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Guide to Good Travel Health Practices

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Introduction

In Québec, two major events changed the accessibility of health services for travellers: the passage of Bill 90, which became Chapter 33 of the 2002 acts (*An Act to amend the Professional Code and other legislative provisions as regards the health sector*) and the Public Health Agency of Canada's review of the certification process for yellow fever vaccination.

An Act to amend the Professional Code and other legislative provisions as regards the health sector

When this Act came into force on January 30, 2003, it resulted in a new sharing of responsibility for vaccination. Nurses could now administer all vaccines listed in the *Protocole d'immunisation du Québec* without a doctor's prescription. Accessibility to vaccination services improved, but it also led to an increasing number of travel vaccination clinics, often run by inexperienced professionals. We noted that many of these clinics were not offering the full range of pre-travel care required. Note that in Québec no registration is currently required and there are no specific requirements for operating a travel health clinic.

The professional qualifications of these new clinicians are not uniform. According to a recent (unpublished) survey by the Comité consultatif québécois sur la santé des voyageurs (CCQSV), 30% of travel health clinicians had no training. Training is also lacking in terms of assessing patients with pre-existing health conditions, including immunosuppressed patients, or assessing possible drug interactions. Moreover, many independent vaccine providers do not have a service corridor with a physician for the prescribing of antimalarial drugs and other medications. Therefore, they are forced to refer their clients to walk-in clinics or to family doctors, who are quite often not equipped to respond to these situations.

Status of yellow fever vaccination

Recently, the Public Health Agency of Canada (PHAC) reviewed the certification criteria for clinics that administer the yellow fever vaccination, in order to adhere to the directives issued by the World Health Organization (WHO).

Previously, clinics certified by PHAC were required to have a designated physician. The physician had to provide proof of competency: five years or more of experience, a recognized diploma in tropical or infectious diseases, or certification from the International Society of Travel Medicine. In addition, the designated physician was expected to produce an annual report on the use of the vaccine as well as the controls for storing vaccines and following the cold chain protocol. The physician was also required to show that there were resources to update knowledge. Lastly, PHAC was responsible for checking the knowledge of the clinic's manager.

Currently, PHAC is consulting with the provinces to develop rules for accessing the yellow fever vaccine. With the interim process now in place, all health professionals authorized to vaccinate in Québec can apply for certification and administer the vaccine, without prior specialized training or application of the above criteria.

The yellow fever vaccine has an exceptional risk of serious side effects, especially in older adults and immunocompromised individuals. It is also the only compulsory vaccine under the WHO's International Health Regulations. Yellow fever epidemiology can change very quickly, so it is essential that the knowledge and professional development needed to perform detailed risk/benefit assessments be updated regularly.

This guide is one way of addressing the shortcomings observed in the care provided to Québec travellers since these changes were made. It describes the pre-travel component of travel medicine, in order to better define the knowledge and skills required. It is also meant to help improve the quality of service provided to travellers, and to promote the training and professional development of clinicians working in this area.

Pre-travel consultation

Pre-travel consultation must be mainly focused on preventive care and must be personalized. It must include:

- a complete medical history, including immunization
- detailed information on the trip
- update of basic vaccination
- vaccination specific to travellers
- appropriate prevention counselling on infection risks not covered by vaccination
- prevention counselling on non-infection risks such as high altitude and envenomation
- prescribing medication for prevention or potential treatment: antimalarial drugs, antibiotics for self-treatment for traveller's diarrhea, medication for high altitudes, triple antiretroviral therapy in the event of accidental exposure to biological fluids, etc.

In addition to vaccination, consultation consists of three key components:

1. collecting data and assessing specific needs
2. providing personalized prevention counselling
3. prescribing appropriate medication

Collection of data

About the Traveller

- Medical history, including the following:
 - cardiovascular diseases
 - respiratory diseases
 - diabetes
 - autoimmune diseases (rheumatoid arthritis, Crohn's disease, etc.)
 - immunosuppression (medication, HIV, thymus diseases, etc.)
 - psychiatric or neurological conditions
 - physical disabilities
 - thromboembolic problems
 - cancer
- Identification of specific client groups: children, older travellers, pregnant women, travellers visiting family or friends, etc.
- Lifestyles:
 - active versus inactive
 - alcohol or drug use, tattoos, etc.
 - work
- Previous vaccinations

- Current medication
- Allergies (types):
 - drugs, food, insect bites
 - previous reactions to certain vaccines

About the Trip

- Detailed itinerary
- Date of departure and length of trip
- Purpose of the trip:
 - tourism
 - medical tourism
 - business travel
 - international adoption
 - humanitarian aid
 - mass gathering (pilgrimage, e.g. the Hajj in Saudi Arabia)
- Trip conditions:
 - off the usual tourist routes
 - rural/urban
 - staying in a hotel, staying with family, camping, etc.
- Specific activities:
 - cruise
 - hiking, trekking, spelunking, archeological activities
 - motorcycling, cycling
 - rafting, freshwater bathing
 - deep-sea diving
 - high-risk sexual behaviour
 - extreme adventure (high altitude, expedition, etc.)

Prevention counselling

The “counselling” aspect is clearly an important part of pre-travel consultation, because there are no vaccines for most of the infectious risks faced by travellers. Moreover, the non-infectious risks are also a significant cause of morbidity and mortality abroad.

Health professionals should be aware that their primary goal is to protect the traveller's health, and they must devote the necessary time and energy.

Health professionals must communicate effectively to ensure retention of information. Therefore, they need to speak clearly and in simple terms, and take the time to correct misconceptions. There are a number of tools to help health professionals in this task: pamphlets from various sources, booklets, etc.

Basic advices

- Food and water (precautions, means of purification, rehydration solutions), and traveller's diarrhea
- Sun protection
- Insect repellents and insecticides for bites by arthropods (mosquitoes, ticks, etc.), malaria, etc.
- Preventing accidents and various types of trauma (motorcycle, public transit, drowning, etc.)
- Preventing bloodborne and sexually transmitted infections
- Contact with freshwater or saltwater
- Contact with animals (rabies, etc.)
- Motion sickness
- Jet lag
- First aid kits
- Travel ethics

More specific advices

- Altitude
- International adoption
- Extended stays and expatriates
- Patients with chronic conditions (diabetes, cardiovascular disease, chronic obstructive pulmonary disease, etc.): whether or not able to travel by plane
- Barotrauma
- Thromboembolic disease
- Chilblains and hypothermia
- Culture shock / adapting
- Travel health insurance / repatriation
- Medical care overseas
- Exposure to biological fluids (healthcare workers)

Returning from a trip

- Inform patients of the symptoms they should recognize upon returning from a trip and that should receive urgent medical attention

Immunization

- Basic immunization: complete the primary vaccination as required, administer vaccine booster according to the schedule for each vaccine (e.g. tetanus vaccine)
- Provide supplementary vaccination based on international requirements (yellow fever) and the health risks related to the destination and type of travel

Prescription

Health professionals must know the indications, contraindications, pharmacology, drug interactions and adverse effects of the drugs prescribed.

- Renewal of regular medication if required
- Drugs for diarrhea (antibiotics for self-treatment, antiperistaltic drugs)
- Trip-specific medication
 - malaria chemoprophylaxis
 - prevention and treatment of altitude-related health problems
 - motion sickness
 - allergy medication (adrenaline self-injector, antihistamines, etc.)
 - prophylaxis following exposure to biological fluids
 - prevention of thromboembolic diseases

Knowledge required and procedures to follow

Basics

- Basic epidemiological concepts (e.g. morbidity, mortality, incidence, prevalence, incubation, outbreak, etc.)
- Various travel health risks
- Geographic distribution of each risk
- Modes of transmission for infectious risks and their symptoms
- Appropriate preventive measures

Immunization

The provider must conform to the *Protocole d'immunisation du Québec* (Ministère de la Santé et des Services sociaux).

- Basic concepts in immunology
- Professional and legal responsibilities for vaccination
- Injection techniques
- Managing and storing immunizing agents
- Immunization schedules
- Vaccination-related emergencies: recognizing and dealing with them
- Reporting adverse effects following vaccination

Overview of infectious diseases that could be acquired while travelling

Vector-borne diseases:

- Malaria
- Dengue
- Japanese encephalitis
- Yellow fever
- Other hemorrhagic fevers (Lassa, Marburg)
- Tick-borne encephalitis
- Leishmaniasis
- Lyme disease
- Trypanosomiasis

Diseases related to consuming water or food:

- Traveller's diarrhea
- Hepatitis A and E
- Typhoid fever
- Toxins (e.g. ciguatera)
- Protozoon (e.g. amoebae)
- Polio (also transmitted by droplets)
- Cholera

Diseases transmitted by droplets or by aerosol:

- Meningitis
- Tuberculosis
- Influenza
- Pneumococcus
- Measles, rubella, mumps
- Diphtheria, pertussis
- Chickenpox

Bloodborne and sexually transmitted infections:

- Chlamydia, gonorrhoea
- Syphilis
- Hepatitis B and C
- HIV
- Human papilloma virus (HPV), herpes

Diseases related to contact with water or the environment:

- Larva migrans
- Tetanus
- Schistosomiasis
- Leptospirosis
- Legionellosis

Diseases transmitted by bites or contact:

- Rabies
- Envenomation

Emerging and re-emerging diseases:

- Influenza H5N1, SARS
- Influenza A (H1N1) 2009

Post-travel information

This guide defines the pre-travel knowledge to be acquired. The post-travel section is meant to provide information so that clinicians can inform travellers on what they need to do. The information will also be helpful in dealing with patients with health problems after a trip and will make it possible for clinicians to recognize the warning signs (e.g. a post-travel fever is a medical emergency) and to direct patients to the appropriate post-travel resources.

Professional, technical and physical organization of travel clinics

In organizing travel health services, all aspects of consultation must be taken into account. A full range of travel health services in a single physical location is preferable in order to accommodate patients more effectively. It promotes adherence to the recommended measures, in addition to preventing patients from having to pay additional administrative costs if they need to be referred to a more specialized clinic or if there is a risk that they may not follow through on their referral.

As for all other types of consultation, health professionals must be diligent and competent, follow their professional association's code of ethics, put the patient's interests first, and not hesitate to refer more complex cases requiring greater expertise to specialized travel clinics.

Group prescriptions, if applicable, should be written by a physician actively practising travel health medicine, in accordance with the rules for writing group prescriptions as stipulated by the Collège des médecins du Québec.

Technical organization should include the following:

- appropriate equipment and supplies (refrigerator with a thermometer, alarm system, etc.)
- Internet access

- access to laboratory analysis resources
- criteria applying to telephone and Internet counselling
- record-keeping and archiving of patient records
- documentation (e.g. vaccination record, report of adverse events following vaccination, information materials, including information for travellers with special needs, e.g. diabetics, pregnant women)
- procedures for infection control
- management of medical emergencies with proper equipment: adrenaline, standard resuscitation equipment, regular updating of basic cardiopulmonary resuscitation

Travel medicine information and available resources (non-exhaustive list)

Professional resources

- International recommendations
 1. World Health Organization: <http://www.who.int/en/index.html>
 2. Centers for Disease Control and Prevention (United States): <http://www.cdc.gov/travel/default.aspx>
- Provincial/federal recommendations
 1. Comité consultatif québécois en santé des voyageurs: <http://www.inspq.qc.ca/aspx/fr/ccqsv.aspx?sortcode=1.50.52.55>
 2. Public Health Agency of Canada: <http://www.phac-aspc.gc.ca/tmp-pmv/prof-eng.php>

General information for travellers

1. Public Health Agency of Canada: <http://www.phac-aspc.gc.ca/tmp-pmv/pub-eng.php>
2. Foreign Affairs and International Trade Canada: <http://www.voyage.gc.ca/>

Summary of recommendations by the Comité consultatif québécois en santé des voyageurs

- Each travel health clinic should have at least one health professional who has training or certification in health travel, infectious diseases or tropical medicine which is recognized in Québec or internationally.
- All professionals at such clinics should participate in continuing professional development activities related to travel health at least once a year, and update their knowledge on an ongoing basis, **including their knowledge on cardiopulmonary resuscitation.**
- All professionals should base their practice on the *Protocole d'immunisation du Québec* (Ministère de la Santé et des Services sociaux) and the *Guide d'intervention en santé voyage* (Institut national de santé publique du Québec).
- All professionals should also regularly consult the guidelines and outbreak notifications issued by other official travel health organizations (World Health Organization, U.S. Centers for Disease Control and Prevention, Public Health Agency of Canada).
- Lastly, each facility, whether public or private, should provide the full range of pretravel services or have established a service corridor with a more specialized clinic (formal service agreement).

Conclusion

The CCOSV hopes that distribution of this *Guide to Good Travel Health Practices* will help to improve the quality of care for Québec travellers and will lay the foundation for recognition of travel health practice as an area of expertise.

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