Sultanate of Oman

Ministry of Health

الدليل الوطني لإجراءات فحص و تحصين مزاولي مهنة الطب و المهن الطبية المساعدة و المتدربين بمهنة الطب و الطبية المساعدة

THE NATIONAL GUIDELINE FOR SCREENING AND IMMUNIZATION FOR HEALTHCARE WORKERS AND MEDICAL INSTITUTIONS STUDENTS.

المديرية العامة لمراقبة ومكافحة الأمراض

٢٠٢٠

الملخص التنفيذي

مقدمة

يواجه العاملين الصحيين مجموعة واسعة من المخاطر في بيئة العمل و تعتبر المخاطر البيولوجية هي أكثر المخاطر الصحية شيوعًا للعاملين في مجال الرعاية الصحية، لذلك فإنه من الضروري الحفاظ على مناعة كافية للعاملين في مجال الرعاية الصحية ضد هذه الأمراض والتي يمكن الوقاية منها باللقاحات.

ويمكن أن تشكل إصابات وخز الإبر والأدوات الحادة خطر الإصابة بعدوى التهاب الكبد الوبائي ب و ج و مرض نقص المناعة المكتسبة. بالإضافة إلى ذلك، يتعرض العاملون في مجال الرعاية الصحية لخطر العدوى بشكل خاص بسبب التعرض المهني لمرض السل الرئوي ولمجموعة متنوعة من الأمراض المعدية المستهدفة بالتحصين كالأنفلونزا الموسمية والسعال الديكي والحصبة والنكاف والحصبة الألمانية.

توفر هذه السياسة نهج شامل ومتسق للفحص و التحصين و اللياقة للعمل و الوقاية و مكافحة العدوى في مؤسسات الرعاية الصحية.

الهدف: -

ضمان صحة و سلامة العاملين الصحيين و سلامة المرضى عن طريق التأكد من أن جميع العاملين في مجال الرعاية الصحية والمقيمين الطبيين وطلاب العلوم الصحية تم فحصهم وتحصينهم ضد الأمراض المعدية و إدارة الحالات الإيجابية بما يتناسب مع طبيعة العمل.

إطار العمل:-

تنطبق هذه السياسة على جميع العاملين في الرعاية الصحية سواءً في المرافق الصحية الحكومية أو الخاصة، والمقيمين الطبيين وطلاب العلوم الصحية.

السياسة: -

- فحص الأمراض التي تنتقل عن طريق الدم (التهاب الكبد الوبائي ب و ج و مرض نقص المناعة المكتسبة) للمجموعات التالية: -
  ١. طلاب الطب والعلوم الصحية و الأطباء المقيمين قبل التحاقهم بالمقاعد الدراسية.

٢. العاملين الصحيين في مرحلة ما قبل التوظيف.

٣. العاملين الصحيين المتعرضون عرضياً بسبب حوادث العمل البيولوجية (مثال: حوادث وخز الإبرة) .

٤. العاملين الصحيين في رأس عملهم والذين لم يتم فحصهم أو تطعيمهم قبل التوظيف.

- تم تصنيف العاملين في مجال الرعاية الصحية المعرضين لخطر الإصابة بالفيروسات المنقولة عن طريق الدم الى فئات وفقًا للتعرضات المهنية جراء التعرض إلى أنسجة و دم المرضى عن طريق الإبر أو الأدوات الحادة. ووفقا لهذا التصنيف سيتم فحص العاملين في مجال الرعاية الصحية بشكل دوري طوال فترة عملهم.
- فحص مرض السل الرئوي للمجموعات التالية:

١. العاملين الصحيين في مرحلة ما قبل التوظيف

٢. طلاب العلوم الصحية أو الأطباء المقيمين قبل التحاقهم بالمقاعد الدراسية

٣. الفحص الدوري لجميع العاملين الصحيين العاملين في المناطق عالية الخطورة لاكتساب مرض السل الرئوي، مثل وحدات العناية المركزة وأقسام الطوارئ وغرف تنظير القصبات الهوائية الرئوية والمختبرات.

- توجيه العاملين الصحيين الذين لديهم نتائج إيجابية للفيروسات المنقولة عن طريق الدم أو مرض السل الرئوي للعلاج في المنشآت الصحية في المحافظات المتخصصة في الأمراض المعدية أو أمراض الجهاز الهضمي .
- تم وضع سياسة لتقييم مدى اللياقة للعمل للعاملين الصحيين الذين لديهم نتائج إيجابية للفيروسات المنقولة عن طريق الدم أو مرض السل الرئوي وفقا لتصنيف التعرضات المهنية.
- جميع العاملين الصحيين وفقًا لهذه السياسة يجب أن يتلقوا التحصين ضد الأمراض التي يمكن الوقاية منها عن طريق اللقاحات.
- جميع العاملين الصحيين وفقًا لهذه السياسة يجب أن يتم تدريبهم بإجراءات الوقاية و مكافحة العدوى قبل الالتحاق بالعمل أو الدراسة بالكليات الطبية و معاهد وكليات العلوم الصحية و بشكل دوري بعد التوظيف.

Contents

الملخص التنفيذي 1

مقدمة 1

السياسة: - 1

Acronyms 4

Definitions 5

Chapter one: - Introduction 7

1. Introduction 8

2. Purpose 8

3. Scope 8

4. Supporting documents 9

Chapter two: - The Guideline 10

1. Screening 11

2. Fitness for work 13

3. Immunization 15

4. Time limit for screening and vaccination 16

5. Infection prevention and control training for health care facilities 16

Chapter Three: - Role and Responsibilities 18

1. Director General of Governorates/Executive Directors of hospitals 19

2. Occupational health services 19

3. HCW/health sciences students 20

Chapter Four :- Annexes 21

Annex 1 Category of health care workers according to exposure-prone procedures 22

Annex 2 Immunization of health care workers 28

Annex 3 Health care worker immunization history card 30

Annex 4 Health care workers immunization declination form 31

Acronyms

BBV	Blood borne virus
DEOH	Department of Environment and Occupational Health
DNA	Deoxyribonucleic acid
EPP	Exposure-prone procedure
HBeAg	Hepatitis B e-antigen
HBsAg	Hepatitis B surface antigen
HBV	Hepatitis B virus
HCV	Hepatitis C virus
HCW	Health care worker
HIV	Human immunodeficiency virus
IGRA	Interferon gamma release assay
IM	Intermuscular
IPC	Infection prevention and control
IPV	Inactivated polio vaccine
LTBI	Latent tuberculosis infection
MERS CoV	Middle East respiratory syndrome-coronavirus
MOH	Ministry of Health
MMR	Measles, mumps and rubella vaccine
MRSA	Methicillin-resistant Staphylococcus aureus
NEAP	National Expert Advisory Panel
OHS	Occupational health services
PCR	Polymerase chain reaction
PEP	Post exposure prophylaxis
RNA	Ribonucleic acid
SHEA	Society for Healthcare Epidemiology of America
TB	Tuberculosis
Tdap	Tetanus, diphtheria and pertussis vaccine
TST	Mantoux tuberculin skin test

Definitions

Blood-borne infections (BBV): are viruses, such as hepatitis B virus (HBV), hepatitis C Virus (HCV) and HIV, that can be spread through blood contamination or other body fluids.

Exposure-prone procedure (EPP): are procedures where there is a risk of injury to the HCW from patient's open tissues to the blood of the HCW. These procedures include those where the HCW's hands (whether gloved or not) 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.

Health clearance permit: is an authorization permit given to healthcare workers with positive results to infectious diseases to allow them to perform their routine duties in health care facilities.

Health care workers (HCWs): refers to all people delivering health care services either directly as doctors and nurses or indirectly as laboratory technician or cleaners.

Hepatitis C RNA: an indicator of infectivity, a laboratory test is performed to assess the level of hepatitis C ribonucleic acid (RNA) present.

Infection prevention and control (IPC): is a practical approach designed to prevent harm caused by infection to patients and HCWs.

Interferon gamma release assay (IGRA): blood test to detect infection with tuberculosis but does not differentiate between latent infection and disease if an individual has been exposed Mycobacterium TB, specific memory Mycobacterium TB cells will be programmed to react to corresponding antigens present in tuberculosis. When challenged with antigen, T cells will release gamma interferon and the IGRA test measures either the amount of interferon produced or the number of cells that are producing interferon.

National Expert Advisory Panel (NEAP): the committee for fitness for work for HCWs with positive results to infectious diseases as per this policy.

Tuberculin skin test (TST): a diagnostic tool used to identify people exposed to Mycobacterium tuberculosis (TB). It is a measure of cell mediated immune

responsiveness and possible infection with the TB organism. This test is the intradermal injection of five tuberculin units of purified protein derivative into the anterior aspect of the forearm (Mantoux test).

Chapter one
Introduction

1. Introduction

Needle-stick and sharps injuries can pose a risk of acquiring or transmitting of BBV infection. The most common BBVs in the health care setting are HBV, HCV and HIV (covered in this policy).

In addition, tuberculosis is a contagious and potentially life-threatening infectious disease and transmission of it is another recognized hazard in health facilities.

Finally, HCWs are at risk of acquiring and transmitting communicable diseases and health care-associated infections, such as MERS CoV, MRSA and multidrug resistant organisms. Therefore, performing IPC practices are crucial to reduce the risk of all types of communicable diseases and this will ensure safe health facility environments.

This policy designed to provide a comprehensive, consistent provincial approach to screening, immunization, fitness for work and IPC practice in health care organization.

2. Purpose

To ensure that all HCWs, residents and students of health sciences are adequately screened, managed and vaccinated against communicable diseases.

3. Scope

This policy is applicable to all HCWs working in governmental or private health facilities, medical residents and health sciences students.

4.Supporting documents

- The Gulf Cooperation Council infection prevention and control manual 3rd edition, 2018
- Prevention and management of blood and body fluids exposure in health care facilities, MOH
- Communicable disease manual, MOH, 3rd edition, 2017
- Policy and procedure of incident reposting and learning system (IRLS), MOH, 2017

Chapter two

The Guideline

1. Screening

- HCWs are periodically assessed throughout their employment.
- BBV screening is required for the following groups:
  1. Students of health sciences or medical residents before enrollment to an educational health institute or college
  2. HCWs in the pre-employment phase
  3. HCWs incidentally exposed to BBV (occupational accidents)
  4. HCWs on service who have not been screened or vaccinated
- If HBV immune status known (vaccinated) and titer is ≥ 10 IU/mL, there is no need to screen for HBV.
- For BBV screening test:-
  1. HBV : HBcAb and HBsAg; if HBsAg is positive then do full HBV serology and HBV DNA PCR (IU/ml)
  2. HCV: HCV Antibodies - if positive test for HCV RNA by PCR (IU/ml)
  3. HIV: Antigen/Antibody combo assay , confirm serology and test HIV viral load (copies/ml)
- Frequency of periodic medical screening will be according to the occupational risk of acquiring BBV
- HCWs at risk of acquiring BBV are categorized according to exposure-prone procedure involved in their works (Annex 1) and periodic screening are displayed in Table 1

Table 1: frequency of periodic screening for HCWs

HCW category	Frequency of periodic screening
AI	Every 5 years
AII/AIII	Annually
BI	Not required
BII	Not required

- HCWs who are non-responders to HBV vaccine should be screened annually for hepatitis B surface antigen (HbsAg)
- Screening must be immediately following any accidental exposure to BBV, and blood samples should be taken from the health institute where the incident took place. The subsequent investigation and post exposure prophylaxes management should follow guidelines laid out in MOH Prevention and Management of Blood and Body Fluids Exposure in the Healthcare Facilities

- TB screening is required for the following groups:
  1. HCWs in the pre-employment phase
  2. Students of health sciences or medical residents before enrollments to an educational health institute or college
  3. All HCWs employed in high risk areas, such as intensive care units, emergency departments, bronchoscopy rooms and laboratories where staff work with TB culture specimens. These groups should be screened annually
  4. Any HCW following TB exposure
- The following procedures are required for TB screening:
  1. Past history of TB (personal or close family member)
  2. TST or IGRA test
  3. Chest x-ray, if positive TST/IGRA or signs and symptoms of TB
- Varicella screening is only required if there is no evidence of immunity at any phase of screening (negative varicella zoster IgG or no records of receiving two doses of varicella-zoster virus vaccine)
- Claims of compensation for occupational injury or disease to be directed to the existing compensation committees
- Priority should be given for screening samples and timely releasing of results for early medical clearance
- Positive and doubtful results can be sent to Central Public Health Laboratory for confirmation.

2. Fitness for work

- Candidates with positive results for BBV or open TB will be directed for treatment at health facility with specialty of infectious diseases or gastroenterology/hepatology
- Candidates confirmed to have LTBI should be referred to designated unit/department for management
- All positive cases must be notified as per MOH communicable disease policy
- HCWs MUST NOT PERFORM EPP if they are:
    1. HBsAg positive, HBeAg positive
    2. HBsAg positive, HBeAg negative with HBV DNA ≥ 200 IU/ml at any time
    3. HCV RNA positive
    4. HIV antibody positive without clearances permit from NEAP
- HCW category AI/AII/AIII with positive results of HCV RNA will be restricted from performing EEP for one year until treatment is completed
- HCWs with positive cases for BBV are cleared to perform EPP when two blood samples, taken one month apart, show low to undetectable viral load (eligibility for health clearance permit)
- Health clearance permit for positive results to BBV:
    1. Must have the permit to perform EPP
    2. Must have an expiry date from date of last viral load test
    3. The validity of the permit will depend on the frequency of repeating the viral load as recommended in Table2
- Fitness for work and frequency of screening for treated positive cases for BBV are seen in Table 2

Table 2: Fitness for work for positive cases for BBV

Disease/viral load calculation	Categories	Performing EPP	Clearance permit for fitness for work from	Frequency of viral load testing per year
HIV (must be on combination anti-retrovirus therapy [cART])				
Viral load ≥ 200 copies/ml	AI/AII/AIII	[a] Restricted	NEAP	NEAP to recommend
Viral load < 200 copies/ml	AI	[b] No restriction	NEAP	2
	AII/AIII	[a] Restricted	NEAP	NEAP to recommend
Regardless of viral load	BI & BII	[c] NA	Governorate DGHS/Regional hospital OH service department	0
HBV DNA level				
≥ 200IU/ml	AI/ AII/ AIII	[a] Restricted	NEAP	NEAP to recommend
≥ 60 - < 200 IU/ml	AI	[b] No restriction	Governorate DGHS/Regional hospital OH service department	0[d]
	AII/AIII	[a] Restricted	NEAP	NEAP to recommend
< 60 IU/ml	AI /AII/AIII	[b] No restriction	Governorate DGHS/Regional hospital OH service department	0[d]
Regardless of viral load	BI & BII	NA	Governorate DGHS/Regional hospital OH service department	0
HCV RNA				
RNA positive	AI/ AII/AIII	[a] Restricted	NEAP	NEAP to recommend
RNA negative	AI /AII/AIII	[b] No restriction	Governorate DGHS/Regional hospital OH service department	1
Regardless of viral load	BI & BII	NA	Governorate DGHS/Regional hospital OH service department	0

[a] Restricted until cleared by NEAP

[b]

- Routinely use double-gloving for all procedures where gloving is routinely recommended or if skin is non-intact.
- No restrictions recommended, only if the HCW:
- Undergoes regular follow up at appointed health facilities to reveal maintenance of a viral load of less than the recommended threshold.
- Obtains advice from NEAP about continued practice.
- Maintain optimal IPC procedures.
- No reported incidents breaching patient safety.
- Report viral load results to occupational clinic/staff clinic

[c] Avoid working in areas with open TB cases.

[d] repeat HBV DNA level annually, if HCW having immunosuppressive disease or on immunosuppressive therapies.

NA: not applicable

- For HCWs with pulmonary TB, the treating physician must issue clearance permit for HCWs to be non-infectious before returning to work
- Extra pulmonary TB and LTBI do not pose a risk to other HCWs or patients; they can reassume work and follow up accordingly for management
- HCWs working in private health institute with positive results to BBV (regardless of viral load) or TB must obtain clearance permit from NEAP

3. Immunization

- All applicants per this policy must receive immunization (except if immunization is contraindicated or there is evidence for receiving it) for the following:
- MMR
- Varicella
- HBV
- Tdap
- Annual seasonal influenza shot
- Laboratory workers who handle specimens of meningococcal and poliomyelitis must be offered IPV and meningococcal vaccine
- Schedule and frequency of immunization is provided in Annex 3

- Catering, laundry & cleaning staff must receive vaccination as schedule (Annex 3)
- Post vaccination Hepatitis B antibody testing is recommended for category A HCWs within 2 months after the 3rd dose and management is as follows;
    1. If anti-HBs titer is below the protective level of 10 IU/ml, re-administer three doses (0, 1, 5 months) of the HBV vaccines
    2. If anti-HBs antibodies are below the protective level after the six doses, HCW is considered a non-responder
- If recommended vaccines are refused, a signed documentation of refusal must be obtained including evidence that the HCW understands the implication involved in refusal (Annex 5)

  In case of a pandemic situation, if a new vaccine is available, it is essential to give the vaccine to HCWs because of high risk of infection and the risk of spreading the disease to others.

4. Time limit for screening and vaccination

- Turnaround time (TAT) for testing, results, referral and giving clearance letter will be 10 days, except for positive cases which will follow the recommendation for fitness for work section
- Vaccination is initiated within 10 days and completed as per the time required for the requisite doses

5. Infection prevention and control training for health care facilities

- IPC training course should be provided before beginning employment or staring of practical rotation for health science students
- Competency certification in IPC should be given after completion of the course and will have a validity of three years
- All HCWs must be re-certificated after expiry of competency certification

- The course contains theoretical and practical measure for IPC at work place and it is as follows:
  - ❖ Module 1 for health science students
  - ❖ Module 2 for nurses and doctors that include N95 fit testing
  - ❖ Module 3 for technicians and service supporting personnel
- Each module should have a competency assessment tool that will be signed by course provider in order to issue certification
- The practical training for HCWs should include N95 mask fit testing and use competency

Chapter Three

Role and Responsibilities

1. Director General of Governorates/Executive Directors of hospitals

- Should ensure that new and existing staff are aware of this policy
- Have in place standard operating procedures for the implementation of this policy
- Establish an occupational health services (OHS) for
    1. Screening of HCWs
    2. Follow up of positive cases in terms of viral load results and compliance to medication and well as clearance of TB infection
    3. Maintaining of vaccination and health screening records
    4. IPC training
- Must ensure no discrimination or dismissal from work due positive results to BBV, TB or LTBI unless there is a concern for fitness for work

2. Occupational health services

- Disclose screening result to HCWs and will be accompanied by counseling for standard IPC practices
- Give appropriate advice to HCWs with positive results to infectious diseases to minimize the risk of transmission in the health care setting and to close contacts
- Establish a procedure for continuing to monitor HCWs with BBV who meet the criteria for clearance to perform EPPs (health clearance permit)
- Establish procedures for documentation, storage and retrieving system for HCW screening, fitness for work and vaccination (occupational health record)
- Send statistics of screening, fitness for work and vaccination quarterly to DEOH (use tracking sheet provided in annex XX).
- Maintain confidentiality of occupational health records
- Establish procedures for IPC training and certification of their HCWs for IPC, specifically prior to joining clinical work
- Establish IPC system which will include
    1. Documentation of HCW competency certification

2. Staff refusal or non-adherence to renewal requirement
3. Audit of IPC practices.
4. System of retrieving information incase needed in investigating an event of exposure to communicable diseases.

- Ensure compliance with vaccinations schedule provided Annex 2

3. HCW/health sciences students

- Provide accurate information for vaccination and medical history to the best of their knowledge
- Attend assigned clinic for screening, immunization and follow up management if requested
- Must not undertake procedures which might pose a risk of transmission of BBV or TB to patient or colleague until they meet the appropriate criteria of this policy
- Keep personal records of vaccinations status for future reference (example of the card Annex 3)
- Must inform the authorities in OHS if they have been diagnosed with BBV infection or TB to enable appropriate occupational health care advice, and any restriction of working practice
- Attend and complies with the requirement for IPC course

Chapter Four

Annexes

Annex 1 Category of health care workers according to exposure-prone procedures

- An EPP is a procedure in which injury to the HCW could result in the worker's blood contaminating the patient's open tissues
- EPPs include procedures where the HCW's hands (gloved or not) may come into contact with sharps, needles or sharp tissues such as bone or teeth, inside a patient's open body cavity, wound or confined space
- The nature of the EPP performed by the HCW can be categorized according to level of risk of transmission, in increasing order of magnitude

Category A

(Category A is based on SHEA guidelines for management of HCW, infection control and hospital epidemiology, March 2010, vol. 31, no. 3)

Category AI : Procedures with minimum risk of BBV transmission

A procedure where the hands and fingertips of the HCW are usually visible and outside the body most of the time and the possibility of injury to the worker's gloved hands from sharp instruments and/or tissues is slight. This means that the risk of the HCW bleeding into a patient's open tissues should be remote, e.g., insertions of chest drain.

These procedures pose a minimum risk of transmission of BBV from HCW to patients.

Examples:

- Regular history-taking and/or physical or dental examinations, including gloved oral examination with a mirror and/or tongue depressor and/or dental explorer and periodontal probe

- Routine dental preventive procedures (e.g., application of sealants or topical fluoride or administration of prophylaxis), diagnostic procedures, orthodontic procedures, prosthetic procedures (e.g., denture fabrication), cosmetic procedures (e.g., bleaching) not requiring local anesthesia
- Routine rectal or vaginal examination
- Minor surface suturing
- Elective peripheral phlebotomy
- Lower gastrointestinal tract endoscopic examinations and procedures (e.g., sigmoidoscopy and colonoscopy)
- Hands-off supervision during surgical procedures and computer-aided remote or robotic surgical procedures
- Psychiatric evaluations

Category A II: Procedures for which bloodborne virus transmission is theoretically possible but unlikely

A procedure where the fingertips may not be visible at all times but injury to the HCW's gloved hands from sharp instruments and/or tissues are unlikely. If injury occurs, it is likely to be noticed and acted upon quickly to avoid the HCW's blood contaminating a patient's open tissues, e.g. appendectomy

These procedures pose a possible but unlikely risk of transmission of BBV from HCWs to patients.

Examples:

- Locally anesthetized ophthalmologic surgery
- Locally anesthetized operative, prosthetic, and endodontic dental procedures
- Periodontal scaling and root planing
- Minor oral surgical procedures (e.g., simple tooth extraction [i.e., not requiring excess force], soft-tissue flap or sectioning, minor soft-tissue biopsy, or incision and drainage of an accessible abscess)
- Minor local procedures (e.g., skin excision, abscess drainage, biopsy and use of laser) under local anesthesia (often under bloodless conditions)

- Percutaneous cardiac procedures (e.g., angiography and catheterization)
- Percutaneous and other minor orthopedic procedures
- Subcutaneous pacemaker implantation
- Bronchoscopy
- Insertion and maintenance of epidural and spinal anesthesia lines
- Minor gynecological procedures (e.g., dilatation and curettage, suction abortion, colposcopy, insertion and removal of contraceptive devices and implants, and collection of ova)
- Male urological procedures (excluding transabdominal intrapelvic procedures)
- Upper gastrointestinal tract endoscopic procedures
- Minor vascular procedures (e.g., embolectomy and vein stripping)
- Amputations, including major limbs (e.g., hemipelvectomy and amputation of legs or arms) and minor amputations (e.g., amputations of fingers, toes, hands or feet)
- Breast augmentation or reduction
- Minimum-exposure plastic surgical procedures (e.g., liposuction, minor skin resection for reshaping, face lift, brow lift, blepharoplasty and otoplasty)
- Total and subtotal thyroidectomy and/or biopsy
- Endoscopic ear, nose and throat surgery and simple ear and nasal procedures (e.g., stapedectomy or stapedotomy, and insertion of tympanostomy tubes)
- Ophthalmic surgery
- Assistance with an uncomplicated vaginal delivery
- Laparoscopic procedures
- Thoracoscopic procedures
- Nasal endoscopic procedures
- Routine arthroscopic procedures
- Plastic surgery
- Insertion of, maintenance of, and drug administration into arterial and central venous lines
- Endotracheal intubation and use of laryngeal mask

- Obtainment and use of venous and arterial access devices that occur under complete antiseptic technique, using universal precautions, "no-sharp" technique, and newly gloved hands

Category A III: Procedures for which there is definite risk of bloodborne virus transmission or that have been classified previously as "exposure-prone"

A procedure where the fingertips are out of sight for a significant part of the procedure, or during certain critical stages, and in which there is a distinct risk of injury to the HCW's gloved hands from sharp instruments and/or tissues. In such circumstances it is possible that exposure of the patient's open tissues to the HCW's blood may go unnoticed or would not be noticed immediately, e.g. suturing of an episiotomy

These procedures pose a high risk of transmission of BBV from HCW to patients.

Examples:

- General surgery, including nephrectomy, small bowel resection, cholecystectomy, subtotal thyroidectomy other elective open abdominal surgery
- General oral surgery, including surgical extractions, hard and soft-tissue biopsy (if more extensive and/or having difficult access for suturing), apicoectomy, root amputation, gingivectomy, periodontal curettage, mucogingival and osseous surgery, alveoloplasty or alveolectomy
- Cardiothoracic surgery, including valve replacement, coronary artery bypass grafting, other bypass surgery, heart transplantation, repair of congenital heart defects, thymectomy and open-lung biopsy
- Open extensive head and neck surgery involving bones, including oncological procedures
- Neurosurgery, including craniotomy, other intracranial procedures and open-spine surgery
- Nonelective procedures performed in the emergency department, including open resuscitation efforts, deep suturing to arrest hemorrhage and internal cardiac massage

- Obstetrical/gynecological surgery, including cesarean delivery, hysterectomy, forceps delivery, episiotomy, cone biopsy, and ovarian cyst removal, and other transvaginal obstetrical and gynecological procedures involving hand-guided sharps
- Orthopedic procedures, including total knee arthroplasty, total hip arthroplasty, major joint replacement surgery, open-spine surgery and open pelvic surgery
- Extensive plastic surgery, including extensive cosmetic procedures (e.g., abdominoplasty and thoracoplasty)
- Transplantation surgery (except skin and corneal transplantation)
- Trauma surgery, including open head injuries, facial and jaw fracture reductions, extensive soft-tissue trauma, and ophthalmic trauma
- Interactions with patients in situations during which the risk of the patient biting the physician is significant (e.g., interactions with violent patients or patients experiencing an epileptic seizure)
- Any open surgical procedure with a duration of more than 3 hours, probably necessitating glove change

Category B

Category B I: These procedures are of minimum risk.

HCWs that do not have direct contact with patients but potentially have some contact with blood or patients body fluids or having direct contact with patients without performing EEP -

Examples:

- Laboratory doctors or technician
- Medical orderly staff
- Outpatient clinics doctors or nurses who do not perform EPP or blood collection
- Physiotherapy

Category BII: These procedures pose no risk whatsoever

HCWs who do not have direct contact with patients or patient's blood/body fluids

Examples:

- Medical records
- Radiographers
- Pharmacy

Annex 2 Immunization of health care workers

Vaccine	Doses & route	Time of vaccine administration and testing				
		0 day	1 month	2 month	5 month	6 month
All health care workers or health science students						
Tdap	1 dose, IM	1 dose				
Influenza	1 dose, IM Annually	1 dose				
Hepatitis B (Adult)	3 doses, IM		[a]Dose 1	Dose 2	Dose 3	[b]Post-screening (assess HBV vaccine response by testing anti-HBs test
Varicella (Chickenpox)	2 doses, SC	[c]Pre-screening test (ELISA IgG VZV test)			Dose 1	Dose 2
MMR	2 doses, SC		Dose 1	Dose 2		
Additional vaccination for laboratory technicians only						
Meningococcal	1 dose, SC every 5 years					
IPV	3 doses, IM					

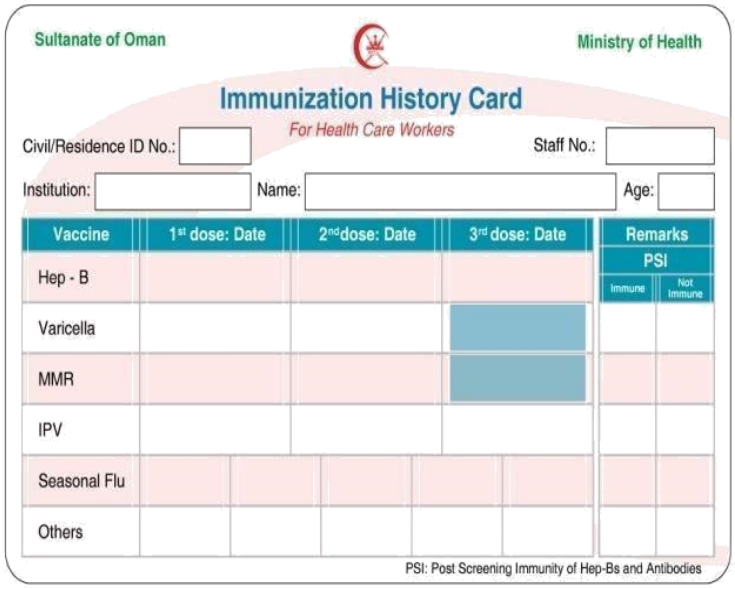
IM=intermuscular; SC=subcutaneous. [a] *Varicella Zoster* Virus (*VZV*)

[a] a protective Ab response is reported quantitatively as >=10mIU/ml or qualitatively as positive. Post vaccination testing should be completed 1-2 months after end of HBV vaccination course for the results to be meaningful.

[b] HCEW who are reactive for VZV IgG will not require VZV vaccine administration.

[c] Only negative HBsAg results will receive dose 1 HBV vaccine

Annex 3 Health care worker immunization history card



Sultanate of Oman — Ministry of Health

Immunization History Card

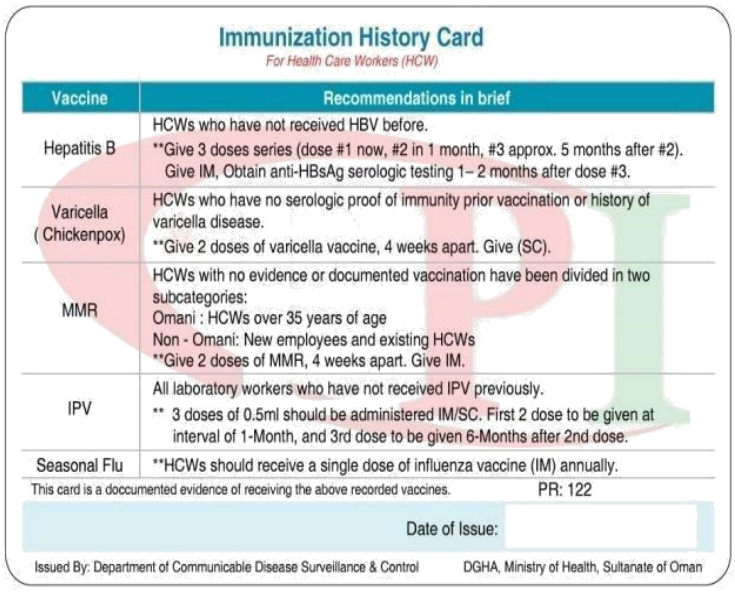
For Health Care Workers

Civil/Residence ID No.: Staff No.:

Institution: Name: Age:

Vaccine	1st dose: Date	2nd dose: Date	3rd dose: Date	Remarks: PSI – Immune	Remarks: PSI – Not Immune
Hep - B					
Varicella					
MMR					
IPV					
Seasonal Flu					
Others					

PSI: Post Screening Immunity of Hep-Bs and Antibodies



Immunization History Card

For Health Care Workers (HCW)

Vaccine	Recommendations in brief
Hepatitis B	HCWs who have not received HBV before. **Give 3 doses series (dose #1 now, #2 in 1 month, #3 approx. 5 months after #2). Give IM, Obtain anti-HBsAg serologic testing 1– 2 months after dose #3.
Varicella (Chickenpox)	HCWs who have no serologic proof of immunity prior vaccination or history of varicella disease. **Give 2 doses of varicella vaccine, 4 weeks apart. Give (SC).
MMR	HCWs with no evidence or documented vaccination have been divided in two subcategories: Omani : HCWs over 35 years of age Non - Omani: New employees and existing HCWs **Give 2 doses of MMR, 4 weeks apart. Give IM.
IPV	All laboratory workers who have not received IPV previously. ** 3 doses of 0.5ml should be administered IM/SC. First 2 dose to be given at interval of 1-Month, and 3rd dose to be given 6-Months after 2nd dose.
Seasonal Flu	**HCWs should receive a single dose of influenza vaccine (IM) annually.

This card is a doccumented evidence of receiving the above recorded vaccines. PR: 122

Date of Issue:

Issued By: Department of Communicable Disease Surveillance & Control DGHA, Ministry of Health, Sultanate of Oman

Annex 4 Health care workers immunization declination form

The health care organization I am employed with has provided me the vaccination(s) listed below for the best of interest of myself, my family and the patients I serve.

I acknowledge that I have been well informed of the following facts:

- My exposure to patients at health care facilities with the following vaccine-preventable diseases and other infectious diseases like influenza puts me at risk of being infected and contracting those diseases and subsequently expose others
- I have had the opportunity to be vaccinated; however, I choose to decline the vaccination(s) marked below at this time. I understand that by declining to take this/those vaccine(s), I continue to be susceptible to those diseases
- In the event of exposure, I understand that I may be requested to be quarantined under medical supervision for at least the incubation period of the disease to which I have been exposed to
- I understand that by declining vaccination, I continue to be a risk of acquiring a serious infectious disease
- I might not be compensated for occupational injury if I got infected by vaccine-preventable diseases

Type of vaccine	Reasons for declaration	Remarks
☐ Measles, Mumps, Rubella (MMR)		
☐ Varicella		
☐ Hepatitis B		
☐ Tetanus / Tdap		
☐ Seasonal Influenza		
☐ Others ……		

Knowing these facts, I choose to decline vaccination at this time. I may change my mind and accept vaccination later, if vaccine is available. I have read and fully understand the information on this declination form.

Name (print): ……

Staff no ……

Department/Organization: ……

Signature: …… **Date: ……**