

# Guidelines for Medical Practitioners Seeking Accreditation for Yellow Fever Vaccination

## 1. INFORMATION ON YELLOW FEVER AND VACCINATION

### 1.1 Introduction

Yellow fever is an acute viral infection occurring as an urban and jungle disease in parts of Africa and South America. A large proportion of infections in endemic areas are subclinical. When symptomatic, infection ranges from a mild, clinically indeterminate condition to an illness of sudden onset with fever, vomiting and prostration that may progress to haemorrhagic symptoms and jaundice. The case fatality rate is about 5% in indigenous populations in endemic areas. In non-indigenous individuals, or during epidemics, it may be as high as 50%. The incubation period is 3 to 6 days.

The infection is transmitted by the bite of infective mosquitoes. In urban areas the reservoir for the disease is humans and the vector is *Aedes aegypti*. Outside urban areas the reservoir is vertebrates, including monkeys and possibly marsupials, while the vector is *Aedes aegypti* in certain areas and a range of forest mosquitoes (*Aedes sp.*) in other areas.

### 1.2 World Health Organization requirements and the International Health Regulations

Yellow fever is a disease which is subject to the World Health Organization's (WHO) International Health Regulations (IHR). The purpose of the IHR is to help prevent the international spread of disease and to do so with the minimum of inconvenience to international travellers. Australia is not a signatory to the IHR but complies with the requirements of the IHR wherever possible.

Under the IHR vaccination can be required of any person leaving a yellow fever infected area. The IHR also permit countries where the vector of yellow fever is present to isolate travellers who arrive from infected countries without a valid certificate of vaccination against yellow fever for a specified period. The IHR establish the requirements for a valid vaccination certificate and for determining when countries are infected.

The IHR require countries to report cases of yellow fever in humans and of the presence of the virus in mosquitoes or non-human vertebrates. When such reports are received the WHO may determine that a country, or an area within a country, is yellow fever infected. The list of yellow fever infected countries and areas is published regularly in the WHO publication *Weekly Epidemiological Record* (WER).

The WHO has also identified yellow fever endemic zones in Africa and South America where, although infection has not been reported, there is potential risk of infection due to the presence of vectors and animal reservoirs. Maps indicating these zones are provided in the WHO publication *International Travel and Health*.

Many countries require arriving travellers who have come from, or travelled through, a yellow fever infected area to hold a valid International Certificate of Vaccination. Some countries consider all areas in the yellow fever endemic zones as 'infected' and require a certificate from travellers who have been in these areas. The yellow fever vaccination requirements for entry into each country are listed in *International Travel and Health* and changes during each year are advised in WER.

As actual areas of yellow fever virus activity exceed the officially reported infected zones WHO strongly recommends yellow fever vaccination for persons travelling outside the urban areas of countries in the yellow fever endemic zones, even if these countries have not officially reported the disease.

### **1.3 Australian vaccination requirements for yellow fever**

All travellers over one year of age who enter Australia within six days of leaving a yellow fever infected area, as listed in the WHO publication *Weekly Epidemiological Record*, are required to hold a valid International Certificate of Vaccination against Yellow Fever.

Travellers who do not meet this requirement are placed under quarantine surveillance until a period of six days has passed since they were last in a yellow fever infected area. Quarantine surveillance does not place restrictions on movements within Australia, but requires the traveller to seek medical attention if they develop symptoms of yellow fever.

### **1.4 Requirements for a Valid International Certificate of Vaccination against Yellow Fever**

The WHO requirements for a valid international vaccination certificate are:

1. The WHO has approved the vaccine administered. The list of WHO approved vaccine manufacturers is published in *International Travel and Health*.
2. The vaccination was administered by a centre designated by the national health administration for the area in which the centre is situated.
3. The certificate of vaccination conforms with the model published in *International Travel and Health*. It must be printed in English and French and must be completed in English or French. It is an individual certificate and separate certificates must be completed for each child.
4. The certificate is signed by the person vaccinated and by the medical practitioner authorised by the national health administration, dated correctly and stamped with the official stamp. The date sequence is day, month, and year with the month written in letters. Designated centres must use an official stamp to indicate that they are approved by the health administration but the stamp itself is not a substitute for the personal signature of the authorised vaccinator. Any suitably qualified person may administer the vaccination, but it must be under the supervision of the authorised medical practitioner, who must sign the certificate personally.

A yellow fever vaccination certificate is valid for ten years, beginning ten days after vaccination. If a person is re-vaccinated before the end of this period, the validity is extended for a further ten years from the date of re-vaccination.

## 1.5 Yellow Fever Vaccine

The only yellow fever vaccine currently available in Australia is the WHO approved *Stamaril®* vaccine manufactured and supplied through Aventis Pasteur Pty Ltd.

The vaccine is a heat-stable and lyophilized live attenuated yellow fever virus of the 17D strain. The vaccine is propagated on avian leucosis-free chick embryos. It is reconstituted for use with buffered diluent. The vaccine must be stored between +2°C and +8°C in a refrigerator. **The vaccine must not be frozen.** The reconstituted vaccine should be protected from light and used within one hour.

The vaccine is provided in a single dose kit (one ampoule of vaccine + one syringe containing 0.5 mL of diluent). Primary vaccination for all ages is a single deep subcutaneous or intramuscular injection of 0.5 mL. Booster doses, required every 10 years under the International Health Regulations, are the same. Adverse effects may occur between 4 to 7 days after vaccination in the form of fever, stiffness, fatigue and headache.

Specific contraindications include true allergy to egg proteins and congenital or acquired immune deficiency. Pregnant women and children under the age of 6 months should not be vaccinated unless the risk of infection is high. Detailed information is available in the Product Information and in the *Australian Immunisation Handbook*. Yellow fever vaccine is supplied only to approved yellow fever vaccination centres.

## 1.6 Current National Health and Medical Research Council (NHMRC) recommendations for yellow fever vaccination

The current NHMRC recommendations, as published in the most recent edition of *The Australian Immunisation Handbook* (9<sup>th</sup> Edition, 2008), are:

1. Persons 6 months of age or older travelling or living in yellow fever infected areas should be vaccinated.
2. Vaccination is also recommended for travel outside the urban areas of countries in the yellow fever endemic areas. The areas of yellow fever virus activity far exceed the infected areas officially reported and, in recent years, fatal cases of yellow fever have occurred in unvaccinated tourists.
3. Infants under 6 months of age and pregnant women should be considered for vaccination if travelling to high-risk areas when travel cannot be postponed and a high level of protection against mosquito exposure is not feasible.
4. Laboratory personnel who might be exposed to virulent yellow fever virus should also be vaccinated.

## 2. APPROVAL PROCEDURES FOR YELLOW FEVER VACCINATION CENTRES

### 2.1 Role of Commonwealth and State Health Authorities

Under the *Quarantine Act 1908*, the Department has statutory responsibility for the control of quarantine diseases, including yellow fever.

The Department has delegated certain human quarantine activities to Chief Quarantine Officers (CQOs) in each State and Territory. CQOs are medical officers within the State and Territory public health authorities. The approval of Yellow Fever Vaccination Centres within their jurisdiction is the delegated responsibility of the CQO in each State and Territory.

The role of the Department of Health and Ageing is to issue national guidelines that comply with the World Health Organization's (WHO) requirements, and to liaise with WHO on yellow fever issues.

The role of the State and Territory health authorities, through their CQO, is to approve Yellow Fever Vaccination Centres, advise Aventis Pasteur Pty Ltd of the centre's approval to purchase yellow fever vaccine, and to maintain and make available to medical practitioners and intending travellers a current list of approved vaccination centres on request.

### 2.2 Applications and assessment procedures

Application for approval as a Yellow Fever Vaccination Centre should be made to the relevant State and Territory health authority. An application proforma is provided at **Attachment A**.

The approval is granted to a medical practice, therefore the application must be made in the name of the practice with the application signed by a partner or the proprietor of the practice. A responsible person must be nominated as a point of contact for the administration of yellow fever vaccination requirements.

This arrangement allows:

- The vaccine to be ordered from Aventis Pasteur Pty Ltd in the name of the practice;
- If a practitioner leaves a practice, the practice may retain the approval; and
- The approval is retained if the practice only changes location.

This arrangement is also applicable to sole practitioners. However, if the practitioner joins another practice that is not approved to administer yellow fever vaccine, the original approval is not transferable to the new practice.

The applicant is required to accept the conditions of appointment in writing. The form for accepting the conditions is at **Attachment B**.

A standard official vaccination certificate stamp is required to be held by approved practices, plus a copy of the WHO publication *International Travel and Health: Vaccination requirements and health advice* ([www.who.int/ith](http://www.who.int/ith)).

The basic format for the official stamp is provided in the *International Travel and Health: Vaccination requirements and health advice*. However, health authorities may determine their own variations on the standard design, eg. by issuing an approval centre number. Copies of the *International Travel and Health: Vaccination requirements and health advice*

are available from the WHO publication agent in Australia: Hunter Publications, 58A Gipps Street, Collingwood VIC 3066, (03) 9417 5361.

All new approvals and cancellation of approvals should be notified immediately to Aventis Pasteur Pty Ltd by the regulating health authority to advise them of those medical centres that may purchase yellow fever vaccine.

There are no restrictions on the number of medical practitioners or medical centres approved to administer yellow fever vaccine provided each applicant satisfies the approval criteria.

Medical practitioners from an approved practice may administer the vaccine at locations other than the approved practice.

### **2.3 Criteria for assessing an application**

The following criteria are used to assess the application:

1. An applicant should be capable of ensuring that the vaccine is administered correctly and completing the vaccination certificate according to WHO requirements.
2. Knowledge of the vaccine including indications, contra-indications and adverse effects, as listed in the most recent edition of *The Australian Immunisation Handbook*.
3. Knowledge of the WHO requirements for yellow fever certification, as stated in *International Travel and Health*.
4. Ability to store the vaccine correctly.
5. Ethical behaviour towards patients referred by other medical practitioners and appropriate communication with a patient's usual doctor.
6. Knowledge of obtaining a valid informed consent to the vaccination procedure.
7. Ability to provide patients with advice and information on mosquito protection and safe travel practices in tropical countries.

### **3. REFERENCES**

The Australian Immunisation Handbook, 9th edition. NHMRC. AGPS.

International Travel and Health. WHO, Geneva. This handbook can be purchased from Hunter Publications, 58a Gipps Street, Collingwood 3066. Phone (03) 9417 5361. (Hunter Publications also supply international vaccination certificates.)

*Weekly Epidemiological Record*. WHO, Geneva. This publication can be obtained by subscription or viewed at the WHO website at: <http://www.who.int/wer>.

A map of the yellow fever endemic zones in Africa and South America is available at: <http://www.who.int/ith/english/index>

**Attachment A**

**Application for Appointment of a Medical Practice as a  
Yellow Fever Vaccination Centre**

1. Name and address of practice:.....  
.....  
.....

2. Names and qualifications of all medical practitioners who are requesting approval to sign the yellow fever vaccination certificate:.....  
.....  
.....  
.....  
.....

3. Anticipated demand for vaccine, i.e. probable number of persons who will be vaccinated annually:.....

4. Does the practice have a dedicated vaccine refrigerator with a thermometer or temperature indicator?     yes     no

5. I certify that all medical staff in this practice who will administer yellow fever vaccine is aware of:

- The indications, contraindications, adverse effects of yellow fever vaccine listed in the most recent edition of the NHMRC publication *The Australian Immunisation Handbook*.
- The WHO requirements for yellow fever certification as given in *International Travel and Health*.
- The requirements for storage of yellow fever vaccine.

Name of Applicant: .....

Signature of Applicant: .....

Date:.....

## **Attachment B -**

### **Acceptance of conditions of appointment as a Yellow Fever Vaccination Centre**

1. In the conditions appearing below:

i) "Appointment" means an appointment as a Yellow Fever Vaccination Centre.

ii) "Director" means the Director, Chief Executive Officer or Senior Medical Officer of the State or Territory Health Authority, or his/her delegate, which approved the appointment of a Medical Practice as a Yellow Fever Vaccination Centre.

iii) "Medical Practice" means a medical practice appointed by the Director of a State or Territory Health Authority as a Yellow Fever Vaccination Centre.

iv) "State or Territory Health Authority" means the Government Department, Commission or Agency responsible for the management of public health within a State or Territory of Australia.

2. The appointment of a Medical Practice as a Yellow Fever Vaccination Centre will be by the Director for an initial period of one year, renewable at the discretion of the Director.

3. Counselling in respect of travel vaccination requirements and other health factors relevant to overseas travel shall be provided, as required, to any person who uses the services of the Medical Practice.

4. The Medical Practice shall not make the provision of other chargeable medical services a condition precedent of or subsequent to the provision of yellow fever vaccination.

5. The Applicant acknowledges that the State or Territory Health Authority or Government is not liable for any monies payable to, or costs incurred by, the Medical Practice as a result of provision of yellow fever vaccination.

6. All World Health Organization requirements with regard to yellow fever vaccine handling, storage and certification shall be complied with. In particular, only medical practitioners who are authorised by the Director to do so, or who are providing the vaccination under the supervision of an approved medical practitioner will sign the Yellow Fever Vaccination Certificate.

7. Any changes relating to the particulars of the Medical Practice, including a change of address, shall be immediately notified to the Director.

8. Patients referred to the Medical Practice for yellow fever vaccination by other medical practitioners will only be provided with the services requested by the referring doctor. Any other medical problems will be managed only with the knowledge and consent of the referring doctor.

**Attachment B -**

9. The Medical Practice will allow a person or persons authorised in writing by the Director, from time to time to enter premises used by the Medical Practice for the purposes of conducting yellow fever vaccinations in order to ensure that all these conditions are being complied with. The Medical Practice will provide all records relating to yellow fever vaccinations to that person or persons on request, where that request is made between 9.00 am to 5.00 pm Monday to Friday, except for public holidays.

10. A breach of any of the above conditions by the Medical Practice may, at the discretion of the Director, result in withdrawal of the appointment.

11. On being notified in writing by the Director that the appointment to provide yellow fever vaccinations has been withdrawn, the Medical Practice shall cease to conduct vaccinations on the date stipulated in the notification.

If the Medical Practice, of which I am the Principal Partner, is appointed as a Yellow Fever Vaccination Centre, I hereby agree to the above conditions:

.....  
Name and Signature of applicant

.....  
Name and address of Medical Practice

.....  
Date

## **Information provided to persons placed under quarantine surveillance for yellow fever** (printed in both English and Spanish)

You have been permitted to enter Australia under quarantine surveillance as you do not have a valid international yellow fever vaccination certificate, and you have been in a declared yellow fever infected country within the past six days.

Being placed under quarantine surveillance means that, if you develop any symptoms of yellow fever (described below) within six days of leaving an infected country, you should:

- seek medical attention; and
- show this form to the treating doctor; and

### **Yellow Fever**

Yellow fever is a serious and sometimes fatal disease caused by a virus that is spread among humans by certain types of mosquitoes.

Symptoms of yellow fever are the sudden onset of fever, chills, headache, backache, muscle pain, nausea, vomiting and exhaustion. Mild jaundice (yellowing of the skin) is present early in the disease and becomes more severe later.

In mild cases symptoms begin to disappear after about the fifth day. However, after a period of improvement lasting up to a day, more serious symptoms may occur including bleeding from the nose and gums, blood in faeces and vomit, and liver and kidney failure.

### **Travel to North Queensland**

Yellow fever is not present in Australia. However the mosquito which can carry the yellow fever virus is found in North Queensland. If you have been infected with the yellow fever virus there is a high risk that a mosquito could transmit the virus from you to another person.

It is strongly recommended that you DO NOT travel to, or live in, North Queensland north of Rockhampton until your period of quarantine surveillance ends.

If you must travel to, or live in, North Queensland during this period, it is essential that you take the following precautions against being bitten by mosquitos:

- wearing loose fitting clothing which covers as much skin as possible;
- regularly applying effective insect repellent to exposed skin such as the face and hands; and
- living in a mosquito proof building.