Yellow fever: vaccination centres and providers

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Yellow fever is an example of:

A. Alphavirus

B. Betacoronavirus

C. Flavivirus

D. Type A viral hepatitis
Yellow Fever – you will hear more about elsewhere (transmission/disease)

*Aedes* spp mosquitoes are vectors in urban environment

*Aedes* spp mosquitoes are vectors in urban environment
Other mosquitoes involved in the Jungle

Source: https://www.cdc.gov/yellowfever/images/Transmission-cycle_color.jpg
Outcomes

- Yellow fever vaccination for those travelling to yellow fever areas of the world is regulated by the World Health Organization’s International Health Regulations.
- Yellow fever clinics have been largely regulated by State and Territory public health authorities in Australia.
- As part of new National Guidelines, Yellow fever vaccinators are now required to complete an online course every three years reviewing the disease, the vaccine and vaccination best practice and accreditation.
Were you aware of the new yellow fever vaccinators course prior to this session?

A. Yes

B. No
Outline – focus on YF Vaccination centres and providers

• International Health Regulations
• Biosecurity Act Australia
• National Guidelines for Yellow Fever Vaccination Centres and Providers
  – Requirements in Australia and New Zealand
• Yellow fever vaccination course
  – Overview areas covered
WHO International Health Regulations

• International Health Regulations, 2005

• IHR (2005): “to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade”

• IHR (2005): also provide the legal basis for important health documents applicable to international travel and transport and sanitary protections for the users of international airports, ports, and ground crossings.
WHO International Health Regulations

- International Health Regulations, 2005

- Shift from 3 diseases (cholera, plague, yellow fever) in IHR (1969) to be reported to any public health risk, including chemical, radiological and nuclear (“Public Health Emergency of International Concern: PHEIC”).

- WHO manages amongst other things under the IHR:
  - Risk of international dissemination of diseases
  - International travel and health
  - Mass gathering

- Still manages yellow fever as a disease of international concern.
WHO International Health Regulations

• International Health Regulations, 2005
    • In accordance with the International Health Regulations (IHR), **countries have the right to require travellers to provide a certificate of yellow fever vaccination.**
    • If there are medical grounds for not getting vaccinated, this must be certified by the appropriate authorities.
    • The IHR are a legally binding framework to stop the spread of infectious diseases and other health threats.
WHO International Health Regulations

• International Health Regulations, 2005
  • Delegated to member states, such as Australia
  • 1 dose of yellow fever vaccine is all that is needed for life now, apart from some selected medical conditions, where there may be a sub-optimal response to vaccination.
  • Need to document yellow fever on appropriate certificate of immunization or prophylaxis card
    – Available from WHO
    – Variations are available
  • Requiring the certificate of vaccination from travellers is at the discretion of each State Party, and it is not currently required by all countries.
Australian Biosecurity Act

- In Australia: Biosecurity Act 2015
  - Useful description in yellow fever fact sheet about what happens to travellers arriving in Australia without a yellow fever vaccine certificate and what Border Force is likely to do:
What do you think happens to those arrive without a YF certificate from YF countries in Australia? Otherwise well, but YF area within 6 days of arrival

A. Refused entry to Australia

B. Detained in holding cell

C. Held in a medical facility

D. Counselling and released
• Yellow Fever factsheet
  – People who are one year of age or older will be asked to provide an international vaccination certificate if, within six days before arriving in Australia, they have stayed overnight or longer in a yellow fever risk country.
  – People unable to provide a certificate will still be able to enter Australia.
  – This may not be the case in other countries!
Yellow Fever factsheet (continued)

- On arrival in Australia, a Biosecurity Officer from the Department of Agriculture will reinforce the seriousness of the disease to you and provide you with a Yellow Fever Action Card.

- The card provides instructions on what you should do if you develop any symptoms of yellow fever in the six-day period following your departure from a yellow fever risk country.
Yellow Fever Vaccination Centres
Yellow Fever Vaccination Centres

• The Yellow fever vaccine can only be administered by accredited providers at approved Yellow Fever Vaccination Centres.
  – National Guidelines for Yellow Fever Vaccination Centres and Providers
  – Yellow Fever Vaccination Centres
    • State and Territory health authorities are the accrediting bodies responsible for approving medical practices as Yellow Fever Vaccination Centres.
Yellow Fever Vaccination Centres

• For example, in Queensland, a form must be completed,

• acceptance of the conditions applying to an Approved Yellow Fever Vaccination Centre

• then submitted to the local Public Health Unit for assessment
  – Applications only considered if there is a Yellow fever vaccinator at the clinic
  – Confirmation letter and official stamp (unique number)
  – Placed on a list of Yellow fever vaccination centres
  – Approved list sent to vaccine supplier (Sanofi) for ordering vaccine
Yellow Fever Vaccination Centres

• Application Form covers
  – Details of the practice
  – Practitioners who will administer vaccine
    • Yellow Fever Vaccination Course
  – Cold chain management
    • Vaccine management protocol, fridge details etc
  – Consent (and forms)
  – Procedures to address indications and contraindications
  – Referrals from other practices
  – Dealing with adverse reactions
  – Travel Health advice
    • Access to advisories and other resources,
    • Membership of travel medicine associations
  – Does practice hold General practice Accreditation?
Yellow Fever Vaccination Centres

• The Yellow fever vaccine can only be administered by accredited providers at approved Yellow Fever Vaccination Centres.

• In New Zealand, there are similar requirements:
  – In New Zealand, the Ministry of Health has policy and application forms available at:
Yellow Fever Vaccination Providers

• In Australia, to maintain status as a Yellow Fever (YF) Vaccination Centre, an approved medical practice must ensure that all practitioners, responsible for provision of the vaccine, meet the individual accreditation requirements introduced on 26 November 2018.
  – Practitioners currently providing the vaccine have up to three years to complete the YF course.
  – New providers are required to complete the course prior to practising at an approved Yellow Fever Vaccination Centre.
  – Medical practitioner or nurse practitioner (if in scope of practice)
Have you done the YF vaccinators course?

A. Yes

B. No
**Yellow Fever Vaccination Providers**

- Vaccination providers can become accredited by successfully completing the Yellow Fever Vaccination Course and providing the certificate of completion to the Yellow Fever Vaccination Centre at which they intend to practice.

- The YF course is conducted on behalf of the Australian Government by ACRRM:
  - This course is based on the CDC online course titled "Yellow Fever Vaccine: Information for Health Care Professionals Advising Travelers"
  - Anyone can complete the course
Certificate of Completion

Prof Peter Leggat
MEDD01374503

has successfully completed the relevant course on the Australian College of Rural and Remote Medicine (ACRRM's) Rural and Remote Medical Education Online for

Yellow Fever Vaccination Course

Completion Date: 24/09/2019
Valid Until: 24/09/2022
PDP Event Code: 13307
PDP Points: 3 (Core)

Date Printed: 29/08/2019
Yellow Fever Vaccination Course

• Contains three modules
  – Yellow fever - the disease
  – Yellow fever – the vaccine
  – Yellow fever vaccination – best practice and accreditation.
  – MCQ Assessment (requirement for 100% correct) – allows multiple attempts
  – ACRRM Certificate of Completion of “Yellow Fever Vaccination Course”
  – Reaccreditation every three years
  – Alerts to related guidelines
    • https://immunisationhandbook.health.gov.au/
Yellow Fever Vaccination Course

• Sorts of things on the course include:
  – The disease
    • Vector, incubation period, symptoms
What is the incubation period of YF?

A. 3-6 days

B. 6-9 days

C. 9-12 days

D. 12-15 days

Source: https://www.who.int/news-room/fact-sheets/detail/yellow-fever
Yellow Fever Vaccination Course

• Sorts of things on the course include:
  – Yellow fever – epidemiology

• Countries that are at risk of yellow fever transmission (Central Africa and S. America)
  – Published periodically by WHO *International Travel and Health* (1 July 2019 update)
    » [https://www.who.int/ith/ith-country-list-new.pdf](https://www.who.int/ith/ith-country-list-new.pdf)
  – Published periodically in Biosecurity legislation
  – The situation can change and there is a need the updated lists
  – Scenarios about when yellow fever vaccination might be needed and who is at risk
Yellow Fever Areas

Source: https://www.cdc.gov/yellowfever/maps/index.html
Yellow Fever Areas

- For travellers, health department has a useful factsheet including a list of countries too:
  - In particular:

Source: [https://www.cdc.gov/yellowfever/maps/index.html](https://www.cdc.gov/yellowfever/maps/index.html)
Yellow Fever Vaccination Course

• Sorts of things on the course include:
  – The vaccine,
    • type of vaccine, administering with other vaccines, need for approval by State/Territory (sends list to vaccine supplier), etc

Only WHO approved yellow fever vaccine currently available in Australia is Stamaril™
Yellow Fever Vaccination Course

- Sorts of things on the course include:
  - Completing the international certificate of vaccination or prophylaxis

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**INTERNATIONAL CERTIFICATE OF VACCINATION OR PROPHYLAXIS**

Certificate international de vaccination ou de prophylaxie

<table>
<thead>
<tr>
<th>International Certificate of Vaccination or Prophylaxis</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Health Regulations (2005)</td>
</tr>
<tr>
<td>Certificate international de vaccination ou de prophylaxie</td>
</tr>
<tr>
<td>Règlement sanitaire international (2005)</td>
</tr>
</tbody>
</table>

Issued to / Délivré à

Passport number or travel document number
Numéro du passeport ou du document de voyage

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<table>
<thead>
<tr>
<th>Vaccine or prophylaxis</th>
<th>Date</th>
<th>Signature and professional status of supervising clinician</th>
<th>Manufacturer and batch no. of vaccine or prophylaxis</th>
<th>Certificate valid from: until:</th>
<th>Official stamp of the administering center</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow Fever</td>
<td>15 June 2018</td>
<td>John M. Smith, MD</td>
<td>[Batch (or lot) #]</td>
<td>25 June 2019, Life of the vaccine</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

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Jane Mary Doe

Date of birth: 22 March 1960
Country of origin: United States

Certificate no: [passport number]

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IN ACCORDANCE WITH THE INTERNATIONAL HEALTH REGULATIONS, CONFORME À L’ARRÊTÉ SANITAIRE INTERNATIONAL.
Yellow Fever Vaccination Course

• Sorts of things on the course include:
  – Situations that may warrant a waiver certificate or letter
  – Yellow fever contraindications & precautions
Yellow Fever Vaccination Course

• Sorts of things on the course include:
  – Complications of yellow fever vaccination
    • Mild adverse events
    • Serious adverse events
      – Immediate hypersensitivity reactions (including anaphylaxis)
      – Vaccine associated neurotropic disease (YF-AND)
      – Vaccine-associated viscerotropic disease (YF-AVD)
  • Reporting requirements of AEs in Australia to
    – State and Territory authorities or
    – TGA - Blue card form or online
Yellow Fever Vaccination Course

• Sorts of things on the course include:
  – Information on vaccination best practice and travel health & other personal protective measures (very important if on a waiver)
Conclusions

• Vaccination is an important part of the travel health consultations and are based on the risk assessment.

• Vaccinations may include mandatory vaccinations such as yellow fever.

• There are special requirements for becoming a Yellow Fever Vaccination Centre and to become a Yellow Fever vaccinator.

• This includes a new course for yellow fever vaccinators.
Thank you

See Annexes
Annex 1. International Certificate of Vaccination or Prophylaxis (usually packs of 50)

- WHO
  - https://www.who.int/ihr/IVC200_06_26.pdf?ua=1 (model form)
  - bookorders@who.int
  - Direct fax for orders: (+41 22 791 48 57)

- Amazon.com.au
  - ~$56.25 for pack of 50

- Fishpond.com.au
  - ~$56.14 for pack of 50

- Adaptings – many organizations print their own
  - Travellers Medical Service cbdmedical@Ozemail.com.au
    - 20 booklets @ approx. $77 (via TCA)
Annex 2:
Yellow fever - 1st dose related SAEs

- **Viscerotropic (YEL-AVD):**
  - Risk ≈ 3 cases/1 M doses (>100 cases reported globally)
    - Higher in ≥60 years (12/1,000,000 doses); even higher in ≥70 years
  - Onset – average ≈4 days (range 1 to 18 days) after vaccination
  - Non-specific prodrome
  - Progressing to **multi-organ** involvement
  - Case fatality rate of 48%

- **Neurologic (YEL-AND):**
  - Risk ≈ 8 cases/million doses
    - Higher in ≥60 years (22/1,000,000 doses);
  - Onset average ≈ 14 days (range 2 to 56 days) after vaccination
  - **Meningoencephalitis, Guillain Barré, encephalomyelitis, rarely cranial nerve palsies**
  - Rarely fatal; most recover completely