transmission if the person is HCV PCR negative[9]. On this basis, HCV PCR positive HCWs are regarded as infectious.

3 STRATEGIES FOR PREVENTION OF TRANSMISSION OF BLOOD BORNE VIRUSES IN THE HEALTH CARE SETTING

3.1 Infection Control

Employers and HCWs should have access to and comply with Circular 95/13 *Infection Control Policy*. Compliance with standard infection control precautions and adoption of recommended procedures for sterilisation and disinfection of equipment, as outlined in the *Policy*, minimises the risk of transmission of blood borne viruses in the health care setting.

Registered HCWs (medical practitioners, nurses, physiotherapists, dentists, podiatrists and dental prosthetists) have an individual legal responsibility to comply with the standards (infection control) set out in regulations of their professional registration acts.

Health care facilities must ensure:

- that HCWs (including those with HIV, HBV or HCV infection) are fully informed about the infection risks involved in undertaking procedures;
- that HCWs are fully informed about and comply with recommended infection control procedures; and
- that HCWs comply with current guidelines for disinfection and sterilisation of reusable devices.

3.2 Immunisation of HCWs against HBV

HBV is currently the only blood borne virus for which a vaccine is available. Successful HBV vaccination prevents a person from acquiring HBV, thus eliminating the possibility that they may become infected and transmit the infection to others. It is strongly recommended that all non-immune HCWs who may be exposed to HBV in the course of their work be immunised against HBV for their own protection. Circular 96/40 *Hepatitis B and Health Care Workers* provides employers with a framework for offering education and HBV vaccination to HCWs.

3.3 Exclusion of infectious HCW s from practising EPPs

HCWs who perform EPPs must know their HIV, HBV and HCV status. Medical practitioners should note that NSW Medical Board policy requires medical practitioners who perform, or who could reasonably be anticipated to perform, EPPs to know their infectious status[10]. Infectious HCWs (ie those who are either HCV PCR positive or HBV DNA positive or HBeAg positive or HIV positive) must not perform EPPs.

Where there is uncertainty about whether certain procedures are exposure prone, the matter may be referred to the NSW Health Blood Borne Viruses Advisory Panel (hereafter the Advisory Panel) - see Appendices 1,2 and 3. Professional associations have a role in assisting the Advisory Panel, by representation from a member of the relevant profession, in determining what is exposure prone on a case by case basis.

4 SEROLOGICAL TESTING FOR HIV, HBV AND HCV.

It is in the interests of all HCWs to know their HIV, HBV and HCV status so that they may take steps to seek appropriate treatment, modify lifestyle if relevant, and avoid occupationally acquired infections that might exacerbate any existing infection.

4.1 Employer responsibility

Employers must ensure that options are available for employees who perform EPPs to obtain confidential testing and counselling for HIV, HBV and HCV. Testing may be provided by employers via the staff health service, or HCWs may choose to seek testing from their general practitioner, or another appropriate health facility. Arrangements should be in place to allow for infected HCWs to obtain the results of testing for markers of their infectious status as soon as possible after a positive test result for HBV or HCV.

4.2 HCWs who do not perform EPPs

For HCWs who do not perform EPPs regular testing for blood borne viruses is not justified due to the very low risk of occupational transmission if standard infection control precautions are applied. Policy for testing following potential occupational exposure to blood borne viruses is set out in Circular 98/11 *Management of Health Care Workers Exposed to HIV, Hepatitis B or Hepatitis C*. These HCWs may however consider seeking testing if other risk factors are present.

4.3 HCWs who perform EPPs

HCWs who perform EPPs must be aware of their HIV, HBV and HCV status by seeking serologic testing:

- if untested and currently performing EPPs;
- if about to commence performing EPPs;
- if it is 12 months or longer since their last tests;
- following any significant occupational exposure (refer to Circular 98/11 *Management of Health Care Workers Exposed to HIV, Hepatitis B or Hepatitis C*); and
- immediately on recognition of a non-occupational exposure, including needle sharing with a person infected with or at increased risk of HIV, HBV, or HCV; and unprotected sexual intercourse with a person infected with or at increased risk of HIV or HBV. The risk of sexual transmission of HCV is at present believed to be low. Risk will be increased where sexual activity involves blood to blood contact.

5 CONFIDENTIALITY

Confidentiality of testing arrangements for HCWs infected with HIV, HBV and HCV not only safeguards personal rights, but also is in the public interest. Maintenance of confidentiality will encourage HCWs to seek appropriate testing, counselling and treatment and to disclose their serologic status to their employers.

Circular 99/18 *NSW Health Information Privacy Code of Practice* sets out clear guidelines on the legislative and policy framework for the management of personal information in health settings. In addition, Circular 98/100 *HIV Confidentiality: A Guide To Legal Requirements* summarises the legislative framework relating to information concerning HIV status.

6 INFECTED HCWs

6.1 Informing patients of HCW status

Patients, like HCWs, are best protected from exposure to HIV, HBV and HCV by adoption of appropriate infection control practices. In the absence of any significant exposure to blood or other body substances, patients are at an extremely low risk of acquiring blood borne infections. It is not recommended that HCWs be required to disclose their HIV, HBV or HCV status to patients. The reasons for this are that:

- infectious HCWs shall no longer undertake EPPs;
- there is no onus of confidentiality on the part of patients once they have been informed of a HCW's infection status; and
- a policy of providing a right for a patient to be informed of the HCWs HIV, HBV and HCV status would send an erroneous message to the public concerning the risk of transmission between HCW and patient.

6.2 Informing employers of HIV/HBV/HCV status

It is desirable that HCWs practising EPPs inform their employer of infectious status regarding HIV, HBV and HCV, if they are positive, so that:

- their welfare and safety in the workplace can be maximised; and
- they fulfil their common law duty of care and take all reasonable steps to safeguard patients/clients.

HCWs have a responsibility to advise either their employer, professional organisation or the Advisory Panel if they are either HIV antibody positive or HBeAg positive or HBV DNA positive or HCV PCR positive and are or have been performing EPPs. If it is likely that patients have been exposed to risk of infection during EPPs, HCWs have a responsibility to inform their employer. Advice should be sought from the Advisory Panel either by the employer or the HCW so that a confidential investigation of patients can be arranged.

Where a HCW does disclose his or her HIV, HBV or HCV status to an employer, the disclosure must be treated with due regard to the HCW's right to confidentiality.

6.3 Management of infected HCWs

All HCWs who are HIV antibody positive, HBeAg positive or HBV DNA positive or HCV PCR positive should seek:

- expert medical advice; and
- expert occupational health and safety advice.

Areas should ensure that appropriate expert advice is available for employees.

HCWs who are HCV antibody positive and HCV PCR negative and HCWs who are HBsAg positive are to be provided with access to ongoing expert clinical advice regarding their potential infectiousness and the appropriateness of their continued performance of EPPs.

In the light of a recent study which demonstrated increased likelihood of fulminant hepatitis and death as a result of co-infection with HCV and hepatitis A, consideration should be given to offering hepatitis A vaccination to HCWs who are HCV positive[11].

6.3.1 Medical care

In the interest of their own health, HCWs infected with HIV, HBV or HCV should be followed up by a medical practitioner who is expert and experienced in the management of these conditions. This medical expert will also have a role in advising the infected HCW about continued involvement in direct patient care.

6.3.2 Occupational health and safety

Infected HCWs should seek confidential advice on infection control procedures, continued involvement in patient care, matters of confidentiality and other issues from an expert medical practitioner with knowledge of the relevant NSW Health policies and policies of the NSW Medical Board. The medical practitioner may be the person who provides medical care as recommended in 6.3.1, however additional advice may also be sought from an occupational physician, a clinical microbiologist or a medical practitioner with relevant expertise (eg hepatologist, immunologist, infectious diseases physician). Further confidential advice may be sought from the relevant professional body or the Blood Borne Viruses Advisory Panel (see Appendix 3).

6.3.3 Exclusion of HCWs from performance of exposure prone procedures

The categories of infected HCWs excluded from the performance of EPPs are:

1. HIV antibody positive, irrespective of levels of viremia.
2. HCV antibody positive and HCV RNA is positive by PCR or in whom HCV RNA PCR status is yet to be determined.
3. HBsAg positive in whom HBeAg or HBV DNA is positive or in whom HBeAg or HBV DNA status is yet to be determined.

Under these guidelines HCWs who are:

1. HCV antibody positive, but HCV RNA negative; and/or
2. HBsAg positive but HBeAg negative and HBV DNA negative

may continue to perform EPPs provided they remain negative for the infectious genetic material of the virus. Such HCWs are obliged to have regular virological monitoring to ensure that their practice reflects their virological status.

HCWs who are HIV positive, HBV positive and HCV positive should double glove for all invasive procedures, including those which are not considered to be exposure prone.

7 MODIFICATION OR TRANSFER FROM DUTIES

All HCWs - including those infected with HIV, HBV or HCV - should be assessed to determine that they are capable of performing their tasks adequately to the accepted professional standard, that they practise recommended techniques, that they comply with standard infection control precautions and that they adhere to approved guidelines for sterilisation and disinfection.

Consistent with this circular (see section 3.3), the work practices of HIV, HBV or HCV infected HCWs who perform EPPs may need to be modified. Any modification should provide infected employees with opportunities to continue their chosen work, where practical, or to obtain alternative career training. Modification of or transfer from duties and retraining should be organised by the relevant supervisor or head of the relevant clinical division in consultation with the employee.

Supervisors or heads of relevant clinical divisions may wish to seek support for their decision from another authority within the Area where the infected HCW is employed. Alternatively the matter may be referred to the Advisory Panel.

Modifications to work practices should be determined according to the following criteria:

- fitness for work, mental and physical capabilities;
- training and expertise of the infected employee;
- ability to perform routine duties;
- competence and compliance with established guidelines and procedures; and
- risk of contracting/transmitting other infections.

The transfer of HIV, HBV or HCV infected HCWs from their roles in health care settings is not supported except where consistent with this Circular.

Where there is uncertainty as to whether to exclude a HCW from performing EPPs on the part of the HCW, their treating medical practitioner or their employer, the matter is to be referred to the Advisory Panel.

8 REHABILITATION POLICY FOR HIV, HBV or HCV INFECTED HCWs

Area Health Services and health care facilities are required to have occupational rehabilitation programs in place, consistent with Departmental policy, the Work Place Injury and Workers Compensation Act 1998, to manage employees with work-related functional impairment including infectious diseases. This includes the requirement that those affected are to be provided with suitable alternate duties or employment where practical, including redeployment.

Modifications to work practices or duties should be in accordance with the Circular 97/89 *Guidelines and Policy for the Management of Occupational Rehabilitation in NSW Public Health Care Facilities* and *Rehabilitation Guidelines: guidelines for workplace-based occupational rehabilitation programs for large businesses* produced by WorkCover NSW [12].

Where practical, infected HCWs should be given the opportunity to participate in clinical trials of drugs which may render them non-infectious. Where natural resolution or treatment renders a HCW non-viremic (ie HBV DNA test negative or HCV PCR test negative), resumption of the performance of EPPs can be considered, conditional on continued monitoring of infectious status.

While neither Area Health Services nor the Department of Health are obliged to offer assistance with rehabilitation to impaired independent contractors, the important contribution of VMOs to the health system is acknowledged. Therefore Area Health Services are to consider strategies to utilise the skills and experience of impaired VMOs in other suitable positions where this is practicable and appropriate.

Area Health Services will nominate a person or persons as contacts for discussion of redeployment and retraining opportunities for employees; and options for VMOs. Appropriate nominees may be the Area or hospital Human Resources Manager, Personnel Officer, Occupational Health or Rehabilitation Coordinator. Other appropriate sources of advice should also be identified.

Infected HCWs are also encouraged to discuss retraining options with relevant educational institutions and professional associations (including medical specialist colleges if appropriate).

9 RESOLUTION OF DISPUTES

Where there is a dispute over the ability of an HIV antibody positive, HBeAg positive, HBV DNA positive or HCV PCR positive HCW to continue with all or part of his/her employment responsibilities, the matter should be referred to the Advisory Panel. The HCW should discontinue performance of the duties in question pending resolution of the dispute.

In those rare cases where an HIV, HBV or HCV infected HCW refuses to accept the advice of the Advisory Panel, and the HCW's medical adviser and/or the health care facility believes that the infected HCW's continued practice constitutes a risk to public health, the doctor or health care facility should notify the Director-General of the Department of Health. There are specific provisions within the Public Health Act 1991 for management of situations where a HIV positive person may be behaving in a way which places the health of the public at risk (see Circular 97/93 *Management of people with HIV infection who risk infecting others*).

10 COMPENSATION

WorkCover NSW is the appropriate authority to address compensation issues for employees who acquire an illness or injury in the course of their work. For current information about workers compensation and rehabilitation matters, employees are advised to contact their local occupational health and safety risk management staff and/or occupational rehabilitation coordinator.

Appendix I

NSW HEALTH BLOOD BORNE VIRUSES ADVISORY PANEL MEMBERSHIP

Membership in relation to infected health care workers

Membership will be by invitation of the Chief Health Officer and may include:

Infectious Diseases Physician*
Medical Epidemiologist, NSW Health*
Virologist*
A member of the professional group, relevant to the health care eg Royal Australasian College of Surgeons*
Occupational Health Physician
Infection Control Practitioner
Legal Officer*
A health care worker advocate
A dentist, hepatologist, immunologist or other appropriate medical expert
NSW Health nominee/s of the Chief Health Officer*

Executive support to be provided by the AIDS/Infectious Diseases Unit (*ex officio*)

* These members shall from part of any Panel constituted to provide advice on modification of work practices of an infected health care worker.

Appendix 2

NSW HEALTH BLOOD BORNE VIRUSES ADVISORY PANEL

Terms of Reference in relation to infected health care workers

1. To provide on a case by case basis advice on modifying work practices of infected health care workers.

2. To provide supplementary specialist occupational advice to physicians of health care workers infected with blood borne viruses, occupational physicians and professional bodies.

3. To advise individual health care workers, or their advocates, how to obtain guidance on work practices.

4. To advise on look back exercises in respect of patients treated by HIV positive, HBeAg positive, HBV DNA positive and HCV PCR positive health care workers.

5. To keep under review the literature on occupational transmission of blood borne viruses and refer any changes relevant to current policy to the NSW Health Department.

6. To report to the Director-General of Health.

Appendix 3

Protocol for accessing Advisory Panel in relation to infected health care workers

Who may consult Panel?

The following parties may require specific advice:

- the infected health care worker;
- the supervisor, or employer, of the infected health care worker;
- the treating doctor of the infected health care worker;
- occupational health staff; and
- infection control staff.

Confidentiality

It is recommended that the name of the infected health care worker be disclosed only to the Chair when consulting the Advisory Panel. In situations where the referral is made by the treating doctor of an infected HCW, it is not necessary to disclose the identity of the HCW to the Chair as it is expected that the treating doctor will monitor the extent to which the HCW complies with the advice of the Advisory Panel.

In what circumstances

Advice may be sought on the following issues:

- exposure prone procedures, where there is some uncertainty about the definition in any given circumstance;
- disclosure of the HCW's status, to whom and when;
- management of the infected HCW;
- infection control procedures;
- modification or transfer from duties;
- management of patient exposure to the blood of an infected health care worker;
- situations where an infected health care worker has been involved in the performance of exposure prone procedures; and
- follow up of an HIV, HBV or HCV infected patient where there is a possibility that the infection was acquired nosocomially.

In situations where there is a dispute regarding the management of an infected HCW the matter should be referred to the Advisory Panel for resolution.

How to access the Advisory Panel

Matters to be referred to the Advisory Panel should be directed to the Medical Epidemiologist, NSW Health on telephone (02) 9391 9192 or the Advisory Panel Chairperson. The current Chair is Professor Tania Sorrell, Director, Centre for Infectious Diseases and Microbiology, Westmead Hospital, telephone (02) 9845 6012.

For further information in regard to policy on infected health care workers please call the AIDS/ Infectious Diseases Unit of NSW Health on (02) 9391 9195.

Advisory Panel Advice

Where the Advisory Panel advises that a health care worker should modify or restrict his/her practices or be transferred to other duties in accordance with this Circular and it is informed that the he/she does not follow this advice, the matter will be referred to the Director-General.

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