VARIATIONS IN NATIONAL IMMUNIZATION SCHEDULES
Impact on students traveling abroad

Friday 7th June 2019
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No Conflicts to disclose

Immunization of students travelling abroad

2 Populations
International Students entering our country
Our National Students travelling abroad

Follow your national immunization program
NATIONAL IMMUNIZATION PROGRAM OF THEIR HOME COUNTRY
NATIONAL IMMUNIZATION PROGRAM USED IN THE COUNTRY OF DESTINATION

1 Prerequisite
Knowledge on Variations between National Immunization Schedules

EXPANDED PROGRAMME ON IMMUNIZATION

1974 EPI
Tuberculosis, Diphtheria, Tetanus, Pertussis, Measles Poliomyelitis.

1988 : Yellow Fever
1992 : Hepatitis B
1998 : Haemophilus influenzae type b
Pneumococcus, Rotavirus, HPV, Rubella
Ticks borne Encephalitis
Japanese Encephalitis

NATIONAL IMMUNIZATION SCHEDULES

Variations in national immunization schedules

• Target Diseases
• Active substance (efficacy, duration of protection, and tolerance)
• Schedules : age of vaccination, boosters
• Obligation
• Coverage by social welfare/medical insurance,

... price, availability, quality (fake)
Do you speak « vaccine »?

TDaP  Tetanus / Diptheria / Pertussis (acellular)
DTP   Diphteria / Tetanus / Polio
Boostrix®  Diphteria, Tetanus, Pertussis
BoostrixTetra®  Diphteria, Tetanus, Pertussis, POLIO

CLEAR AND COMPREHENSIVE VACCINATION RECORDS

Tony 25 yo, Canadian citizen plans to move to Paris for one year. History of art degree, he was last vaccinated for Diphteria, Tetanus, Pertussis, Polio at home at the age of 18 yo. Accordingly to the French Immunization schedule, the French medical staff will recommend:

• 1- Diphteria Tetanus Pertussis Polio booster at 25 yo
• 2- Diphteria Tetanus Pertussis Polio booster at 28 yo
• 3- Only Tetanus booster
• 4- Diphteria Tetanus Polio booster at 25 yo

Diphteria, Tetanus Boosters after 18 yo

• Booster every 10 years (most countries in Europe and Americas)
• Booster at fixed ages: 25, 45, 65 then every 10 years
• No booster (UK)

Individuals who received 3 doses of dT as infants plus one or several boosters during chilhood are protected during decades

• Booster in Pregnant women or CABW (AFR, SEAR and WPR)

Shirley, American citizen, 20 yo, 30th week pregnancy plans to go to France in a few weeks. She and her boyfriend will spend 2 years in Paris. Shirley heard that it is important for pregnant women to get Pertussis vaccine during 27th through 36th week of pregnancy. What would you recommend:

• 1- Get an appointment with a GynObs in Paris and get the shot after her arrival to France
• 2- Get the shot before leaving the US
• 3- Get the shot right after the delivery (Pertussis vaccine during pregnancy might be harmful for the baby)
• 4- Risk of Pertussis is France is low or null. No need for Pertussis vaccination

Pertussis vaccine during Pregnancy

Whooping cough vaccination during Pregnancy is Well Tolerated
The newborn infant will have protection as soon as he is born

US, Australia, UK …: Tdap in 3rd trimester

In most countries of Europe (France): No Tdap (Boostrix®) vaccine
dTaPPolio (Boostrix Tetra®) is not licensed for pregnant women
dTaPPolio vaccination on immediate post partum

Thomas, Norwegian citizen is leaving to Nigeria for a 6 months internship in an Oil company. He got vaccinated for Yellow Fever.
Is there another MANDATORY vaccine he needs?
WHO Temporary Recommendations to Reduce International Spread of Poliovirus

Afghanistan Pakistan
Nigeria Somalie
Indonésie
Papoua New Guinea
(WPV1, cVDPV1, cVDPV3)
RDC Kenya Niger
Nigeria Mozambique
(cVDPV2)

Up to date for Polio Vaccination
+ Longterm visitors (i.e. > four weeks), receive a dose of bivalent OPV or IPV between 4 weeks and 12 months prior to international travel

Student N°4

Chay, from Port Vila school of nursing in Vanuatu got a scholarship for 1 semester in Italy.
He got all vaccinations recommended in the Vanuatu national immunization schedule.
What needs to be doubled checked in his vaccination records?

MEASLES

MEASLES

Health Alert:
The Chickenpox is highly contagious. MEASLES virus is similar. Call & Book Right Away.

Europe
2016
82 596 cases

National Vaccination schedules for Measles

- AMR: All countries recommend 2 injections Measles
- WPR: All countries recommend 2 injections Measles (except Vanuatu)
- EUROPE: All countries recommend 2 injections Measles
- SEAR: All countries recommend 2 injections Measles
- AFR (53): Most countries recommends 2 injections of Measles

- Except Central African Republic, Equatorial Guinea, Ethiopia, Gabon, Gambia, Guinea-Bissau, Liberia, Marshall Islands, Malawi, Mauritania, Nigeria, South Sudan, Uganda (53)

One dose of MMR vaccine is 93% effective against measles,
Two doses of MMR vaccine are 97% effective against measles

Student n° 5

Lise 20 yo (French) is admitted at Stanford University for a Joint Degree in Law and Business (and Stanford university Surf Club).
She is up to date for all Vaccinations recommended in the French National vaccination schedule.

Which vaccine not included in the French recommendations should she get before going to Stanford?
Recommended immunization for meningococcal disease

MENINGOCOCCAL Vaccines

\[ 19/06/2019 \]

MENINGOCOCCAL Vaccines

\[ 20 \]

UNITED STATES OF AMERICA  ACIP

\[ 21 \]

Mandatory for some universities in UK or US

\[ 22 \]

Vaccination Coverage is as high as 80% for:

\[ 23 \]

TICK BORNE ENCEPHALITIS VACCINE

\[ 24 \]
TICK BORNE NCEPHALITIS

NATIONAL VACCINATION SCHEDULE

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+ Switzerland

TICK BORNE ENCEPHALITIS IN SWIZELAND

In 2018: 400 cases: 3 fold increase since 2015

JAPANESE ENCEPHALITIS VACCINE

CONCLUSION

Vaccination practices can be very different abroad
Sometimes better / sometimes not
Some vaccinations can be Mandatory (not only YF)

Vaccination recommendations are established upon LOCAL
Epidemiology and Risk: therefore need to be taken into account

Vaccination programs at destination Might not be optimal
because of availability of vaccines, quality, economical concerns
: better to get vaccinated at home before leaving

Some vaccines are necessary even for trips to so called
"developed countries"
And it is only Theory... check vaccinations records

CONCLUSION

LET US BE AWARE OF VACCINATION PRACTICES ABROAD

WHO
http://apps.who.int/immunization_monitoring/globalsummary/schedules
http://polioeradication.org/where-we-work/polio-outbreak-countries/

EUROPE
http://vaccine-schedule.ecdc.europa.eu/Pages/Scheduler.aspx
Grégoire part étudier une année à Brasilia dans le cadre d’un double diplôme franco-brésilien. Il a entendu parler de la Dengue qui sévit sur tout le continent Sud américain et s’inquiète beaucoup. « Existe-t-il un vaccin contre la Dengue ? »

A - Non, il n’existe pas de vaccin contre la Dengue
B – Un vaccin est disponible au Brésil mais pas en Europe
C- Un nouveau vaccin fabriqué par Sanofi est recommandé chez les voyageurs vers une zone à risque
D- Un nouveau vaccin protège à la fois contre la Dengue et la Fièvre Jaune

Un vaccin contre la dengue homologué : Dengvaxia® (CYD-TDV)
Il s’agit d’un vaccin vivant tétavalent recombinant

EFFICACITE variable:
En fonction du sérotype
sérotypes 3 et 4 (71,6% et 76,9%), sérotypes 1 et 2 (54,7% et 43,0%)

En fonction de l’âge
En fonction du statut sérologique de départ
(78,2% si exposition antérieure à la maladie)
(38,1% si séronégatif au départ)

TOLERANCE
Un excès d’hospitalisation pour Dengue sévère a été relevé chez les sujets vaccinés âgés de 2 à 5 ans

Utilisé chez des individus de 9 à 45 ans vivant dans des zones d’endémie
3 doses : 0/6/12 mois

Pratiques vaccinales dans les pays de destination de nos voyageurs :
✓ Pour compléter des protocoles vaccinaux des vaccins standards (! Parfois complexe )
✓ Pour prescrire des vaccins spécifiques au pays de destination
✓ Pour mieux comprendre le choix des stratégies vaccinales français

Conclusion