INTRODUCTION

The Pharmacy Travel Health Clinic Operations Guide provides an overview of the resources and travel-specific information useful to those starting and maintaining an international travel health clinic or administering travel-related vaccines within the context of a pharmacy practice. Additional considerations may apply to travel medicine clinics in other care delivery settings such as medical clinics, workplaces, and public health departments. Non-physician initiation of vaccines or travel-related medication is increasingly common but varies widely by state or province; thus, pharmacists should understand local law related to vaccine and prescription medication provision.

Materials have been designed to help standardize delivery of service and reduce administrative workload. This guide focuses on aspects of clinic operations that are unique to the pharmacy practice of travel medicine. Resources, policies and procedures, and other guidelines applicable to general medical clinics can be found in a multitude of other publications and will not be provided here.

ESTABLISHING A PHARMACY-BASED TRAVEL HEALTH CLINIC

THE BASICS

Because the concept of travel medicine is often new to travelers, it is important to consider the unique aspects of establishing a travel medicine clinic. Pharmacists often focus on the pre-travel, or travel health, aspects of travel medicine.

Location within a pharmacy: A highly visible location contiguous with the pharmacy dispensing area to maintain visual control of the pharmacy that also generates interest and prompts inquiries is desirable. The clinic may also be located within the pharmacy's wellness patient care area or other similar area.

Naming: Clinic names and signage should clearly indicate the unique services offered. The terms "Travel Clinic" or "Travel Health Clinic" are most appropriate.

Space and setup: The preferred layout consists of approximately 50 square feet of a private or semi-private area in consultation or patient care format. The pharmacist will need to conduct both consultation and immunization in the same space. There are no special modifications needed for this space if the pharmacist is already providing immunizations.

Legal aspects: State and provincial laws vary regarding the pharmacist's ability to provide vaccines and prescription medication. In addition, some organizations have chosen to be more restrictive than state law. The following questions must be addressed before starting a pharmacy-based travel health clinic.

Immunization

- What immunizations are pharmacists able to give?
- Are there restrictions such as age or pregnancy?
- Are there route-of-administration restrictions (e.g., only allows vaccines by injection)?
- Can pharmacists administer vaccines independently (i.e., no physician involvement), by protocol (i.e., standing orders), by prescription (i.e., must obtain a physician signed order for the vaccine), or some combination of any of the aforementioned?

Prescription Medication

- Do collaborative practice laws allow pharmacists to initiate medications with or without referral from a primary care provider?
- Do collaborative practice laws allow pharmacists to initiate prescription medication when no previous diagnosis is required (e.g., malaria prophylaxis, altitude illness, etc.)?
- Are pharmacists allowed to obtain a DEA license for controlled substances (e.g., sleep medications categorized as controlled substances) if allowed either through collaborative practice or independent prescriber laws?
- Are pharmacists able to independently initiate prescription medications related to travel (e.g., California allows pharmacists to initiate travel-related prescription medications for people traveling outside the U.S., according to the CDC Yellow Book)?

SPECIALIZED EQUIPMENT AND SUPPLIES

Storage: At minimum, a dedicated refrigerator with a separate freezer and a device that records temperature (particularly observed high and low temperatures) are recommended by CDC for vaccine storage. Additionally, CDC recommends the use of glycol-encased probes to more accurately record vaccine temperature and digital data loggers for more frequent monitoring and documentation. At minimum, pharmacists should monitor and record temperature twice daily.

- For guidance on the safe handling and storage of vaccines, see Storage and Handling in the Travax Medical Library and CDC's website on storage and handling (www.cdc.gov/vaccines/recs/storage/default.htm).
Travel vaccines: See "Vaccines and Medications" for vaccine inventory suggestions and tips on vaccine ordering, storage, and handling.

Yellow fever vaccine administration: When administering yellow fever vaccine, the following will be needed:

- a Yellow Fever Stamp (Uniform Stamp), which can be obtained from local or state public health authorities
  - Check state law to make sure pharmacists are authorized to administer yellow fever vaccine. If not, determine a suitable location to which to refer patients to obtain this vaccine or others that state law does not allow pharmacists to administer.
  - Many states require completion of the online CDC course, "Yellow Fever Vaccine: Information for Health Care Professionals Advising Travelers," before they will issue a Yellow Fever Stamp.
  - CDC requires that only a physician can apply for a yellow fever stamp, but it does not prohibit a physician from delegating the use of the stamp to other health care providers in accordance with state policy.
- Stocks of the International Certificate of Vaccination or Prophylaxis (see below), which can be obtained from:
  - WHO: http://apps.who.int/bookorders/anglais/detart1.jsp?sesslan=1&codlan=0&codcol=69&codcch=1000
  - Canada: Travel Health Division of the Public Health Agency of Canada: www.phac-aspc.gc.ca/tmp-pmv/yf-fj/designation/pm_yf-mp_fj-eng.php#a18

WHO's International Certificate of Vaccination or Prophylaxis (ICVP): A revised certificate took effect June 15, 2007, replacing the previous Certificate of Vaccination or Revaccination. The new certificate must be used, but persons vaccinated before that date may use the old certificate.

- The name of the vaccine (e.g., yellow fever) or prophylaxis must be written out each time on the page "International Certificate of Vaccination or Prophylaxis." Currently, WHO mandates only documentation of yellow fever vaccination in the ICVP.
- The Certificate must be hand signed by a licensed clinician or authorized designee; a signature stamp is not acceptable. The Uniform Stamp of the medical center administering the vaccine must be used to validate the immunization entry. (In the U.S., the Uniform Stamp is issued to non-federal vaccination centers by state health departments.)
- Other vaccines may be entered on a separate page (called "Other Vaccinations"), but this is optional. If cholera vaccine is given to satisfy an "unofficial" entry requirement or if meningococcal or polio vaccines are given to satisfy an official country requirement (i.e., for the Hajj), record the vaccine administered in "Other Vaccinations" in the column "Disease Targeted." A Uniform Stamp, although not required, lends credibility to this section.
- Although the entire booklet is frequently called the "certificate of vaccination," the official ICVP—and the only mandated portion—is the page on which the clinician enters yellow fever vaccination information. The booklet itself includes additional material (e.g., "Instructions to Travelers," "Instructions to Physicians," and "Other Immunizations/Prophylaxis Received"), but use of these sections is optional.
- Non-physician health care providers can sign the ICVP. However, CDC recommends that, for medical exemptions, in addition to completing the Medical Contraindication to Vaccination section of the ICVP, it also be accompanied by a signed and dated exemption letter on the physician's stationary.

Vaccine Information Statements (VISs): Health care providers must inform patients (or the parent/legal representative of a child) about the benefits and risks of vaccinations prior to administration of a vaccine. VISs, which are developed by CDC, provide objective information on vaccine safety, potential adverse events, and the diseases against which the vaccines protect. The appropriate and most current version of a VIS should be provided each time a vaccine dose is administered to a child or an adult.

U.S. federal law requires the documented use of VISs for each dose of a vaccine (given to an adult or child) containing any of the following components: diphtheria, tetanus, pertussis, measles, mumps, rubella, polio, hepatitis A, hepatitis B, Hib, influenza, pneumococcal conjugate, meningococcal, rotavirus, HPV, or varicella.
- An alternative VIS (the multi-vaccine VIS) can be used when administering one or more of the following routine birth-through-6-months vaccines: DTaP, HepB, Hib, pneumococcal conjugate (PCV), polio (IPV), or rotavirus. It can also be used when giving combination vaccines (e.g., Pediarix, Pentacel, Comvax) or when giving 2 or more routine vaccines at other pediatric visits (e.g., 12-15 months, 4-6 years).

VISs for other vaccines are also available and their use is strongly encouraged but not mandated (unless the vaccine is purchased through a CDC contract).

VISs are periodically updated, and it is the responsibility of the health care provider to obtain the most recent versions. VISs are available in the Travax Medical Library (see Vaccine Information Statements) and on the CDC website (www.cdc.gov/vaccines/hcp/vis/index.html). VISs are available in more than 40 languages at www.immunize.org/vis.
CDC regulations require that the Vaccine Administration Record contain the publication date of the VIS provided and the date that the VIS was given to the patient or guardian. Clinicians are not required to obtain a patient signature acknowledging receipt of a VIS, as these are not consent documents.

**Forms for Reporting Adverse Events**

In the U.S., adverse events are reported to the Vaccine Adverse Event Reporting System (VAERS); the reporting form can be completed online (https://vaers.hhs.gov/esub/step1). The VAERS 24-hour information line (800-822-7967) can be called with questions regarding adverse reactions or to order paper forms, which are also available.

In Canada, adverse events are reported to the Canadian Adverse Events Following Immunization Surveillance System (www.phac-aspc.gc.ca/im/vs-sv/index-eng.php); the reporting form (Report of Adverse Events Following Immunization) is available at www.phac-aspc.gc.ca/im/aefi-essi-form-desc-eng.php.

**Travel medications:** See "Vaccines and Medications" for suggested inventory and tips on ordering.

**Pre-printed prescription order forms:** Using pre-printed templates will save time and reduce errors, whether prescribing independently or by protocol, or if a prescription from a prescriber is needed.

**Supplies for Anaphylaxis**

- Aqueous epinephrine 1:1,000 (i.e., 1 mg/mL or 0.3 mg/0.3 mL) dilution in pre-filled syringes, such as epinephrine auto injectors (e.g., EpiPen or Auvi-Q). If vaccinating pediatric patients, both EpiPen Jr. (0.15 mg) and Auvi-Q pediatric (0.15 mg) should be stocked (3 each). It is recommended to have 3 doses readily available in an emergency kit; do not rely on using regular drug stock. Also, make sure expiration dates are checked regularly.
- Diphenhydramine (Benadryl) injectable (50 mg/mL solution); 25 mg or 50 mg capsules or tablets and syrup (12.5 mg/5 mL suspension)
- Wristwatch with second hand or second timer
- Sphygmomanometer (child, adult, and extra-large cuffs) and stethoscope
- Cell phone or access to an on-site phone to activate the emergency medical service (EMS)

See also the CDC "Pink Book" (Epidemiology and Prevention of Vaccine-Preventable Diseases Edition 13, Appendix D) for a protocol on managing vaccine reactions. A quick reference sheet for vaccine adverse events including anaphylaxis can also be found on the Immunization Action Coalition's website (www.immunize.org/handouts/vaccine-reactions.asp).

**PERSONNEL AND TRAINING**

In a community pharmacy, interns, technicians, and clerks can all play a role to support the pharmacist in a travel clinic. No U.S. state currently allows technicians or clerks to administer immunizations or counsel patients. However, they can assist operations with other functions, such as collecting and processing forms; scheduling appointments; ordering medications, supplies, and vaccines; prescription processing; and billing. In most states, all regular pharmacists' duties may be performed by intern pharmacists under the supervision of a full-fledged pharmacist.

Ideally, all staff should have CPR (BLS) certification.

**Desirable Attributes for Pharmacist Providers**

- Graduate or post-graduate training in travel medicine that follows the ISTM (International Society of Travel Medicine) Body of Knowledge in Travel Health
- Certificate in Travel Health CTH from the ISTM (www.istm.org), which recognizes knowledge in the field of travel medicine associated with pre-travel care and consultation
- Significant patient teaching experience
- Cultural sensitivity to the needs of those traveling to the family's country of origin
- Personal experience in foreign travel
- Previous travel health or foreign health care experience

**Training and Orientation**

Before they practice travel health, pharmacists in the U.S. should prepare by taking a comprehensive ACPE (Accreditation Council on Pharmacy Education)-approved course on immunization and travel health. Currently, the only programs in the U.S. that fit this description are:

- APhA's Pharmacy-Based Immunization Delivery (12 hours self-study + 8 hours live)
- APhA's Pharmacy-Based Travel Health Services advanced competency training (6 hours self-study + 4 hours live); www.pharmacist.com/pharmacy-based-travel-health-services

Up-to-date knowledge about itinerary risks and prevention strategies is essential for the provision of quality pre-trip care. Travel medicine information changes constantly. Systems for ongoing continuing education should be established in every travel health practice to keep staff apprised of developments in the field. Consider implementing:

- Continuing education requirements as a part of all job descriptions
- Access to weekly updates, e-mail alerts, and Travax Literature Watch Reviews
• Development of case studies from previous patients for ongoing pharmacists' education
• Attendance at ISTM and other travel medicine and pharmacy conferences
• Web-based updates on immunizations from CDC

Orientation: A sample training plan to orient new staff members who are joining an established travel clinic practice

At the start of training, the clinician should be provided with the most current editions of the following materials:

• Shoreland: Travax web-based travel medicine program
• Shoreland: Pharmacy Travel Health Clinic Operations Guide
• CDC: Health Information for International Travel ("Yellow Book")
• CDC: Epidemiology and Prevention of Vaccine-Preventable Diseases ("Pink Book")
• Shoreland News Alerts and Literature Watch Reviews, available by subscription to Travax, are also helpful in accessing new developments and current literature on travel medicine.

Sample Readiness Checklist

☐ Demonstrate use of Travax by researching a trip for a basic and a complex itinerary (e.g., involving yellow fever vaccination and malaria prophylaxis) using at least 2 resources (Travax, CDC Yellow Book, etc.).
☐ Review travel history and other documentation forms.
☐ Review documentation and administration procedures for immunizations.
☐ Review procedures for completion of the ICVP.
☐ Review pharmacy workflow as it relates to the travel clinic.
  o Receiving the travel history form and scheduling an appointment
  o Procedures for itinerary review and time period for completion
  o Printing of patient/itinerary specific educational material
  o Clinic visit flow
  o Processing of prescriptions, vaccines, OTC medications, and supplies
  o Billing
☐ Quality assurance: Evaluate a client's knowledge following a patient-teaching session; periodic peer review of randomly selected clinic visits to evaluate clinical decision making.

POLICIES AND PROCEDURES

Each pharmacy travel clinic should develop an individualized policy and procedure (or standard operating procedures) manual, with dated policies that are reviewed regularly and revised as needed. A few examples of topics are noted below.

WORKFLOW

The following are some basic considerations for workflow operations within a pharmacy-based travel health clinic:

• All appointments should be scheduled rather than walk-in.
• Depending upon the setup of the travel clinic, visits typically take 30-60 minutes.
• Travel clinic costs are usually discussed before or during the visit, but pharmacists should strive for transparency of all fees.

The following relate to the figure below:

• Travel history
  o Traveler History Forms should faxed, e-mailed, or made available via a website.
  o Patients should complete and transmit forms to the pharmacist 24-48 hours prior to the scheduled visit.
  o Prior to the appointment, the pharmacist should review the Traveler History Form (see sample form, page 14) to determine a prevention plan that includes vaccines, medications, supplies, and counseling. Travax, as well as other resources listed in this guide, should be used in this preparation process. This may take 5-30 minutes, depending upon the patient, itinerary, and pharmacist’s travel health experience.
• Assess
  o During the first 5 minutes of the visit, the pharmacist reviews the Traveler History Form with the patient.
  o Reconfirms the itinerary. Use maps (available in Travax) to visually show where the patient has indicated he or she is traveling.
    ▪ The pharmacist should attempt to verify all information when it is critical to the travel health recommendations. For example, immunization records should be reviewed and, when needed, discussed with the traveler’s primary care provider or specialist to explore a stated condition. The
lowest form of evidence is verbal history, which should be documented if it is used for decision making.

- **Educate**
  - Patient education should be current and comprehensive, yet prioritized and individualized for the traveler and his or her itinerary.
  - Education should cover medical, environmental, and safety/security topics.
  - A typical flow of the educational component of the visit might look like:
    - Route of disease transmission and prevention strategies (most important)
      - Vector-borne diseases (insect repellants, insecticides, netting, etc.)
      - Food/water-related illnesses (general precautions, getting potable water, etc.)
    - Vaccine recommendations
    - Medication-related prevention (e.g. malaria, traveler's diarrhea, altitude sickness, jet lag)
    - Non-vaccine, non-medication prevention strategies by route of transmission
      - Vector, food/water, respiratory, environmental, blood/sex/needles, zoonotic
    - Safety/Security/Consular
      - Medical evacuation, consular warning, etc.

- **Vaccinate**
  - Policy and procedures already in place for administration of other vaccines should be used here, such as use of the Vaccine Administration Record and Vaccine Information Statements
  - For pharmacists trained on adult/adolescent patients, the maximum number of IM + SC injections is 6 (2 deltoid per arm and 1 SC per arm). To increase the number of vaccines without violating this rule, consider other routes of administration where approved, such as intradermal, intranasal, and oral.
  - Make sure patients are observed for at least 15 minutes after vaccination before leaving the travel clinic.
  - Document all vaccines given on the patient's routine vaccination record or use Clinic Documentation Form (see sample form, page 16), or immunization registry. In addition, if patient requires yellow fever vaccine, make sure to also record this on the ICVP.

- **Pharmacy**
  - One of the advantages of a pharmacy-based travel health clinic is that, depending upon state law, all aspects of a travel health service can be conducted here, including dispensing and retailing.
  - Prescription medications should be adjudicated and dispensed as per standard operating procedures in the pharmacy. To enhance efficiency, the technician or other pharmacist should prepare the prescription medications while the patient is still in travel clinic (pharmacist inputs these orders from the travel clinic area).
  - Over-the-counter medications and supplies that were recommended during the travel clinic visit can be gathered by the clerk or technician while the patient is still being seen by the travel clinic pharmacist (pharmacist enters in the pharmacy computer system or creates a paper order list).

- **Check-out and documentation**
  - Payment is collected and any follow-up visits for vaccination are made
  - The entire process of the clinic visit can take from 30 minutes to 1 hour, depending upon use of ancillary personal for parallel processing, components of the process that can be done in the pharmacy, patient, and itinerary.
  - Types of documentation
    - Communications with primary care providers: Used to foster continuity and document travel health services for the patient's permanent record. Useful for generating further referrals from local primary care practitioners. Send a copy of the work-up form with a short cover letter, and list any follow-up immunizations (and schedules) to be administered at the travel medicine or primary care clinic.
    - Communication with patients: Use to clarify the information given at the appointment about prescriptions and follow-up care. For example, include directions on when to start malaria medication, list vaccines given (or due to be given), and list any follow-up appointments.
- Medical information or exemption letters: Use to assist the patient at border crossings and in the event of a medical problem abroad. This is highly recommended for any patient needing an exemption letter for yellow fever or cholera, a needle and syringe permission letter, medication requirements letter, HIV status letter, and for persons with a chronic or unstable disease. An additional letter may be written by the primary care provider concerning the patient's medical status, with EKG and/or lab copies attached, as needed. Samples letters are available in the Travax Medical Library under Forms & Samples.

- Refusal of recommendation/treatment: Use to document patient refusal of immunizations, prescriptions, or travel health recommendations. The clinic's legal department should aid in the design of this form.

- Patient Handouts
  - Topic handouts: See previous section for information on traveler handouts available in the Travax Medical Library.
  - Country information: Printed country-specific information and recommendations from Travax (see Destinations) and Report Builder.
  - Travel Health Companion

PHARMACY TRAVEL CLINIC FLOW

15-30 min 15 min 15 min 15 min

After-Hours Care
- Policy: Establish and maintain a system whereby patients can access care when the pharmacy is closed.
- Purpose: Ensure that all travel clinic patients have knowledge of and access to after-hours medical care.

Travel Clinic Refrigerator (See also Storage and Handling in the Travax Medical Library.)
- Policy: Set guidelines for choosing and maintaining the refrigerator/freezer.
- Purpose: Ensure proper storage of vaccines in the clinic refrigerator/freezer and avoid loss due to compromised or outdated stock.
- Consider purchasing a thermometer that can call or text someone when the power goes out (especially important for weekends or overnight if the pharmacy is closed).

Immunization
- Policy: Check state law for documentation requirements and immunization clinic operation.
- Purpose: Ensure standardized procedures are used for all vaccines, including travel vaccines.
VACCINES AND MEDICATIONS

VACCINE STOCK

Vaccine supplies should include routine, recommended, and required vaccines, in both adult and, if appropriate, pediatric formulations.

Routine vaccines: For a complete list of routine adult and pediatric vaccines by generic and brand names, see Products in the Travax Medical Library.

Because all routine immunizations should be up-to-date before travel, these vaccines should be stocked in the travel clinic for incompletely immunized travelers. Commonly stocked vaccines and biologics include:

- Tdap and Td vaccines
- Hepatitis B vaccines
- HPV vaccine
- Influenza vaccines
- MMR vaccine
- Meningococcal B vaccine
- Pneumococcal conjugate (PCV13) and pneumococcal polysaccharide (PPSV23) vaccines
- Polio (IPV) and polio combination vaccines
- Varicella and herpes zoster vaccines
- Pediatric vaccine: DTaP, DT, and DTaP combination vaccines; Hib and Hib combination vaccines; rotavirus vaccines

Recommended vaccines: Vaccines that may be recommended to protect the traveler from endemic or epidemic diseases present in the country of destination include the following:

- Hepatitis A and hepatitis A/B combination vaccines
- Japanese encephalitis vaccine
- Meningococcal vaccines (MCV4 and MPSV4) (This may be a required vaccine in some cases; see below.)
- Rabies vaccine
- Typhoid, injectable and oral vaccines
- Yellow fever vaccine (Yellow fever vaccine may be recommended when there is risk of yellow fever to the traveler or may be required by the destination country to prevent transmission of yellow fever virus into that country. See below.)

Required vaccines: Required by the country of destination, these vaccines are designed to protect the host country’s population from the importation and spread of disease. Some vaccines are required only under certain conditions (e.g., during the Hajj in Saudi Arabia).

- Yellow fever vaccine: Many countries require this vaccine when the traveler has recently been in countries either known or thought to harbor yellow fever virus, though some countries require the vaccine for all travelers. Requirements as reported by individual countries to WHO can be found in Travax Report Builder or in individual country summaries in Travax Destinations.
  - Travelers with a specific contraindication to this vaccine should obtain a waiver before traveling to countries requiring vaccination.
  - Enter proof of vaccine in the ICVP, which can be obtained from CDC at https://bookstore.gpo.gov/.
  - All yellow fever vaccination centers should keep a Vaccine Administration Record, and some state health departments require a yellow fever vaccination logbook that includes the following information for each vaccine recipient: name, sex, date of birth, vaccine lot number, vaccination date, prior YF vaccination, destination countries, and Adverse Event/VAERS Report (U.S.) or the Report of Adverse Events Following Immunization (Canada).
  - Yellow fever vaccine may also be recommended if there is risk to the traveler of contracting yellow fever.
- Meningococcal meningitis vaccine (quadrivalent) is required by Saudi Arabia for visitors arriving in that country for purposes of the Hajj or Umra.
  - Meningococcal vaccine may also be recommended if there is risk to the traveler.
- Polio vaccine: A small number of countries, including Saudi Arabia for Hajj travelers, require proof of polio immunization for certain travelers, mainly those arriving from polio endemic countries. The U.S. and Canada are polio-free.
  - See Polio and Hajj Travelers in the Travax Medical Library for additional information.

Other vaccines

Cholera vaccine: Not available in the U.S., oral cholera vaccine is available in Canada and elsewhere and may be obtained by travelers in transit, if feasible.

- Cholera vaccine is not recommended for typical travelers because of the low risk of cholera to most travelers, other than aid or refugee workers.
• Cholera vaccine is not officially required by any country, and a requirement is not legal under the International Health Regulations.

Other biologics

• Immune globulin (IG), IM (if available)
• Tuberculosis skin testing (TST) with PPD

See Products in the Travax Medical Library for additional information, including contact information for vaccine manufacturers and distributors.

Ordering vaccines and medications: Clinics that are new or that have a low patient volume should order only what is needed for one month at a time. With experience, orders can be adapted according to need. Consider heavier travel periods, such as winter holiday season vacations, spring break, summer vacations, etc., when planning orders. April to June is typically the highest-volume period for clinics that see a significant proportion of leisure travelers. While often more expensive, single-dose vials and pre-filled syringes for less-commonly used vaccines are recommended to avoid waste.

Vaccine suppliers: Vaccines may be available from a wholesaler or directly from the manufacturer. Verify vaccine delivery time with the supplier. Delivery times should be agreed upon by both the distributor and facility in order to maintain the cold chain required to guarantee vaccine viability. The usual time from ordering to delivery is about 1-4 business days. Note that the manufacturer of the yellow fever vaccine will not ship the vaccine to the pharmacy until the pharmacy has the Uniform Stamp.

Vaccine shortages: Up-to-date information on vaccine shortages or backorders/delays can be found in the Travax Medical Library under Vaccine Supply Shortages.

Vaccine recalls: Vaccine recalls are reported via Travax News Alerts, when significant to travel medicine practice. The FDA website can also be consulted (www.fda.gov).

Vaccine storage and handling: For guidance on the safe handling and storage of vaccines, see Storage and Handling in the Travax Medical Library and the CDC Pink Book (Epidemiology and Prevention of Vaccine Preventable Diseases). In addition, revised guidelines are available at www.cdc.gov/vaccines/recs/storage/default.htm.

Recordkeeping: See Recordkeeping in the Travax Medical Library.

Refusal of recommendation: Always document patient refusal of indicated immunizations or prescriptions.

DRUG STOCK

Most of the medications used in travel health are usually routinely stocked by the pharmacy.

Examples of some prescription medications used for travelers:

• Traveler’s diarrhea: quinolones (ciprofloxacin, norfloxacin, ofloxacin, levofloxacin), azithromycin, rifaximin
• Altitude illness: acetazolamide (Diamox), dexamethasone (Decadron), nifedipine (Procardia; Adalat)
• Antimalarials: chloroquine (prophylaxis), mefloquine (prophylaxis), atovaquone/proguanil (prophylaxis or standby emergency treatment [SBET]), doxycycline (prophylaxis), artemether/lumefantrine (SBET), primaquine
• Motion sickness: scopolamine (patches and tablets)
• Oral typhoid vaccine

Self-care products: To offer the full complement of products that a traveler may need, the pharmacy should consider stocking an appropriate selection of OTC products in addition to prescription products and vaccines. Having at least 1 OTC product from each of the following categories should be sufficient:

• Insect repellent (DEET or picaridin/icaridin) and insecticide (permethrin)
• Mosquito net
• Anti-diarrheal (bismuth subsalicylate and loperamide)
• Oral rehydration solution (ORS)
• Water purification tablets
MARKETING

This section presents strategies to increase public awareness of the clinic, whether a new or well-established practice. Promotion should begin as soon as the clinic opens and continue for the duration of its lifespan.

GOAL SETTING

Outline intended outcomes of the marketing campaign. Set quantifiable goals that will enable the success of the marketing plan to be gauged. Some common goals are:

- Identify demographic groups with the greatest potential for international travel.
- Inform target groups and likely referral sources about the clinic.
- Gain positive community visibility—both immediately and throughout the year.
- Attract a certain number of new patients during a given time period.

RESEARCH

Start by contacting media outlets within the community to request a media kit and demographic information about their listeners, viewers, or readers. During the conversation, determine to whom press releases and phone calls should be directed. Identify local travel blogs and method of posting to them. Define the geographic and demographic target audience. Most communities will have multiple competing travel clinics. Compare the media audiences with the target audience to identify outlets with the most potential for the clinic.

TARGET GROUPS

- **Individual or group travelers:** Demographically, this group includes the more affluent segment of the population and groups associated with educational institutions. This group can be reached through mass media promotions, direct mail, referrals, blogs, and websites oriented to local community events.

- **Current pharmacy patients:** Potential travel clinic clients include current pharmacy patients who bring in prescriptions for medications that may be travel-related (such as a short course of ciprofloxacin or azithromycin) or are clearly travel-related (e.g., antimalarials or altitude illness medication) or who request early refills or vacation overrides for extra refills. If applicable, place information at the pharmacy photo center to capture potential passport photo customers.

- **Student travelers:** Study abroad programs are expanding quickly. Contact student health services in boarding schools and colleges and reach students through campus media promotions, direct mail, or referrals.

- **Local health departments:** Many local health departments either don’t have or have eliminated travel immunization services but still receive inquiries from the public. Where this is the case, pharmacists should start by contacting the local immunization outreach coordinator to determine next steps.

- **Travel agents:** Most agents are reluctant to broach the topic of travel health out of fear of dissuading their clients from traveling. Limited time should be spent on unsolicited discussions with travel agents, but direct mail or speaking at local travel agents’ meetings may offer an efficient opportunity to recommend a visit to the travel medicine clinic or to share promotional materials.

- **Corporate human resource departments:** Because an employee’s health is a major concern when planning overseas business travel, many corporate human resource departments that oversee travel will be relieved to have a resource for all of the health services and information their employees need. Contact them through personal visits, phone calls, local professional meetings, or direct mail.

- **Primary care providers:** Many primary care providers recognize their limitations in advising the international traveler and welcome a comprehensive resource for information and services. Travel health specialists must convey to these clinicians that even the most well-informed general practitioners and internists will find it difficult to research and understand the complex health and safety risks a traveler may encounter. The patient may be served best if referred to a resource for complete information and services. Even if the primary care provider chooses to administer the vaccinations, a consultation with a travel medicine specialist can be beneficial. Contact this group through personal visits, phone calls, or direct mail.

ACTIONS

In the beginning, prioritize target groups. Concentrate on prospects with the highest potential for yielding the greatest number of patients. Focus on the other groups after the clinic is established.

It is possible to create professional-quality materials using desktop publishing software or contact a design professional to create unique, eye-catching pieces and webpages.
In-store advertising: Since the equivalent of the U.S. population walks through the doors of a pharmacy every week, in-store signage can be the most effective tool to raise awareness of the pharmacy clinic to the people who come into the store. It can be as simple as a banner or window advertising and shelf-talkers (small advertisements co-located with OTC travel-related products).

Direct mail: Direct mail should be narrowly targeted and have a personal appeal rather than the mass approach of a newspaper ad or website.

Brochures: Brochures are a simple way to communicate clinic information and the need for preventive travel medicine. The brochure should be written in a clear, concise, and easy-to-read manner, free of medical jargon. The brochure should be distributed to target audiences and be easily available within the clinic.

Press releases: Providing articles to community-oriented blogs, local websites, local newspapers, and magazines or appearing on local news is inexpensive and reaches surprisingly large audiences. Press releases are also a common, inexpensive, and effective way to convey information, but some knowledge of electronic distribution channels monitored by media outlets is necessary.

Advertising: Although it is probably the most obvious marketing tool, it isn’t always the most effective, because multiple impressions per consumer are necessary and most potential clients only notice the message right before they travel.

Website: Set up a clinic website or integrate the travel clinic service into a well-visited part of the main pharmacy website. Join or subscribe to an organization or service that maintains listings of travel clinics on a high-volume website; this includes Shoreland’s Travel Health Online, ISTM, ASTMH, and other travel medicine resources.

Special events: The intrinsic appeal of international travel makes special events appropriate for promoting the travel clinic. It may be wise to have a computer with Travax installed as part of a hands-on display. Printed promotional materials should be available, as well as clinic staff to answer questions about services offered.

- Hold an open house and invite members of the targeted referral groups. Place a guest book at the door; this will be the beginning of a future mailing list.
- Consider a display or booth at health fairs or conferences. Take clinic materials to local conferences of travel agents, health care providers, or corporate travel directors.

Public speaking: Consider speaking to churches, especially those organizing travel groups; college-organized tour groups; high school exchange groups (invite parents, too); parent-teacher organizations; senior citizen groups; community service organizations; and professional organizations for health care providers.

Referrals: Obtaining referrals is one of the most successful ways of recruiting patients. Be sure to acknowledge all referrals by notifying the person who made the referral that a client has visited the clinic based on the referring patient’s recommendation and that it is appreciated. Always inform the referring provider about any medical treatment provided to their patients. While primary care providers are an important source of referrals, infectious disease specialists to whom pharmacists refer suspected returned traveler diseases may also refer pre-travel patients to the pharmacy.

Internal public relations: For a travel health service located within a larger pharmacy or pharmacy within a larger retail outlet, this section offers some promotional ideas to heighten awareness of the travel health clinic.

- Participate in new employee orientation sessions, write a paragraph in the employee handbook, or distribute a brochure in new employee packets. Let everyone know that travel health is more than just immunizations.
- Request that the travel health clinician be added to the mailing or e-mail distribution list for new employee announcements. If the memo mentions or implies travel, send this employee a welcome note explaining the clinic’s services.
- Target promotional efforts to the many subgroups within any workplace (e.g., first-time travelers, executives, other employees traveling to specific regions). Contact human resources, corporate travel, and corporate security departments to learn which employee groups travel, where they go, and how often.
- Ask the corporate travel department or the company’s designated travel agent to include information about the clinic’s services with any tickets to international destinations.
- Meet with key managers and HR personnel involved with hiring to educate them about the clinic and its benefit to the company.
- Participate in company meetings and activities. Set up a booth outside the cafeteria or at a health fair and demonstrate Travax.
- Get and keep the attention of managers. Outline the benefits of pre-travel care in a memo and follow up each time the clinic helps an employee return safely.
- Use the company communications system to the clinic’s benefit. Consider sending seasonal alerts (e.g., “Safety tips for summer travel with kids”) and respond rapidly to news reports of new infectious diseases (e.g., influenza outbreaks).
- Create a special “fast track” system for internal employees that are traveling on business. Establish a routine for seeing these travelers quickly, efficiently, and at the last minute if necessary. Know the most common travel itineraries for the company and have information packets readily available.
TRAVEL MEDICINE RESOURCES

TRAVAX – SHORELAND

- Web- and subscription-based, updated daily
- Global near-real-time medical, environmental, resource, and countermeasure information relating to tropical infectious diseases and health threats/risks associated with international travel written by in-house medical experts
- Detailed country-specific recommendations; vaccine, medication, and safety recommendations; e-mail updates; News Alerts; Literature Watch Reviews; staff articles on diseases and safety issues; and printable patient handouts
- Detailed malaria, yellow fever, and elevation maps for each applicable country to guide preventive interventions
- Report Builder calculates immunization requirements and generates comprehensive itinerary reports for multi-country trips and recommendations

HEALTH INFORMATION FOR INTERNATIONAL TRAVEL (YELLOW BOOK) – CDC

- Published by CDC, available online or hardcopy
- Major content areas include pre-travel consultation, post-travel evaluation, infectious diseases related to travel, select destinations, transportation issues, traveling with children, travelers with special needs, and newly arrived immigrants and refugees

INTERNATIONAL TRAVEL AND HEALTH – WHO

- Available online with current updates only for malaria and yellow fever risk and requirements

INTERNATIONAL SOCIETY OF TRAVEL MEDICINE (ISTM)

- The Body of Knowledge for the Practice of Travel Medicine outlines the scope and extent of knowledge required for professionals working in the field of travel medicine. Knowledge categories highlighted include the global epidemiology of health risks to the traveler, vaccinology, malaria prevention, and pre-travel counseling designed to maintain the health of the traveling public. See www.istm.org.

GENERAL RESOURCES

TRAVAX

Traveler education is an essential component of every travel health clinic visit. Many travelers are unfamiliar with travel health risks and protection measures.

Travax has an extensive Medical Library with traveler education articles on vaccine-preventable diseases, other infectious diseases, health and safety, and special needs travelers. These informational articles can be printed for the traveler and used as teaching handouts on specific topics. By using Travax Report Builder, clinicians can print country-specific traveler reports organized by destination. Examples of some of the patient article topics available in the Travax Medical Library are listed below.

- Vaccine-preventable diseases such as cholera, diphtheria, tetanus, pertussis, hepatitis A and B, influenza, meningococcal, Japanese encephalitis, polio, rabies, tick-borne encephalitis, typhoid, varicella, and yellow fever
- Other infectious diseases such as Chagas' disease, chikungunya, dengue, Lassa fever, leishmaniasis, malaria, schistosomiasis, and traveler's diarrhea
- Health and safety issues such as air travel, altitude sickness, food and beverage precautions, insect precautions, jet lag, marine hazards, motion sickness, safety and security, seafood poisoning, and traveler's thrombosis
- Special needs such as cardiovascular disease and air travel, children and travel, Hajj travelers, pregnant travelers, disabled travelers, diabetic travelers, immunocompromised travelers, and HIV-infected travelers

USEFUL FREE ONLINE TRAVEL MEDICINE RESOURCES

- Shoreland Travel Health Online: www.tripprep.com
  - General country specific advice in lay language directed at consumers
- Epidemiology and Prevention of Vaccine-Preventable Diseases (the Pink Book): www.cdc.gov/vaccines/pub/pinkbook/index.html
- Morbidity and Mortality Weekly Report: www.cdc.gov/mmwr
- International Society of Travel Medicine (ISTM): www.istm.org
- U.K. National Travel Health Network and Centre: http://travelhealthpro.org.uk/
- Travel Health-Public Health Agency of Canada: www.phac-aspc.gc.ca/tmp-pmv/
- U.S. Department of State Bureau of Consular Affairs: http://travel.state.gov
- World Health Organization (WHO): www.who.int/en
- American Pharmacists Association: www.pharmacist.com
- Immunization Action Coalition: www.vaccineinformation.org

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**FORMS**

This section describes forms that may be helpful in the travel medicine clinic. A few sample forms are provided, which can be revised for use in individual travel medicine clinics. These sample forms are also available in the Travax Medical Library under *Forms and Samples*.

- **Telephone triage form or log**: The first telephone contact with patients can be critical. It will ensure that all of the necessary questions are asked, answered, and documented during the first call from a traveler. Include such things as contact date, traveler's name, complete contact information, itinerary (countries in chronological order and locales/activities), departure date, length of stay, type of trip, appointment date and time, etc. An example of a telephone triage form is below.

  **SAMPLE TELEPHONE TRIAGE FORM**

<table>
<thead>
<tr>
<th>Name</th>
<th>Telephone number</th>
<th>Emergency contact name and number</th>
<th>Address</th>
<th>Reason for Call</th>
<th>Appointment (date/time/provider)</th>
<th>Requests call-back</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

- **Traveler History Form**: Use to efficiently gather information about the patient (including trip details, health history, and current medications) before the appointment. This form can be mailed, faxed, or e-mailed to the patient to complete (or enter information online) and bring to his or her appointment; alternatively, the patient may fill in the form during the appointment. (See sample form, page 14.)

- **Clinic Documentation Form**: Use to record specialized information such as patient health and immunization history, malaria medication history, care plan, vaccine administration record, follow up vaccinations needed, and medications prescribed or recommended for the trip. Copies of the immunization and medications of the form may be provided to the patient to clarify medication instructions and follow-up care recommended.

- **Medical information or exemption letters**: Use to assist the patient at border crossings and in the event of a medical problem abroad. This is highly recommended for any patient needing an exemption letter for yellow fever or cholera, a needle and syringe permission letter, medication requirements letter, or HIV status letter, and for persons with a chronic or unstable disease. Although no official requirement exists nowadays, occasionally border officials require documentation of cholera vaccination; providing a cholera exemption for certain travelers crossing multiple international borders can prevent such inconveniences. An additional letter may be written by the primary care provider concerning the patient's medical status, with EKG and/or lab copies attached, as needed.

- **Refusal of recommendation/treatment**: Use to document patient refusal of immunizations, prescriptions, or travel health recommendations (unless documented in the health care provider's notes). The clinic's legal department should aid in the design of this form, if one is used.

- **Communications with primary care providers**: Use to foster continuity and document travel health services for the patient's permanent record. Send a copy of the work-up form with a short cover letter, and list any follow-up immunizations (and schedules) to be administered at the travel medicine or primary care clinic.
**TRAVELER HISTORY FORM**

Complete this form and bring it to the clinic appointment along with all immunization records.

<table>
<thead>
<tr>
<th>Name:</th>
<th>DOB:</th>
<th>Gender: Male □ Female □</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Phone:</td>
<td>Work Phone:</td>
<td>Mobile Phone:</td>
</tr>
<tr>
<td>Home Address:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>City:</td>
<td>State:</td>
<td>Zip:</td>
</tr>
<tr>
<td>Email:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary care physician:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patient ID#:</td>
<td>Primary insurance:</td>
<td></td>
</tr>
</tbody>
</table>

Does your insurance cover:
- Health care overseas? □ Yes □ No □ Not sure
- Medical evacuation? □ Yes □ No □ Not sure

Birth country: ________________________________

**TRAVEL PLANS** (list additional information on back of form if needed):

**Purpose of trip** (check all that apply)
- □ Vacation
- □ Education/research
- □ Adoption
- □ Visit friends or family
- □ Missionary/volunteer/humanitarian relief
- □ Work (urban, office-based, or conference)
- □ Work (rural, outdoors, or in local community)
- □ To obtain medical or dental care
- □ Other: ________________________________

**Planned activities** (list all): ________________________________

**Will you be:**
Visiting areas that are:
- Rural □ Yes □ No □ Not sure
- Urban □ Yes □ No □ Not sure
- Primitive or remote □ Yes □ No □ Not sure

Ascending to high altitudes (8,000 ft or higher)? □ Yes □ No □ Not sure

Working with potential exposure to body fluids (e.g., medical or dental work)? □ Yes □ No □ Not sure

Working with exposure to animals? □ Yes □ No □ Not sure

Potentially having new sexual partners? □ Yes □ No □ Not sure

**Accommodations** (check all that apply):
- □ Resort/large hotel
- □ Small hotel/guest house/B&B
- □ Cruise ship
- □ Private home (with locals)
- □ Private home (with relatives)
- □ Private home (expatriate or high-end)
- □ Primitive camping
- □ Up-scale camp/lodge
- □ Dormitory/ hostel
- □ Other: ________________________________

Previous international travel (year/destination): ________________________________

<table>
<thead>
<tr>
<th>Countries and cities in order of visit</th>
<th>Arrival Date</th>
<th>Departure Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</tbody>
</table>
## HEALTH HISTORY (Check all that apply)

### Allergies
- Antibiotics (e.g., penicillin, sulfa)
- Other medications
- Egg
- Latex
- Gelatin
- Yeast
- Bees/wasps
- Seasonal
- Other
- Side effects/reactions from previous medications (e.g., nausea, dizziness, stomach upset):

### Cancers/blood disorder
- Coagulation disorder
- History of cancer or blood disorder
- Other

### Cardiovascular
- Arrhythmia (rhythm disturbance considered significantly abnormal including atrial fibrillation, heart block)
- Implanted pacemaker or automatic defibrillator
- Heart attack
- High cholesterol
- High blood pressure
- Stroke
- Other

### Endocrine
- Diabetes
- Thyroid disease
- Other

### GI
- Crohn’s disease or ulcerative colitis
- IBS
- GERD
- Chronic hepatitis
- Cirrhosis or liver failure
- Other

### Immune system
- Steroids by mouth within last 3 months
- Immune suppressive medications or treatments within last 3 months (e.g., radiation, cancer chemotherapy drugs, methotrexate, azathioprine, adalimumab, anakinra, etanercept, infliximab, leflunomide, rituximab)
- Spleen removed
- Thymus disease or thymectomy
- HIV/AIDS
  - Most recent CD4:
  - Most recent viral load:
- Organ, bone marrow, stem cell transplant
- Other

### Kidneys
- Dialysis
- Kidney insufficiency
- Other

### Lungs
- Asthma
- Emphysema/COPD
- Other

### Musculoskeletal
- RA
- Psoriatic arthritis
- Other

### Neurologic/psychiatric
- Seizures or epilepsy
- Anxiety/depression
- History of Guillain-Barré
- Other

### Skin
- Psoriasis
- Other

### OB/GYN
- Pregnant: weeks/trimester
- Breastfeeding
- Possible pregnancy in next 3 months
- Other

### VACCINATION HISTORY
(Please bring all vaccination records to your appointment.)

<table>
<thead>
<tr>
<th>Immunization</th>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles/Mumps/Rubella</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polio</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Tetanus</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Typhoid</td>
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<td></td>
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<tr>
<td>Yellow Fever</td>
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<td></td>
<td></td>
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<tr>
<td>Japanese Encephalitis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Influenza</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:</td>
<td></td>
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</tr>
</tbody>
</table>

Have you ever had an adverse reaction to an immunization? | No | Yes |
|---------------------------------------------------------|----|----|
### CURRENT MEDICATIONS

**Prescription medications:** List all current prescription medications

<table>
<thead>
<tr>
<th>Medication</th>
<th>Reason for use/medical condition</th>
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<tbody>
<tr>
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</tbody>
</table>

**Non-prescription products:** List current over-the-counter, herbal, homeopathic products, vitamins, supplements, etc.

<table>
<thead>
<tr>
<th>Product</th>
<th>Reason for use/medical condition</th>
</tr>
</thead>
<tbody>
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</table>

### QUESTIONS/CONCERNS

Additional questions or concerns about your travel:

________________________________________________________________________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________
________________________________________________________________________________________________________
# CLINIC DOCUMENTATION FORM

(Clinician completes this form at time of appointment.)

<table>
<thead>
<tr>
<th>Name</th>
<th>DOB</th>
<th>Date</th>
</tr>
</thead>
</table>

## Itinerary

<table>
<thead>
<tr>
<th>Departure Date</th>
<th>Length of trip</th>
<th>Purpose of trip</th>
<th>Urban / Rural / Both</th>
</tr>
</thead>
</table>

## VACCINATION HISTORY (review with traveler)

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Date 1</th>
<th>Date 2</th>
<th>Date 3</th>
<th>Date 4</th>
<th>Date 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholera (oral)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis B</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hepatitis A/B</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Hib</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>HPV (indicate: 9-valent, 4 valent, or 2-valent)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immune globulin</td>
<td></td>
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<td></td>
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<tr>
<td>Influenza</td>
<td></td>
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<td></td>
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<tr>
<td>Japanese encephalitis (cell based; available since 2009)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Japanese encephalitis (mouse-brain; available pre-2009)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Measles/mumps/rubella</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal (quadrivalent conjugate)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Meningococcal (quadrivalent polysaccharide)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Meningococcal (monovalent B)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Pneumococcal conjugate (PCV13)</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Pneumococcal polysaccharide (PPSV23)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polio primary series</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polio adult booster (1 dose)</td>
<td></td>
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<tr>
<td>Rabies pre-exposure</td>
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<tr>
<td>Rabies post-exposure</td>
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<td></td>
</tr>
<tr>
<td>Rotavirus</td>
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<tr>
<td>TBE</td>
<td></td>
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<tr>
<td>Td series</td>
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<tr>
<td>Tdap</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Typhoid (IM)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Typhoid (oral)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varicella</td>
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<tr>
<td>Yellow Fever</td>
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<td></td>
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<tr>
<td>Zoster (shingles)</td>
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<td></td>
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<tr>
<td>Other:</td>
<td></td>
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</tr>
</tbody>
</table>
### MALARIA MEDICATION HISTORY

Antimalarials that the traveler has used in the past (check all that apply)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Drug</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Chloroquine</td>
<td>□ Mefloquine</td>
</tr>
<tr>
<td>□ Doxycycline</td>
<td>□ Coartem</td>
</tr>
<tr>
<td>□ Malarone or generic (atovaquone/proguanil)</td>
<td>□ Primaquine</td>
</tr>
</tbody>
</table>

Side effects experienced:  
______________________________________________________________________________

### TEACHING CHECKLIST

<table>
<thead>
<tr>
<th>Date done</th>
<th>Brief review</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Travax handouts given to the patient (check all that apply)

### VACCINE-PREVENTABLE DISEASES

- □ Cholera
- □ Hepatitis A
- □ Hepatitis B
- □ Herpes Zoster
- □ Human Papillomavirus
- □ Influenza
- □ Influenza Antivirals Handout
- □ Japanese Encephalitis
- □ Measles, Mumps, Rubella
- □ Meningococcal Meningitis
- □ Pneumococcal
- □ Polio
- □ Rabies
- □ Tetanus, Diphtheria, Pertussis
- □ Tick-Borne Encephalitis
- □ Typhoid Fever
- □ Varicella
- □ Yellow Fever

### HEALTH & SAFETY

- □ Air Travel
- □ Altitude Illness
- □ Cruise Ship Travel
- □ Food and Beverage Precautions
- □ Insect Precautions
- □ Traveler's Thrombosis
- □ Treating Water

**COUNTRY HANDOUTS:**  
______________________________________________________________________________

### OTHER INFECTIOUS DISEASES

- □ African Trypanosomiasis
- □ Avian Influenza
- □ Influenza Antivirals Handout
- □ Chikungunya
- □ Dengue
- □ Ebola Virus Disease
- □ Leishmaniasis
- □ Leptospirosis
- □ Malaria

### OTHER

- □ MERS Coronavirus
- □ Rickettsial Infections
- □ Schistosomiasis
- □ Sexually Transmitted Infections
- □ Tick-Borne Diseases
- □ Traveler's Diarrhea
- □ Tick-Borne Encephalitis

**ADDITIONAL NOTES:**  
______________________________________________________________________________

______________________________________________________________________________

Health care provider signature and printed name  
____________________________________________ / ________________________________  

Date  
____________________________________________ / ________________________________  

Page 2 of 5

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## VACCINE ADMINISTRATION RECORD

<table>
<thead>
<tr>
<th>Date</th>
<th>Vaccine</th>
<th>Dose</th>
<th>Lot #</th>
<th>Site given</th>
<th>VIS date</th>
<th>Signature of vaccine administrator</th>
</tr>
</thead>
<tbody>
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</table>

**PATIENT CONSENT:** I have read the written information given to me and I have discussed with my provider the benefits and risks of the vaccines noted above, which are required and/or recommended for my protection while traveling abroad. I have had a chance to ask questions, which were answered to my satisfaction. I request that these vaccines be given to me or to the person named below for whom I am authorized to make this request.

**Signature**

**Date**

**Relationship to patient:**

### FOLLOW UP VACCINATIONS NEEDED

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Date of Next Dose</th>
<th>Date of Next Dose</th>
<th>Date of Next Dose</th>
<th>Vaccine</th>
<th>Date of Next Dose</th>
<th>Date of Next Dose</th>
<th>Date of Next Dose</th>
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</tr>
</tbody>
</table>

**TB test 3 or more months after return**

**Other series to complete**

**Note:** Pharmacists may wish to set appointment refill reminders in the computer system.
### MEDICATIONS FOR CURRENT TRIP

<table>
<thead>
<tr>
<th>MEDICATIONS FOR CURRENT TRIP</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TRAVELER’S DIARRHEA - Treatment</strong></td>
<td></td>
</tr>
<tr>
<td>Azithromycin 500 mg</td>
<td>1 tablet taken QD x 3 days</td>
</tr>
<tr>
<td>Ciprofloxacin 500 mg</td>
<td>1 tablet taken BID x 3 days</td>
</tr>
<tr>
<td>Levofoxacin 500 mg</td>
<td>1 tablet taken QD x 3 days</td>
</tr>
<tr>
<td>Rifaximin</td>
<td>200 mg TID x 3 days</td>
</tr>
</tbody>
</table>

#### MALARIA - Prevention

<table>
<thead>
<tr>
<th>MEDICATIONS FOR CURRENT TRIP</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Atovaquone/proguanil (Malarone) 250 mg/100 mg</strong></td>
<td>4 tablets taken daily as a single dose x 3 days. Should be taken with food.</td>
</tr>
<tr>
<td><strong>Chloroquine phosphate 500 mg (300 mg base)</strong></td>
<td>1 tablet taken weekly starting 1 week before entering the malarious area, and then 1 tablet taken weekly for 4 weeks after leaving area. Should be taken with food.</td>
</tr>
<tr>
<td><strong>Mefloquine 250 mg (228 mg base)</strong></td>
<td>1 tablet taken weekly starting 2 weeks before entering the malarious area, and then 1 tablet taken weekly for 4 weeks after leaving area.</td>
</tr>
<tr>
<td><strong>Doxycycline 100 mg</strong></td>
<td>1 tablet taken QD x 3 days during the stay, and then 1 tablet taken QD for 4 weeks after leaving area.</td>
</tr>
<tr>
<td><strong>Primaquine (off-label for prevention) 52.6 mg (30 mg base)</strong></td>
<td>taken orally, once/day. Start 1 day before entering malarious area; continue daily during exposure and for 1 week after leaving the malarious area.</td>
</tr>
<tr>
<td><strong>Primaquine (relapse prevention) 52.6 mg (30 mg base)</strong></td>
<td>taken orally, once/day for 14 days.</td>
</tr>
</tbody>
</table>

#### MALARIA – Self-treatment

<table>
<thead>
<tr>
<th>MEDICATIONS FOR CURRENT TRIP</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Atovaquone/proguanil (Malarone) 250 mg/100 mg</strong></td>
<td>4 tablets taken daily as a single dose x 3 days. Should be taken with food.</td>
</tr>
<tr>
<td><strong>Artemether/lumefantrine (Coartem) 20 mg/120 mg</strong></td>
<td>4 tablets taken as a single dose, then 4 tablets 8 hours later, and then 4 tablets BID on days 2 and 3. Should be taken with food.</td>
</tr>
</tbody>
</table>

#### ALTITUDE ILLNESS

<table>
<thead>
<tr>
<th>MEDICATIONS FOR CURRENT TRIP</th>
<th>QTY</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acetazolamide</strong></td>
<td>1 tablet taken the day before ascent, 1 tablet BID taken each day during ascent, and then 1 tablet BID taken for 1-2 days after arrival at highest altitude.</td>
</tr>
<tr>
<td><strong>Dexamethasone</strong></td>
<td>8 mg initial dose followed by 4 mg q 6 hrs</td>
</tr>
<tr>
<td><strong>Nifedipine</strong></td>
<td>20 mg sustained release q 12 hrs</td>
</tr>
<tr>
<td><strong>Salmeterol</strong></td>
<td>205 ug (5 puffs) inhaled q12 hrs (adjunctive medication if known to be susceptible)</td>
</tr>
</tbody>
</table>
**MOTION SICKNESS - Prevention**

Transderm Scop, Transderm-V (Scopolamine) 1.5-mg patch: 1 patch applied to skin behind the ear 4 hours before antiemetic effect is needed. The patch may be left in place for 3 days.

**TYPHOID - Prevention**

Typhoid Vaccine Live Oral Ty21a: 1 capsule taken PO once daily for 4 alternate days (days 0, 2, 4, and 6). Should be taken 1 hour before meals with cold or lukewarm water.

**OTHER MEDICATIONS (Check)**

<table>
<thead>
<tr>
<th>Motion Sickness</th>
<th>Influenza</th>
<th>Over the counter</th>
<th>Acetaminophen</th>
<th>Aspirin</th>
<th>Ibuprofen</th>
<th>Loperamide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promethazine</td>
<td>Oseltamivir (Tamiflu)</td>
<td></td>
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<tr>
<td>Meclizine</td>
<td>Zanamivir (Relenza)</td>
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<tr>
<td>Dimenhydrinate</td>
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<tr>
<td>Diphenhydramine</td>
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</tr>
</tbody>
</table>

**Altitude**

- Sildenafil (Viagra)
- Tadalafil (Cialis)

**OTHER (Check)**

- Insect repellent
- Mosquito net
- Water purifier

Valid after provider signature and date are entered

<table>
<thead>
<tr>
<th>Provider (Print)</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>License #</th>
<th>NPI #</th>
</tr>
</thead>
</table>

For pharmacy travel clinics that may require primary care provider authorization for prescriptions, this form may be faxed back to the pharmacy. Fax number:
CASE STUDIES

The sample case studies below are for illustrative purposes only and are not intended to represent the current "standard of care." They are merely examples of how to assess travelers' needs and provide pre-travel recommendations based on those needs. They should not be taken as applicable to all travelers. Each traveler situation must be evaluated individually. Cases studies are also available to members of ISTM (see "Expert Opinions in Travel Medicine"). The Expert Opinions present a pre- or post-travel situation discussed by an invited ISTM member with expertise in that topic.

CASE 1: GOING HOME FOR A VISIT: MAKING THE IMMUNIZATION DECISION

The patient is a 37-year-old male who grew up in Ethiopia and has lived in the U.S. for about 12 years. He is leaving in 3½ weeks for a 2-month visit with his family, who live throughout Ethiopia. He will be staying in both urban and rural locations. The lifestyle of the family members is modest but not poor. He is not sure what he needs, but a friend told him to call a travel clinic. He brings no immunization history to the appointment and does not have a regular health care provider. He speaks some English.

There is little time before departure. Unfortunately, it is not unusual for patients to visit a travel clinic just prior to a trip. This often occurs because of lack of knowledge about the importance of preventive measures or may be due to an emergency trip for family illness or death.

Many patients seeking pre-travel care in travel clinics grew up in foreign countries, have lived in the countries to which they emigrated for several years, and occasionally return home to visit friends and family members. These patients pose unique problems for the travel medicine professional.

Even though this is a difficult scenario, the travel medicine professional must approach the patient as he or she would any other. A major obstacle may be language: despite moving to a new country, many immigrants continue to speak the mother tongue and do not develop a facility for their new language.

Medical history

Even with a translator, obtaining a medical history may be difficult because the names of the various diseases and immunizations do not translate easily. As much as possible, help the patient fill out a travel medicine questionnaire and to answer the following questions:

- Is the patient in good health? If not, what are the patient's health problems?
- Does he take any medications?
- Does he have any allergies to medications?
- Does he have any history of seizures, psychiatric problems, or heart conduction abnormalities? (This is a challenge when working with patients who are non-native language speakers.)

This patient states he has no health problems, is not taking any medications, and has no allergies. He has no history of seizures, psychiatric problems, or heart conditions.

Immunization and disease history

Immunization history (particularly those received in childhood) and disease history are often not known, and patients might be vague about the vaccines that have been received. Ask the following questions, rephrasing as simply as possible for best translation and understanding.

- Did he receive any immunizations while growing up?
- Did his school give medications and immunizations?
- Did he receive any immunizations prior to arrival in the U.S.?
- Did he receive any immunizations when he immigrated?
- If the patient is sure he had tetanus shots and polio vaccine growing up, when was his last Td? Has he ever had 1 dose of Tdap?
- Has he had any emergency visits to the hospital for lacerations? (If so, it is possible that a dose of tetanus/diphtheria was given.)
- Has he returned to Ethiopia before or traveled to other foreign countries, and did he have any immunizations before those trips? Does he have an immunization record book anywhere? (Show him a WHO International Certificate of Vaccination booklet.)
- Did he have the usual childhood diseases (e.g., measles, mumps, rubella, chickenpox)? It is often necessary to describe the diseases, including manual or drawn descriptions because of difficulties with translation.

See table below for recommendations based on this traveler’s immunization history and destination.
### Recommendations for this traveler

**Immunizations**

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Recommended</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholera</td>
<td>No</td>
<td>Vaccine not available in U.S. and is only recommended for aid and refuge workers in this country.</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>No</td>
<td>Probably unnecessary; likely immune due to childhood exposure. Could offer 1 dose hepatitis A vaccine (or IG if available) before travel, or perform antibody screening.</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Yes</td>
<td>While the normal schedule (0, 1, 6 months) cannot be used due to time constraints, an acceptable accelerated schedule (0, 7, 21 days + return in 6 months for booster dose) can be used for persons traveling to endemic areas on short notice.</td>
</tr>
<tr>
<td>Influenza</td>
<td>Yes</td>
<td>Recommended for all travelers. He has not received influenza vaccine this year.</td>
</tr>
<tr>
<td>MMR</td>
<td>No</td>
<td>States he had these diseases as a child.</td>
</tr>
<tr>
<td>Meningococcal</td>
<td>Yes</td>
<td>Recommended for all travelers to Ethiopia throughout the year, especially if prolonged contact with the local populace is anticipated.</td>
</tr>
<tr>
<td>Polio</td>
<td>Yes (booster)</td>
<td>States he has had primary series as a child but not an adult dose.</td>
</tr>
<tr>
<td>Vaccination</td>
<td>Requirement</td>
<td>Reason</td>
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<tr>
<td>Rabies preexposure series</td>
<td>Yes</td>
<td>Risk of rabies is presumed to occur in most parts of the country; patient will be traveling widely over a 2-month time period, so vaccine is indicated.</td>
</tr>
<tr>
<td>Td/Tdap</td>
<td>Yes (Tdap)</td>
<td>States he completed primary series as a child but has not had a dose of Tdap.</td>
</tr>
<tr>
<td>Typhoid</td>
<td>Yes</td>
<td>Recommended for all travelers on this itinerary. May be preferable to give the injectable vaccine due to potential language difficulties explaining dosing for oral vaccine.</td>
</tr>
<tr>
<td>Varicella</td>
<td>No</td>
<td>States he had chickenpox as a child.</td>
</tr>
<tr>
<td>Yellow fever</td>
<td>Yes</td>
<td>Recommended for health protection of all travelers aged 9 months and older for all areas (including Addis Ababa) except the provinces of Afar and Somali. This patient will be traveling widely so vaccine is indicated.</td>
</tr>
</tbody>
</table>

**Malaria**

Extremely high transmission occurs throughout the year, predominantly *P. falciparum*.

- Evening and nighttime insect precautions are essential.
- Provide Rx for mefloquine, atovaquone/proguanil (A/P), or doxycycline for malaria prophylaxis; encourage traveler to carry enough antimalarials for entire trip, as effective drugs may not be available.
- Because this traveler is staying longer than 3 weeks, consider providing a treatment dose of co-artemether or atovaquone/proguanil (if A/P is not chosen for prophylaxis), in case the prophylactic drug fails; instruct traveler that treatment dose should be administered under the supervision of a qualified local health care provider.

**Traveler’s diarrhea**

High risk exists throughout the country.

- Food and beverage precautions are essential.
- Traveler should carry loperamide and/or be given Rx for ciprofloxacin for presumptive self-treatment.

**Other recommendations**

**Tuberculosis:** Ethiopia has a high incidence of TB. Since this traveler is staying for > 1 month, he should receive a pre-departure PPD skin test and be instructed to avoid crowded public places and public transportation, if possible.

**Dengue:** Low risk. Daytime insect precautions are recommended.

**Leishmaniasis** occurs. Evening and nighttime insect precautions are recommended.

**Schistosomiasis** presents significant risk. Avoid freshwater exposure.

**Medical evacuation:** Adequate evacuation insurance coverage is a high priority. In the event of a serious medical condition, medical evacuation to Nairobi, Kenya, is likely to be necessary.

**Traveler education**

Education of the traveler returning to his home country is especially important, because he is at extremely high risk for health problems.

- Family in his home country will not be taking antimalarial medication, so it is important to explain that any immunity he may have developed while growing up will have been lost during the years in the U.S. He should be advised not to stop the medication, even if family and/or friends try to pressure him.
- Mosquito precautions are essential. The importance of using insect repellents, mosquito nets (if available), and protective clothing should be stressed.
Great care should be taken with food and water concerns. The patient should be reminded that his immunity to the local bacteria has also waned while he has been away. He should drink only safe beverages (such as boiled, treated, or pre-bottled, carbonated water) and stick to hot, cooked foods. Tactfully discuss the difficulties in choosing foods while eating with friends and family.

Explain how to deal with illness abroad, what to do if he is ill or if bitten by a dog, and review self-treatment for diarrhea and malaria.

**Conclusion**

- Methodically work through the patient's history, gathering any data possible and deciding on the best solution given the patient's desires and financial capability.
- Remember that many people who grew up in an area endemic for hepatitis A or B may have positive antibody tests and may not need immunization.
- Education of the traveler returning home to a developing country is one of the biggest challenges of the travel health advisor. It is often not possible for the traveler to adhere to the usual guidelines given to the typical tourist. Giving too much information, especially in the form of impossible "do's and don'ts" will overwhelm the traveler and make him far less likely to adhere to the more important recommendations. Stress the most crucial items and the fact that a febrile illness acquired while traveling or on return to the U.S. requires immediate medical evaluation.

**CASE 2: THE TRAVELER WHO DOESN'T KNOW WHERE HE IS GOING**

Dave is a 25-year-old male with plans to travel for "as long and as far as my savings account will get me." He just graduated from law school and wants to "see the world before I settle down and work 80 hours a week." He thinks he needs "some shots and some antibiotics" and plans to leave next week.

All travel health professionals eventually encounter the challenge of the traveler with no set itinerary. Travelers such as Dave seek care in many different travel health settings. College health clinics often see students with open-ended travel plans. Certain well-recognized occupational groups, including the international press, disaster relief workers, and global couriers, often travel without definitive itineraries. The newly married and the newly retired are others who may travel with some spontaneity built into their trip plans.

How can the clinician best prepare these travelers for safe and healthy, yet not-fully-defined, journeys?

At the outset, the clinician may be somewhat overwhelmed by the challenge of seemingly preparing a patient for travel to potentially anywhere or everywhere. In reality, this is rarely the case. Begin by helping this client better define his clinical expectations and needs and clarify his travel plans.

1. Does the traveler really understand the potential hazards of travel and the scope of travel health preparation? Does he understand that health and safety risks increase with trip duration? Dave had read a little about hepatitis but knew nothing about vector-borne disease, food and water sanitation, sexually transmitted diseases, the high incidence of accidents in travel, or freshwater hazards.
2. Goals and limitations of pre-trip care: Does the client seek maximum preparation without consideration for time or cost? Or does he have specific goals and/or limitations for the intervention, no matter where he finally chooses to travel? Can he delay the trip? Dave thought 4 days of preparation time would be plenty and was visibly shocked to learn the cost of some common travel vaccines.
3. Does this client have any special travel health needs or issues? Disabilities? Chronic or unstable medical or dental problems that may have an impact on travel? Allergies to travel health medications? Special at-risk travel plans, such as scuba diving, mountain climbing, etc.? Dave was healthy and took no regular medications. He did have questions about preventing AIDS while traveling. He planned to try lots of new things while traveling, including bungee jumping and parasailing.
4. What previous travel health care has this client received? What is his immunization history? What experience does he have with travel health medications? What is his level of self-care knowledge, including first aid and accessing medical resources abroad?
5. By now, the client should be able to better define his trip. Is it still as open-ended as first described? As part of the consultation service, he has already learned more about travel hazards and travel health preparation. He most likely recognizes the importance of better defining his journey. If not, it may be necessary to continue to ask questions. For example, employees who say they need to leave on a moment's notice to "fly anywhere" actually may work for companies only serving the Western Hemisphere. Or retirees who want to "see the world" may hate the cold and have no plans to set foot in the northern latitudes. Even reporters who cover the world's "hot spots" usually can predict their next few assignments.

With the history complete, it is necessary to know answers to these classic assessment questions to best prepare the client:

- What is the final itinerary?
- In terms of priority, what are the highest health risk destinations and activities of this trip?
- Will any "required" vaccines be necessary, such as yellow fever or meningitis?
Can the risk of malaria be eliminated? Which type and how much malaria medication will he need?
What is the general and potential risk level of accommodations and types of transport?
Is the client a risk-taker?
Will he travel solo or with others?
Do the clinic and the client have the resources (time, funds, vaccine supply, etc.) to fully prepare before departure?
What other services will he need before departure (lab work, dental care, etc.)?
What health resources may he need during his trip: services, insurance, Internet resources?
What will be the contents of his travel medical kit?
How does this client learn best: counseling or reading?

After completing the pre-trip assessment and doing some more thinking about his trip, Dave decided he would visit Australia, Asia, and the Pacific Islands, to include Japan, China, Malaysia, Thailand, Vietnam, French Polynesia, Papua New Guinea, and Guam; while traveling, he also decided to visit India. He made the personal choice to forgo some spontaneity to maximize his health and safety. He asked to read everything available about potential health issues for this trip.

Recommendations for this traveler

**Immunizations**

- **Vaccines:** Provide required and recommended vaccines appropriate to this traveler and destinations. *(See table below for vaccine recommendations.)* Base recommendations on proposed travel areas with the highest risks, projected duration of travel, and expected travel style, as well as immunization history. Discuss the advantages of "pre-loading" immunizations when future needs are not always known or predictable. Help him make decisions about rabies, Japanese encephalitis, hepatitis B, tetanus, pertussis, and diphtheria, typhoid, and cholera using up-to-date resources to ascertain risk.
- **Finances:** As needed, explore ways to obtain all recommended vaccines if money is an issue, as is often the case in college settings. By contrast, in the corporate setting, it is customary to maximally prepare employees. Factor in any future travel plans when addressing this issue. Immunizations have 3 costs: vaccine cost, visit charges, and the value of client time.
- **Time constraints:** Decide with the client if he can complete the recommended series prior to departure. Consult accelerated schedules as needed. Consider directing the client to services abroad if additional immunizations are indicated.
- **Document:** Thoroughly document all care, including full immunization details, such as manufacturer, because this client may need to seek care abroad.
- **Important:** Educate the client about the need to verify immunization requirements and recommendations if he adds destinations. This may be critical if he has elected not to receive all recommended immunizations recommended.

Dave had adequate funds for a full set of immunizations and wanted to get everything. He chose to postpone his trip by a month and complete his immunizations.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Recommended</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholera</td>
<td>No</td>
<td>Vaccine not available in U.S.; recommended only for aid and refugee workers.</td>
</tr>
</tbody>
</table>
| Hepatitis A | Yes         | Recommended for all travelers.  
Give Hep A/B on days 0, 7, and 21. Instruct traveler to return in 12 months for booster dose.  
While the normal schedule cannot be used due to time constraints, an acceptable accelerated schedule to protect against hepatitis B (as well as hepatitis A) can be used for persons traveling to endemic areas on short notice. |
| Hepatitis B | Yes         | See above.                                    |
| Influenza   | Yes         | Recommended for all travelers. He has not had influenza vaccine this season. |
Japanese encephalitis | Yes | Risk exists in several of his potential destinations. Give 2 doses (days 0 and 28). Instruct traveler that the second dose will not be able to be given 1 week before possible exposure, so strict insect precautions are necessary.

MMR | No | Had 2 doses MMR as a child. (Childhood immunization records provided by mother.)

Meningococcal | No | Not in risk area.

Polio | Yes (booster) | Had primary series as a child, but has not had a 1-time adult booster.

Rabies preexposure series | Yes | Risk exists in several potential destinations (e.g., Thailand, China, Vietnam, etc.). Since traveler does not know if he will always be within 24 hours of reliable source of HRIG and vaccine, he opts to receive rabies preexposure series for maximum preparedness.

Td/Tdap | Yes (Tdap) | Had primary series. Has not had 1 dose of Tdap.

TBE | No | Only recommended for travelers with prolonged stays participating in outdoor activities in certain areas of China and Japan. Traveler instructed to practice tick precautions.

Typhoid | Yes | Recommended for all travelers to several of his potential destinations.

Varicella | No | Had chickenpox as a child.

Yellow fever | No | Not required for entry or recommended for protection on this itinerary.

Malaria

Chemoprophylaxis choice
- What are the malaria risks of the possible destinations in this more open itinerary?
  - Risk for both *P. vivax* and *P. falciparum* at potential destinations.
- Are there areas with resistant strains?
  - Mefloquine resistance exists in Thailand and Vietnam.
- Does the client have any contraindications to the use of standard antimalarials?
  - No contraindications.
- Be sure the client knows the potential side effects of any malaria prophylaxis.

Because he may travel to areas of mefloquine resistance, antimalarials recommended were doxycycline or atovaquone/proguanil (A/P). Dave chose to use doxycycline due to the high cost of A/P for a long trip.

Chemoprophylaxis supply:
- Address the issue of medication purchase.
- Discuss the pros and cons of waiting to buy medications abroad.
  - Pros: The medication is purchased only if needed, eliminating the need for storage. Medication prices vary between countries and may be less expensive abroad.
  - Cons: The medication may not be available when needed, quality may be questionable, or language conflicts may occur.
- Dave chose to purchase enough antimalarial to last for the entire trip and was also given names of clinics where he might obtain additional supplies, if needed.

Medication schedule and compliance:
- With an unplanned itinerary, will this client need to take medication continuously or intermittently?
• How well does the client comply with medication schedules?
• Consider providing this client with a calendar to plan his medication intake.
• Dave chose to use the drug continuously while in Asia, and, with the resource list provided, he planned to review malaria issues at clinics in Nepal and Australia.

Review mosquito precautions:
• Will he bring his own bed netting?
• How much repellent is he able to carry?
• Stress the importance of not leaving behind items necessary for health and safety.
• Also discuss ways to obtain these supplies in the regions he plans to visit.

Self-treatment:
• Educate the client to recognize the risk of malaria and the need to seek medical treatment quickly if symptoms occur.
• Unless contraindicated, provide this client with a course of self-treatment of malaria ("stand-by" treatment) and detailed instructions on how and when to self-treat.
• Provide resources for malaria care abroad.
• Dave was supplied with A/P for self-treatment, along with instructions on how and when it should be used.

Traveler’s diarrhea
Risk exists in most of his potential destinations.
• Food and beverage precautions are essential in order to reduce chance of illness.
• Dave will carry loperamide and was given Rx for both ciprofloxacin and azithromycin (for coverage in areas of quinolone resistance, such as Thailand and India) for presumptive self-treatment of diarrhea if it occurs, as well as instructions on use.
  o Because of the increasing incidence of quinolone-resistant *campylobacter* in many countries, azithromycin should be started in all patients who have no response at all to a quinolone in 36-48 hours. In Thailand and India and any other country with known high rates of quinolone resistance, azithromycin should be the first line therapy.

Other recommendations
Recommend the usual guidelines for any travel: up-to-date dental care, evaluation for any acute problems, review of any chronic medical problems, and laboratory testing as indicated. Dave had avoided a dentist for 4 years and required 3 visits to undo the damage. Review the client's health insurance and need for evacuation insurance. He spent some of his trip money to purchase his first health care policy but decided not to get evacuation coverage.

Tuberculosis is common in developing countries. Consider pre-departure PPD skin test. Traveler should avoid crowded public places and public transportation, if possible.

Dengue fever presents a risk, especially in areas of French Polynesia, Malaysia, Papua New Guinea, Thailand, Australia, and Vietnam. Daytime insect precautions are recommended.

Chikungunya presents risk in parts of Asia, Africa, the Caribbean, and the Americas. Daytime insect precautions are recommended.

Leishmaniasis presents risk in parts of Asia. Daytime and nighttime insect precautions are recommended.

Monkey bites occur among tourists. Monkeys may transmit a number of diseases, including rabies and herpes B. Avoid feeding monkeys; if bitten, immediately cleanse bites thoroughly with soap or detergent under running water for at least 15 minutes, and seek urgent medical consultation.

Medical kit: Anticipate needs for self-care while traveling. Encourage Dave to prepare a travel medicine kit that maximizes his ability to safely self-treat while traveling but doesn't overburden his luggage. Include a first aid pamphlet, and indicate destinations where he can safely refill his kit.

• Assess the need for additional antibiotics (e.g., for respiratory infections, skin infections, and genital-urinary problems). Dave denied all allergies and took ciprofloxacin and azithromycin in addition to the standard list of travel kit items. Discuss proper transport and safe storage of medications.
Dave doubled the amount of sunscreen he had originally planned to take and added 2 packets of oral rehydration solution (ORS) to his kit. He also brought an ample supply of his usual brand of condoms. Since Dave was planning to travel solo he purchased a first aid book and asked lots of questions about self-care. He carried the International Society of Travel Medicine listings with him plus some embassy phone numbers.

**Medical care:** Provide appropriate resources for care and questions abroad. Dave made a last-minute decision to bring a laptop computer and learned how to access a number of travel health websites for future use.

**Traveler education**

- **Updated information:** Especially for this type of traveler, reiterate the changing nature of travel health risks and recommendations. Encourage the client to check in with U.S. consulates and get regular updates on health conditions and travelers' advisories for the next destination.
- **Paper trail:** For safety's sake, remind the traveler to always keep someone at home informed of his whereabouts and next destination. Recommend that he leave copies of all important papers with that contact person to allow for emergency replacement.
- **Post-travel:** Recommend a post-trip assessment visit. Advise the client to seek care upon return if s/he is symptomatic (especially if s/he has a fever) or otherwise wait for 6 weeks so appropriate laboratory tests (such as schistosomiasis screens) can be performed accurately.
- **Emphasize that malaria may occur up to 1 year or more after travel, particularly in the first 2 months.** If Dave develops a fever, he should seek medical attention immediately and request blood films to rule out malaria.

Dave added India to his itinerary while traveling, but knew from his consultation to update his pre-travel care before flying into Madras. Dave was sick a few times and used just about everything in his medical kit, but his post-trip exam at 7 weeks was normal.

**Conclusion**

The client with an open-ended itinerary poses a special challenge. Key elements for successful preparation of this client include: up-to-date travel health references, knowledge of travel health and other medical resources worldwide, adequate preparation time, a client's willingness and ability to engage in self-care education, and flexibility for all involved.

**CASE 3: A FAMILY AFFAIR: COORDINATING CARE DELIVERY**

A family of 5 is going on a 2-week vacation to Venezuela, leaving 3 months from today. The father grew up in Caracas, where they will be staying with his well-to-do family. However, they will also be traveling to rural areas in the southern part of the country. In addition to the parents, there are 3 children, aged 10 years, 4 years, and 18 months. The first thing the baby does is to toddle over to the computer and push the button to restart the system. No one is listening very well.

After determining travel destination, style of travel, departure date, and length of the trip, review the medical and immunization histories, including current medications and allergies, and discuss the plan for immunizations. In this situation, the patients were all established members of our health care plan so their immunization histories were readily accessible. All 5 clients were in good health, took no regular medications, and had no allergies. The mother was not pregnant.

**Immunization and disease history**

<table>
<thead>
<tr>
<th></th>
<th>Td/Tdap DTP/DtaP</th>
<th>Last dose Td/Tdap/DtaP</th>
<th>Hib</th>
<th>Polio</th>
<th>MMR</th>
<th>Varicella</th>
<th>HepB</th>
<th>Influenza</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Father</strong></td>
<td>Had Td series, including 1 dose Tdap</td>
<td>Within 3 yrs</td>
<td>No</td>
<td>Had series</td>
<td>Had diseases</td>
<td>Had disease</td>
<td>No</td>
<td>Had vaccine this season</td>
</tr>
<tr>
<td><strong>Mother</strong></td>
<td>Had Td series, including 1 dose Tdap</td>
<td>Within 2 yrs</td>
<td>No</td>
<td>Had series</td>
<td>Had 2 doses MMR</td>
<td>Had disease</td>
<td>No</td>
<td>Had vaccine this season</td>
</tr>
<tr>
<td><strong>10-year-old</strong></td>
<td>Had DtaP series</td>
<td>5 yrs ago</td>
<td>No</td>
<td>Had series</td>
<td>MMR 2 doses</td>
<td>Had disease</td>
<td>Had series</td>
<td>Had vaccine this season</td>
</tr>
</tbody>
</table>

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## Immunizations

Assess need to update routine immunizations or for necessary travel vaccines (*see table below*).

### Routine vaccines

<table>
<thead>
<tr>
<th>Age</th>
<th>Immunizations Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Father</td>
<td>No routine immunizations needed.</td>
</tr>
<tr>
<td>Mother</td>
<td>No routine immunizations needed.</td>
</tr>
<tr>
<td>10-year-old</td>
<td>Consider giving adolescent Tdap dose (routinely recommended at age 11-12 yrs).</td>
</tr>
<tr>
<td>4-year-old</td>
<td>Give DtaP (4-6 year booster), Hib (booster), and MMR #2 before leaving.</td>
</tr>
<tr>
<td>18-month-old</td>
<td>Give MMR #2; <em>see below for hepatitis A</em>. Consider accelerating VAR #2. No other routine immunizations are indicated, and it is too early for DtaP 4-6 year booster.</td>
</tr>
</tbody>
</table>

### Travel vaccines

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Recommended?</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hepatitis A</td>
<td>Yes – for all</td>
<td>No one in the family has had this vaccine. Recommended for all since they probably will travel again and will want the long-term protection. In addition, hepatitis A is a routine vaccination for young children, with first dose usually given at age 12-15 months. Give first dose prior to travel, and instruct family to return for a second dose in 6 months.</td>
</tr>
<tr>
<td>Influenza</td>
<td>No</td>
<td>All family members have received this season’s vaccine, which is the same as the vaccine for the Southern Hemisphere.</td>
</tr>
<tr>
<td>Rabies</td>
<td>Discuss with parents</td>
<td>Rabies is a risk, particularly for children. Discuss risk and options, including vaccination (including cost) and avoidance behaviors. (Prioritization of vaccinations may be necessary when costs are prohibitive.)</td>
</tr>
<tr>
<td>Typhoid</td>
<td>Optional</td>
<td>If food preparation will be closely monitored, the parents may choose to decline this vaccine. If the vaccine is desired, the parents and the 10-year-old could take the oral typhoid vaccine (a series of 4 capsules) or a single dose of the injectable typhoid vaccine; the 4-year-old would be given a dose of injectable typhoid vaccine. The baby is too young to receive</td>
</tr>
</tbody>
</table>
typhoid vaccine; careful food and beverage precautions should be employed.

<table>
<thead>
<tr>
<th>Vaccine</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varicella</td>
<td>Consider giving second dose to 18-month-old</td>
</tr>
<tr>
<td></td>
<td>Second dose may be given 3 months after first dose.</td>
</tr>
<tr>
<td>Yellow fever</td>
<td>Yes – for all</td>
</tr>
<tr>
<td></td>
<td>Recommended for health protection when traveling in rural risk areas in the southern part of the country.</td>
</tr>
</tbody>
</table>

**International Certificate of Vaccination or Prophylaxis:** Appointments with families take a great deal of time on the part of the consultant, not the least of which is completing the *International Certificate of Vaccination or Prophylaxis*. At this point, all 5 family members may be anxious to leave, so if it is possible mail the certificates to them or have them return to pick up the certificates later.

**Malaria**

Malaria, predominantly *P. vivax*, is a risk, especially in the southern part of the country and rural areas of other locations.

- Mefloquine or atovaquone/proguanil (A/P) can be prescribed for malaria chemoprophylaxis, depending on final travel plans for in-country rural excursions.
  - While doxycycline is protective, it cannot be used in children < 8 years of age.
  - Choice of drug can be left to the parents to decide. Mefloquine must be started 2-3 weeks before entering malarious area but is only taken weekly; A/P can be started the day before entering malarious area but requires daily dosing and is more expensive. For the children, the dose will depend on their weight. *(See the package insert or the Shoreland malaria article for dosing.)*
- If they will assuredly not be in rural risk areas, mosquito precautions would be recommended and no Rx.
- Travelers should be instructed to seek immediate medical attention for fever or flu-like illness within 3 months after travel in a malaria risk area. Include mention of travel history.

**Traveler's diarrhea**

Except for deluxe accommodations, high risk exists everywhere. Offer ciprofloxacin to the parents for self-treatment of traveler's diarrhea. If the parents ask about a prescription for the children, point out the importance of oral rehydration and offer azithromycin for the children (drug of choice for TD treatment in children).

**Other recommendations**

**Dengue fever** presents significant risk in urban and rural areas, including in Caracas. Daytime insect precautions are recommended.

**Leishmaniasis** occurs throughout the country. Daytime and nighttime insect precautions are recommended.

**Chagas’ disease** occurs in rural areas; risk to travelers is unknown but is thought to be negligible. Avoid overnight stays in houses constructed of mud, adobe brick, or palm thatch.

**Schistosomiasis** presents significant risk in focal areas of Aragua, Carabobo, and Vargas states. Travelers should avoid freshwater exposure in these areas.

**Marine hazards** may include jellyfish (often causing sea bather’s eruption), coral, and sea urchins. Dangerous (potentially deadly) jellyfish are present year-round, but particularly during the rainy season. Children are especially at risk, and adults wading, launching boats, or fishing.

**Traveler education**

Since the parents may be preoccupied with the children, educating them about travel health issues will be difficult. It may be advisable to lend an educational DVD to the parents, if available, or have 1 parent remain in the office while the rest of the
family stays in the waiting room. Having a quiet environment is important when discussing complicated instructions for food and water concerns, traveler's diarrhea, mosquito precautions, prescriptions, and other trip-related information.

Emphasize that malaria may occur up to 1 year or more after travel, particularly in the first 2 months. If 1 of the family members develops a fever, he or she should seek medical attention immediately and request blood films to rule out malaria.

Conclusion

- Make sure the parents know that the appointment will take a long time so waiting does not frustrate them. Suggest they bring along toys or games to occupy the children. In some cases, they may want to bring a babysitter. Consider asking 1 of the parents to set up an appointment to come in alone to provide the patient histories before bringing in the whole family.
- Gather the immunization histories before the appointment.
- Plan a clear, organized education session, referring parents to written materials that they can review later.
- Emphasize the important things: mosquito precautions, taking malaria medication as directed, seriousness of rabies exposure, safety issues, and food and water precautions. With so many family members, a vacation can be ruined if anyone has health problems on the trip.
- Families traveling with children may want to know what signs and symptoms should prompt them to seek medical care while abroad. It may be helpful to have printed information on this subject specifically regarding infants and children.
- Prioritization of immunizations may be necessary when cost is an issue.