



Guidelines On Management of Health Care Workers (HCW)

Infected with
Human Immunodeficiency Virus (HIV)
Hepatitis B Virus (HBV)
Hepatitis C Virus (HCV)



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Hepatitis C Virus (HCV)



Occupational Health Unit Ministry of Health Malaysia December 2007



ABBREVIATION

HCW Health Care Workers

EPP Exposure Prone Procedures

HIV Human Immunodeficiency Virus

Anti-HIV Antibody to Human Immunodeficiency Virus

HBV Hepatitis B Virus

HBsAg Hepatitis B Surface Antigen

HBeAg Hepatitis B e Antigen

HBV DNA Hepatitis B Virus Deoxyribonucleic Acid

HCV Hepatitis C Virus

HCV RNA Hepatitis C Virus Ribonucleic Acid

PCR Polymerase Chain Reaction

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FOREWORD



Exposures to infections such as Human Immunodeficiency Virus (HIV), Hepatitis B (HBV) and Hepatitis C (HCV) are the most dreaded risks faced by health care workers around the world in the course of their duty. This puts them in the very same position as that of the patients and this may have a profound effect on their health and well being. Such disease not only cause ill health, but also carry a social impact on their occupations and lives.

The Ministry of Health is committed to ensuring the health and welfare of its employees, which is in line with the caring component of the corporate culture of the organization. Infected health care workers may also be able to contribute towards patients care within reasonable circumstances. Therefore, it is timely that this guideline for the management of infected health care workers is made available, to assist in ensuring that the proper care is given to these employees and adequate measures are taken in lieu of their continued service.

I would like to take this opportunity to congratulate the Technical Committee and the Occupational Health Unit for the effort of producing this important guideline which would assist in improving care to the employees and the patients.

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Tan Sri Datuk Dr. Hj. Mohd Ismail Merican Director General of Health, Malaysia

December 2007

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1. INTRODUCTION

- 1.1 This document contains recommendations for the prevention of Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) transmission from infected health care workers (HCW) to patients during invasive procedures that are considered to be exposure-prone.
- 1.2 This is to ensure:
 - Safety of patients
 - · Care to the infected HCW
 - Continuous productivity of the infected HCW

2. **DEFINITIONS**

2.1 Definition of Health Care Workers

HCW are persons whose activities involve contact with patients, or with blood or other body fluids from patients, in health care, laboratory or public safety settings.

2.2 Definition of infected Health Care Workers

All HCW who have the serological status mentioned below (Table 1) are considered to be infected with the respective diseases.

Table 1: Serological Status and Type of Infection

SEROLOGICAL STATUS	TYPE OF INFECTION
Anti-HIV positive	Human Immunodeficiency Virus (HIV)
HBsAg positive	Hepatitis B Virus (HBV)
HCV RNA positive	Hepatitis C Virus (HCV)

2.3 Definition of Exposure Prone Procedures

- 2.3.1 Exposure Prone Procedures (EPP) are those procedures where there is potential 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.
- 2.3.2 Procedures that lack these characteristics, are unlikely to pose a risk of transmission of blood borne viruses from infected HCW to patients.
- 2.3.3 Provided they are not conducted in poorly visualised or confined body sites, the following procedures are not considered to be exposure prone:
 - 2.3.3.1 Oral, vagina or rectal examinations that do not involve sharp instruments.
 - 2.3.3.2 Phlebotomy.
 - 2.3.3.3 Administering intramuscular/intradermal/subcutaneous injections.
 - 2.3.3.4 Needle biopsies.
 - 2.3.3.5 Needle aspirations.
 - 2.3.3.6 Lumbar punctures.
 - 2.3.3.7 Venous cutdown and angiographic procedures.
 - 2.3.3.8 Excision of epidermal/dermal lesions.
 - 2.3.3.9 Suturing of superficial skin lacerations.
 - 2.3.3.10 Endoscopy.
 - 2.3.3.11 Placing and maintaining peripheral and central intravascular lines, nasogastric tubes, rectal tubes and urinary catheters.
 - 2.3.3.12 Acupuncture.
 - 2.3.3.13 Other procedures that do not involve sharps.
 - 2.3.3.14 Procedures where the use of sharps is superficial, well visualised, and administered to compliant/anaesthetised patients where it is very unlikely that a HCW skin injury would result in exposure of a patient to the HCW blood/body substances.

3. MANAGEMENT OF THE INFECTED HCW

- 3.1 All infected HCWs must be treated by a medical specialist in the respective discipline (hepatologist/infectious disease physician).
- 3.2 All infected HCW who perform Exposure Prone Procedures shall be further assessed for the risk of transmission of the disease to the patient.
- 3.3 All infected HCW who possess the criteria mentioned below (Table 2) shall not be allowed to perform Exposure Prone Procedures.

Table 2: Serological Criteria for HCW Not Allowed To Perform EPP

TYPE OF INFECTION	WORKERS ARE NOT ALLOWED To Perform EPP IF
Human Immunodeficiency Virus (HIV)	Anti-HIV positive
Hepatitis B Virus (HBV)	 HBsAg positive and in whom HBeAg positive or HBsAg positive, HBeAg negative and in whom HBV DNA ≥10⁴ copies/ml
Hepatitis C Virus (HCV)	 HCV RNA is positive by PCR or In whom HCV RNA by PCR status is yet to be determined

- 3.4 Management of the infected HCW not allowed to perform EPP
 - 3.4.1 All infected HCW who are not allowed to perform Exposure Prone Procedures shall be provided with the following opportunities:
 - 3.4.1.1 To continue their chosen work, where practical, or
 - 3.4.1.2 To obtain alternative career training.
 - 3.4.2 Modification of work or transfer of duties and retraining shall be organized by Head of Department and Hospital Director/Medical Officer of Health in consultation with the infected HCW.
 - 3.4.3 If modification of work or transfer of duties is not possible, or has not been agreed upon, case shall be referred to the Advisory Panel for the final decision.

- 3.4.4 The infected HCW may be allowed to perform EPP in specific circumstances whereby no other HCW can perform that task especially if it is critical in nature and that the patient is informed.
- 3.5 Management of infected HCW allowed to perform EPP.
 - 3.5.1 Infected HCW who are allowed to perform EPP shall be continuously assessed to avoid transmission of disease to patients.
 - 3.5.2 HCW with HBsAg positive and HBeAg negative who are not undergoing treatment must have their HBV DNA status tested every 3 months if they want to maintain practising EPP.
 - 3.5.2.1 Those with HBV DNA < 10⁴ copies/ml can practice EPP.
 - 3.5.2.2 Those with HBV DNA \geq 10⁴ copies/ml cannot practice EPP and test must be repeated in 3 months to assess the status.
 - 3.5.2.3 For infected HCW undergoing treatment, consideration shall be given to the HCW to continue performing EPP provided the viral load and the risk of transmission is low.
 - 3.5.3 HCW who are anti-HCV positive and HCV RNA negative must have yearly HCV RNA done to practice EPP.
 - 3.5.3.1 HCW with HCV RNA positive who have undergone viral therapy and achieved Sustained Virological Response (HCV RNA negative at 6 months after completion of therapy) shall be allowed to perform EPP.
 - 3.5.3.2 HCW with HCV RNA positive and have not achieved Sustained Virological Response shall not be allowed to perform EPP.
- 4.1 An advisory panel consists of a team of experts, appointed by Director General of Health, who convene to make decisions on the management of an infected HCW who performs EPP that cannot, for appropriate reasons, be made at the hospital or district level.
- 4.2 For professional staff, there is an Advisory Panel at the national level; for support staff, the Advisory Panel is at the state level.

- 4.3 Members of the Advisory Panel.
 - 4.3.1 Members of the Advisory Panel for Professionals may include:-
 - 4.3.1.1 The Deputy Director General of Health (Medical) Chairman.
 - 4.3.1.2 Expert in Infectious Diseases/Hepatology.
 - 4.3.1.3 The senior consultant from the same specialty as the infected HCW.
 - 4.3.1.4 Expert in Occupational Health Secretariat.
 - 4.3.2 Members of the Advisory Panel for Support Staff may include:
 - 4.3.2.1 The State Health Director Chairman.
 - 4.3.2.2 The state expert in Infectious Diseases/Hepatology.
 - 4.3.2.3 The state senior consultant from the same specialty as the infected HCW.
 - 4.3.2.4 The state expert in Occupational Health Secretariat.
 - 4.3.3 A report from the treating Physician and the Hospital Director/District Medical Officer of Health shall be made available to the Advisory Panels.
- 4. 4 Roles of the Advisory Panel
 - 4.4.1 To re-assess the disease transmission risk to patients posed by the infected HCW.
 - 4.4.2 To decide on the occupational intervention for the infected HCW such as work modification and transfer from duties.
- 4.5 Advice on the following issues related to the HCW may also be requested from the Advisory Panel.
 - 4.5.1 Where there is some uncertainty about the definition of Exposure Prone Procedures in any given circumstance.
 - 4.5.2 Disclosure of the HCW status, to whom and when.
 - 4.5.3 Management of patient exposed to the blood of an infected HCW.
 - 4.5.4 Follow up of an HIV, HBV or HCV infected patient where there is a possibility that the infection was acquired nosocomially.



5. ETHICAL CONSIDERATIONS

- 5.1 HCW who perform EPP, and who become aware that they are infected with a blood borne pathogens, are ethically obliged to report, as follows:
 - 5.1.1. Professional staff report to Head of Department or Hospital Director/
 District Medical Officer of Health.
 - 5.1.2. Support staff report to Hospital Chief Supervisor/District Chief Supervisor or Hospital Director/District Health Officer.

6. **CONFIDENTIALITY**

- 6.1 Maintenance of strict confidentiality will encourage HCW to seek appropriate testing, counselling and treatment and to disclose their serological status to their employers.
- 6.2 The status of the infected HCW should only be disclosed to the Hospital Director/ District Medical Officer of Health and Head of Department or Hospital/District Chief Supervisor.
- 6.3 It is recommended that the name of the infected HCW be disclosed only to the Chair when consulting the Advisory Panel or Appellate Board.

7. INFORMING PATIENTS ON INFECTION STATUS OF THE HCW

- 7.1 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.
- 7.2 It is not recommended that HCW be required to disclose their HIV, HBV or HCV status to patients.
- 7.3 The reasons for this are:
 - 7.3.1 Infectious HCW shall no longer undertake EPP.
 - 7.3.2 A policy of providing a right for a patient to be informed of the HCW's status would send an erroneous message to the public concerning the risk of transmission between HCW and patient.

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8. INFORMING EMPLOYERS ON INFECTION STATUS OF THE HCW

- 8.1 It is desirable that HCW practicing EPP inform their employer about their infection status, so that:
 - 8.1.1 Their welfare and safety in the workplace can be maximized.
 - 8.1.2 They fulfill their common law duty of care and take all reasonable steps to safeguard patients/clients.
- 8.2 If it is likely that patients have been exposed to risk of infection during EPP, HCW have a responsibility to inform their employer.
- 8.3 Where a HCW does disclose his or her infection status to an employer, the disclosure must be treated with due regard to the HCW's right to confidentiality.

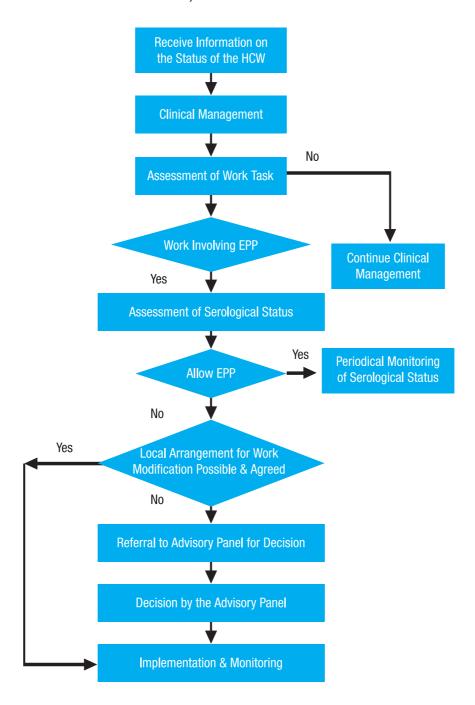
9. APPELLATE BOARD

- 9.1 If an infected HCW is not satisfied with the decision made by the Advisory Panel, he / she may appeal within a period of 3 months from the date of decision, to the Appellate Board.
- 9.2 Members of the Appellate Board.
 - 9.2.1 Chairman The Director General of Health.
 - 9.2.2 Secretariat Occupational Health Expert.
 - 9.2.3 Head of Discipline.
 - 9.2.4 Legal Advisor.
- 9.3 Roles of the Appellate Board.
 - 9.3.1 To hear and review cases of the Advisory Panel that has been disputed by the infected HCW.
 - 9.3.2 To make the final decision regarding any restrictions on EPP for the infected HCW.

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Flow Chart on the Management of HCW infected with HBV, HCV or HIV



Work Process of the Management of HCW (Professionals) infected with HBV, HCV or HIV

Joh Dogovintion	Responsible Person			
Job Description	Hospital	Primary Care		
1. Receive information on th	. Receive information on the status of infection of the HCW			
 Receive information from HCW Inform status of HCW to Hospital Director 	Head of Department/ Hospital Director Head of Department	District Medical Officer of Health		
2. Clinical management				
Refer case to relevant treating Physician*	Head of Department/ Hospital Director	District Medical Officer of Health		
Assess serological status	Treating Physician	Treating Physician		
Treat infected HCW	Treating Physician	Treating Physician		
3. Assessment of work task				
Assess whether work task involves EPP or not	Head of Department HCW	District Medical Officer of Health HCW		
3.1 Work not involving EPP				
Continuation with clinical management				
 Continue follow up for clinical management 	Treating Physician	Treating Physician		

Work Process of the Management of HCW (Professionals) infected with HBV, **HCV** or **HIV** (continues)

Joh Dogovintion	Responsible Person			
Job Description	Hospital	Primary Care		
3.2 Work involving EPP				
Assessment of serological status				
Check blood for serological status	Treating Physician	Treating Physician		
Review the serological status				
4. Practice EPP				
Decide whether to allow HCW to continue/	Hospital Director	District Medical Officer of Health		
conduct EPP	Head of Department			
	Treating Physician	Treating Physician		
4.1 EPP allowed				

Periodical monitoring of serological status

•	Check blood periodically for serological status	Treating Physician	Treating Physician
•	Decide whether HCW can continue EPP		

Work Process of the Management of HCW (Professionals) infected with HBV, HCV or HIV (continues)

Joh Dossvintion	Responsible Person				
Job Description	Hospital	Primary Care			
4.2 EPP not allowed	4.2 EPP not allowed				
4.2.1 Local arrangement for v	work modification – Possible an	d agreed			
 Inform HCW on work modification Discuss with HCW on the possible work modification Get the agreement from HCW on the work modification 4.2.2 Local arrangement for 	Head of Department Hospital Director HCW work modification – Not possible	District Medical Officer of Health HCW			
	•	e aliu/or ilot agreeu			
5. Referral to Advisory Panel	for decision				
Refer case to Advisory Panel	Hospital Director	District Medical Officer of Health			
6. Decision by the Advisory F	6. Decision by the Advisory Panel				
Decision made by the Advisory panel	Advisory Panel Secretariat	Advisory Panel Secretariat			
 Submit decision made to: HCW Hospital Director/ District Medical Officer of Health 	Advisory Panel Secretariat	Advisory Panel Secretariat			

Work Process of the Management of HCW (Professionals) infected with HBV, HCV or HIV (continues)

Job Description	Responsible Person		
Job Description	Hospital	Primary Care	
7. Implementation and monitoring			
 Implement work modification as planned/recommended by Advisory Panel 	HCW Head of Department Hospital Director	HCW District Medical Officer of Health	
 Monitor implementation 			

* Relevant Treating Physician

- 1. For HIV/AIDS Infectious Diseases Physician
- 2. For Hepatitis B and Hepatitis C Hepatologist or Gastroenterologist (if Hepatologist is not available)

Work Process of the Management of HCW (Support Staff) infected with HBV, HCV or HIV

Job Description	Responsible Person				
Jon Describtion	Hospital	Primary Care			
1. Receive Information on the	1. Receive Information on the status of infection of the HCW				
Receive information from HCW	Hospital Chief Supervisor/ Hospital Director	District Chief Supervisor/ District Medical Officer Of Health			
 Inform status of HCW to Hospital Director/District Medical Officer Of Health 	Hospital Chief Supervisor	District Chief Supervisor			
2. Clinical management					
Refer case to relevant physician*	Hospital Director	District Medical Officer Of Health			
Assess serological status	Treating Physician	Treating Physician			
Treat infected HCW	Treating Physician	Treating Physician			
3. Assessment of work task					
Assess whether work task involves EPP or nott	Hospital Chief Supervisor	District Chief Supervisor			
3.1 Work not involving EPP					
Continuation with clinical management					
Continue follow up for clinical management	Treating Physician	Treating Physician			

Work Process of the Management of HCW (Support Staff) infected with HBV, HCV or HIV (continues)

Job Description	Responsible Person		
Job Description	Hospital	Primary Care	
3.2 Work involving EPP			
Assessment of serological sta	ntus		
Check blood for serological status	Treating Physician	Treating Physician	
Review the serological status			
4. Practice EPP			
 Decide whether to allow HCW continue/conduct EPP 	Hospital Director Hospital Chief	District Medical Officer Of Health	
	Supervisor	District Chief Supervisor	
	Treating Physician	Treating Physician	
4.1 EPP allowed			
Periodical monitoring of serological status			
Check blood for periodical serological status	Treating Physician	Treating Physician	
Decide whether HCW can continue EPP			

Work Process of the Management of HCW (Support Staff) infected with HBV, HCV or HIV (continues)

Job Description		Responsible Person			
	Job Description	Hospital	Primary Care		
4.2	4.2 EPP not allowed				
4.2	4.2.1 Local arrangement for work modification – Possible and agreed				
•	Inform HCW on work modification	Hospital Director	District Medical Officer Of Health		
•	Discuss with HCW on the possible work modification	Hospital Chief Supervisor	District Chief Supervisor		
•	Get agreement from the HCW on the work modification	HCW	HCW		
4.2	2.2 Local arrangement for v	work modification – Not possible	e and/or not agreed		
5.	Referral to Advisory Panel	for decision			
•	Refer case to Advisory Panel	Hospital Director	District Medical Officer Of Health		
6.	6. Decision by the Advisory Panel				
•	Decision made by the Advisory panel	Advisory Panel Secretariat	Advisory Panel Secretariat		
•	Submit decision made to: - HCW - Hospital Director/ District Medical Officer of Health	Advisory Panel Secretariat	Advisory Panel Secretariat		

Work Process of the Management of HCW (Support Staff) infected with HBV, HCV or HIV (continues)

Job Description	Responsible Person		
Jon Describtion	Hospital	Primary Care	
7. Implementation and monitoring of work modification			
Implement work modification as planned/recommended	Hospital Director	District Medical Officer Of Health	
by Advisory Panel	Hospital Chief Supervisor	District Chief Supervisor	
Monitor implementation	HCW	HCW	

* Relevant Treating Physician

- 1. For HIV/AIDS Infectious Diseases Physician
- 2. For Hepatitis B and Hepatitis C Hepatologist or Gastroenterologist (if Hepatologist is not available)