

International Travel with Children: Tips for Physicians and Families

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Introduction

For a variety of political and economic reasons, opportunities for childhood travel outside the United States have increased dramatically. Expatriation of employees and their families to global markets, deployment of families who have children for military or humanitarian aid purposes, foreign adoption, return of recent immigrants for visits to their countries of origin, and increased ease of leisure travel in areas previously “off the beaten path” have contributed to opportunities for international travel with children.

Often, the first source of information for families that include children who are considering international travel is their pediatrician or other primary care practitioner. The practitioner may be asked to help plan for anticipated and unanticipated health-care needs abroad, to provide information about the prevention of infectious diseases and other health problems specific to certain destinations, and to assist in planning for routine health care in areas where politics and health-care funding are different from those in the United States. Additionally, the health-care practitioner may see patients who recently have traveled abroad, who have immigrated to this country, or who are here for a prolonged stay. A pediatrician's familiarity with the resources available and current recommendations about international travel allows for helpful guidance to the family.

Types of International Travel and Available Resources

International travel with children is likely to fall into two general categories: 1) short-term travel for leisure or adoption and 2) expatriation for parental career purposes (which may last for months or years). For the leisure traveler, *Lonely Planet Travel Guides* or a local travel agent can offer suggestions for lodging and dining. For the expatriate, the family's sponsoring organization often is invaluable, providing names of other expatriated employees and perhaps providing for a visit prior to travel so housing, schooling, and health care can be arranged. International groups for expatriates (eg, Federation of American Women's Clubs Overseas) are abundant, often offer Web sites and orientations in host countries for American families that have children (www.aca.ch), and frequently are a source of much useful information.

For both groups of international travelers, the Centers for Disease Control and Prevention (CDC) Web site (www.cdc.gov) is invaluable to the physician and family. This Web site provides up-to-date information about travel hazards, immunization recommendations, and precautions for specific travel destinations (such as malaria prophylaxis). The United States State Department (http://travel.state.gov/travel/tips/regional/regional_1178.html) can provide information about areas to be avoided because of civil unrest. Table 1 lists many helpful Web sites. For those practitioners and families who are not facile with or who do not have access to the Internet, contacting the local or state health department by phone is an alternative.

Pretrip Planning

Gathering Documents and Arranging for Medical Care

As a part of the travel planning process, parents should gather necessary documentation, such as copies of birth certificates and passports, childhood immunization records, and a list of medicines with their *generic* names (medications often are marketed under different trade names in different countries). If the travel is likely to be for an extended period of time, complete duplicate copies of the child's medical and dental records may be necessary

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Table 1. Web Site Resources for Practitioners and Parents

American Academy of Pediatrics, Fellowship Directory	www.aap.org
American Board of Pediatrics	www.abp.org
American Red Cross First Aid Handbook	www.redcross.org
American Citizens Abroad	www.aca.ch
Association of Tropical Medicine and Hygiene	www.astmh.org/clinics/clinindex.html
Association of Americans Resident Overseas	www.aaro.org
Centers for Disease Control and Prevention	www.cdc.gov/travel/camerica.htm
Federation of American Women's Clubs Overseas	www.fawco.org
International and Continental Pediatric Societies	www.il-st-acad-sci.org/health/pedsocs_i.html
International Association for Medical Assistance to Travelers	www.iamat.org
International Diabetes Foundation	www.idf.org
International Pediatric Association	www.ipa-world.org
International Society for Travel Medicine	www.istm.org
Lonely Planet Publications	www.lonelyplanet.com
Travel Clinic Directory, American Society of Tropical Medicine and Hygiene	www.astmh.org/publications/clinics.cfm
Travel Medicine Providers	www.tripprep.com/scripts/main/topframe.set.asp?DocID=tmp
United States Department of State: "Services and Information for American Citizens Abroad"	http://travel.state.gov/travel/tips/regional/regional_1178.html
Virtual Hospital	www.vh.org
World Health Organization: general travel, vaccines, immunizations, and biologicals	www.who.org

and should be packed in both carry-on and checked luggage, in the event that immediate availability en route is required.

Children who have chronic medical conditions, especially those whose medical conditions may be exacerbated by stress or unfamiliar activity, should have ready access to a pediatrician or family physician on arrival in the host country. A new clinician should be identified prior to departure with the help of the child's regular physician. Sources of international health care include the International Pediatric Association (www.ipa-world.org), the list of American Academy of Pediatrics fellows overseas (AAP Fellowship Directory), the American Board of Pediatrics Online Directory (www.abp.org), and the Primary Care Internet Guide (www.uib.no/isf/guide/family.htm). Subspecialty care can be arranged through contacts with domestic subspecialists, through international subspecialty societies (http://www.il-st-acad-sci.org/health/pedsocs_i.html), or by contacting pediatric departments of medical schools in the host country. Online resources for individuals traveling with specific disabilities (eg, Virtual Hospital [www.vh.org] and others) also may be useful.

An appointment at a travel medicine clinic or an international adoption clinic, depending on the circumstances, may be recommended to review travel destination needs, especially for families traveling to developing

areas. Many children's hospitals have Web sites that can be accessed for these types of clinics, and lists are available from the CDC Web site and the Institute of Travel Medicine (www.istm.org). Parents adopting children from outside the United States should consider the services of an adoption clinic specializing in such care, which may be able to provide useful planning information, especially regarding risk for infectious diseases. The CDC Web site also provides information about the legal requirements for documenting the health and vaccination status of children adopted outside the United States.

Although parents may have many questions about endemic and epidemic diseases in the host country (especially for preventable and treatable ones such as malaria), the leading causes of death outside the United States are due to illnesses for which American children are routinely immunized, including *Haemophilus influenza* type b, measles, pneumococcal disease, and chickenpox. It is imperative to ensure that a soon-to-be-traveling child's United States immunization status is current. Equally important is accessing destination-specific information for additional immunization or prophylaxis measures. Specifically, the parent and physician should seek information about malaria, cholera, dengue fever, typhoid, and other tropical diseases from the CDC (www.cdc.gov), travel medicine clinics, or country-specific publications or Web sites.

Special attention must be paid to patterns of malarial drug sensitivity and to ensuring that palatable formulations of medications, such as chloroquine and mefloquine, are obtained well in advance of departure. The CDC Web site provides a list of specific medication recommendations for malaria prophylaxis in children based on age and underlying medical condition (www.cdc.gov/travel/mal_kids_pub.htm); they recommend that medications for children *always* be purchased in the United States. For small children, it may be necessary to contact a compounding pharmacy for a syrup preparation well in advance of travel.

Teenagers and college-age young adults often travel independently or with school or community groups. Parents of these travelers can plan in advance to assist their children should emergency needs arise. They should ask their domestic physicians for references for pediatric care in a foreign country before travel begins. Parents may wish to consider an appointment with a travel medicine clinic prior to departure to ensure that immunization and prophylaxis arrangements for their child have been met (see references). Ideally, parents also should ensure that their own travel documents (passports and visas), immunization requirements, and medical needs are current in the unlikely event they are required to travel to the child's destination to arrange or assist with urgent issues. Parents can ensure that letters with contact information for the child's domestic pediatrician and a description of the child's medical needs, including full details about the medical condition of children who regularly take medication or have ongoing medical needs, are in the hands of the traveling chaperones.

Teens traveling to the United States as exchange students or working as au pairs usually carry their medical forms and immunization documents with them, but host families may want to interview the teens or contact their parents on arrival to the United States to review any special needs. A "get-acquainted visit" with a physician may be a good idea for teens staying for more than a few weeks; the university health service where they are enrolled or the resources available to au pairs and exchange students via the sponsoring agency can be referenced.

Packing for the Trip

Most parents are accustomed to packing "comfort" items for their children (toys, games, snacks, and juice boxes); including these items for the initial portion of the trip can make the travel easier. Some items taken for granted in the United States or Western Europe (eg, disposable diapers, prepackaged baby wipes) may be difficult to procure or exorbitantly expensive in rural or

less-developed areas; alternatives for these types of items should be considered.

Medications and medical supplies such as asthma inhalers, insulin syringes, and glucometer strips can be divided between carry-on luggage and packed bags. Some items typically recommended for a first aid kit may *not* be carried on aircraft due to airline safety regulations; these items must be packed in checked baggage (Table 2). A signed letter from each family member's physician describing the diagnosis and need for each medication may expedite immigration and customs queries. Some durable medical equipment could be subject to confiscation or payment of a "duty" in host country currency if importation for profit is suspected, even if the item is accompanied by a physician's statement.

Most airlines supply oxygen on their aircraft, but they must be notified prior to passenger arrival; a written letter or prescription from the child's health-care practitioner can be required. The patient's own oxygen canister may be carried in the cargo compartment, but it must be empty. (1) Parents traveling with children who require oxygen must arrange for replacement canisters in advance from one of the many companies that provide this service worldwide (www.oxygentravel.com).

Families traveling to industrialized countries in which medical supplies are readily available require only a complete standard first aid kit, as recommended by the American Red Cross. (2) Families anticipating prolonged stays in rural areas or in developing countries should consider additional items, such as water purification tablets (3) and perhaps antibiotics to be used judiciously under prediscussed circumstances. The family pediatrician may want to discuss with families who will be living in areas more than 1 day's travel from medical care the possible need for treating skin infections not responding to local care and associated with fever, dysentery not improving with oral rehydration, or signs and symptoms of pneumonia or urinary tract infection. Depending on the destination, parents may want to take a copy of the *American Red Cross First Aid Book* or other health and first aid references (see Suggested Reading).

The need to adjust for varying electrical sources in various countries is commonly known, but planning for this is critical for parents of children who use equipment such as apnea monitors or nebulizers. Most parents are aware of the need to have both a voltage converter and a plug adaptor, and kits containing various types can be purchased at many department stores, as well as online from travel supply companies. In some cases, alternative

Table 2. Contents of an Expanded First Aid Kit*

- Sterile gauze in individual packages
- Elastic bandages
- Antiseptics (povidone-iodine, hydrogen peroxide)
- Scissors, tweezers, medicine spoon and cup
- Disposable plastic razor[†]
- Utility or pocket knife[†]
- Digital thermometer (replace battery yearly)
- Sealed wet wipes (replace every 6 months)
- Soap
- Clean washcloth
- Sunscreen
- Nonaerosol insect repellent
- Hydrocortisone 1% cream
- Antibiotic ointment
- Decongestant (topical and oral)
- Bismuth subsalicylate (eg, Pepto-Bismol®) (for use in those older than age 16 years for prevention or treatment of traveler's diarrhea)
- Acetaminophen and ibuprofen
- Antihistamine (diphenhydramine)
- Cefixime, ciprofloxacin, or other temperature-stable antibiotics for *Salmonella* and *Shigella* infections
- Antibiotics (azithromycin or cephalexin capsules) for skin infections
- Waterproof ground cover or plastic trash bags
- Tongue depressors
- Sling
- Band-aids
- Blanket
- Saline nose wash
- Mosquito netting and poles
- Sterile cotton tip applicators
- Sanitary napkins
- Twist-activated heat pack
- Blue ice
- Bottled water
- Oral rehydration salts in powder form
- Sports drink (powder or liquid)
- Flashlight and transistor radio
- Extra batteries
- Separate copies of passports, birth certificates, insurance cards, and calling card/credit numbers
- Coins for use in phone in host country
- Crackers or other nonperishable snack
- Water purification tablets (halazone or iodine compound) with use instructions
- Splint material (heavy cardboard, length of PVC pipe, balsa wood)
- Sealable sandwich bags with lock strips

*Items can be adjusted by families for specific needs and travel destinations.

[†]Check with the airline for current restrictions.

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medications can be used (eg, an appropriately used metered dose inhaler with spacer and mask for most asthma patients has been shown to provide at least as good, if not better, delivery of medication than does a nebulizer). (4)(5) In other instances (eg, children who have cystic fibrosis and may require a nebulizer for some medications), specialized equipment is required. Some medical devices (home ventilators and apnea monitors) require significant knowledge to change settings or download information, and parents must ensure that they are knowledgeable about the equipment and sources of repair.

Emergency medical care and evacuation, including the insurance coverage for such eventualities, should be discussed prior to an extended stay for families in a foreign country. Parents should check with their health insurance carriers and may want to consider additional coverage. Information about health insurance available to expatriates may be found from the American Citizens Abroad (www.aca.ch) or Associations of Americans Resident Overseas (www.aaro.org). Commercial airlines have strict rules about the medical conditions of those

who fly. Commercial medical evacuation flight services can be found throughout the world, and the United States State Department may be a resource for emergency evacuation or acute needs for care from a rural area.

The Trip Amenities in the Host Country

Parents should understand that “American-style” motels conveniently located along travel routes and continuous service restaurants where children are universally welcome are not always the norm in other countries; plans for meals and accommodations before embarking on any road trip outside the United States should be considered. Information from the United States State Department should be incorporated into such travel plans.

Although most industrialized cities throughout the world have modern water treatment facilities, these modern systems may be supplemented in some regions by rooftop cisterns or garden wells that may not be satisfactory. Posted signs usually advise as to the water's potability. If in doubt, parents should insist that their children

drink and brush their teeth with only bottled water and not allow them to drink or play with bath water. Water purification tablets may be used 30 minutes prior to ingestion, but parents should be aware that they may confer a bitter taste to water. (3)

Infectious diarrhea is known to be a significant cause of morbidity and mortality worldwide and is the primary cause of traveler's diarrhea. In some regions, most of the native population may be carriers of *Salmonella* sp, *Shigella* sp, or enterotoxigenic *Escherichia coli*. Education of parents includes routes of transmission of these organisms as well as ensuring proper food handling, storage, and refrigeration (which may be inadequate in nonindustrialized locales). Parents should be warned against buying any consumables from street vendors. Rather, families should be directed to use supermarkets (where available) for snacks; generally safe foods for children to consume include packaged cereal, bread, pasta, canned and bottled food and juices, and pasteurized dairy products. They should not provide raw, uncooked food for their children unless they can wash it themselves. Salad bars and cold buffets are especially suspect; fruits and vegetables that cannot be peeled (such as berries) should be avoided. (6) Families should be encouraged to provide only cooked food that is served at the table steaming hot (7) and to be aware that eating in private homes may be a concern if household help has not been trained in sanitation precautions.

A high priority for public health entities in the United States has been vigilance about environmental concerns such as lead poisoning and air quality. In some cases, these concerns may have been addressed to a lesser degree by public health entities in other countries. Leaded gasoline continues to be produced and used in many parts of the world, especially in rural areas, although most countries (including Thailand, Indonesia, India, and Mexico) have begun phase-out programs. High levels of lead continue to be found in paint, folk remedies, over-the-counter medicines, and cosmetics in Latin America and the Middle East in particular; avoidance of these products is crucial. Annual lead testing may be indicated in children returning from those regions. Measurement of serum lead levels may be especially germane for couples adopting children from China, Mexico, and Russia; pediatricians caring for immigrant children from these areas should be on the alert and may choose to provide screening on arrival to the United States.

Children who have significant food allergy may be at special risk during international travel. Although the European Union has strict food labeling guidelines that

are equal to or exceed those found in the United States, parents of children who have peanut, milk, shellfish, or other allergies that result in urticarial reactions or anaphylaxis will want to review the food labeling laws specific to the country they plan to visit. EpiPen® and Epi Pen Jr® (Dey LP, Napa, Calif) are important components of that family's first aid kit, and the parent should investigate availability of these items abroad via purchase or mail order.

Air pollution is a significant concern worldwide; Mexico City and large cities in India are particularly notable for high degrees of pollution, which can be a problem for children who have chronic respiratory diseases. Organophosphate pesticides continue to be used throughout the world, especially in malaria-bearing mosquito areas. Exposure to and proper storage of these chemicals is of concern; parents should be diligent in washing fruits and vegetables to eliminate this toxin.

American children accustomed to living in more northern latitudes may require special anticipatory guidance about using sunscreens or sun block when traveling to tropical or subtropical locales. Unscented PABA (para-aminobenzoic acid) preparations that have an SPF of 15 to 30 are recommended and should be used frequently; supplies should be replenished by mail order or on annual home visits as needed.

Rabies vaccination of household pets in developing countries is low compared with American and European standards. A dog bite in the United States is almost never a cause for concern, although public health laws allow for observation of the animal. A bite by an animal in a developing country, however, should be treated as a risk for rabies, and inoculation with rabies immune globulin and rabies vaccine should be undertaken as soon as possible. For those families exploring caves or forests in Africa, Asia, and Latin America, strong consideration should be given to pre-exposure rabies prophylaxis because the availability of vaccine for postexposure prophylaxis may be limited in these areas (www.cdc.gov).

Accessing Health Care Abroad

Many United States parents are aware of differences in the structure of health-care services in foreign countries. As a part of trip planning, parents can be reminded of the need to learn how to use the host country's private versus public health facilities and how to access general versus specialty care (see resources for finding physicians discussed earlier). Parents may be unaware that pediatricians often serve as consultants rather than primary community-based physicians. Conversely, many parents of children traveling overseas may be surprised to learn

that in contrast to those medical services in the public domain in the United States (such as immunization clinics, school nurses, and school-based screening programs for vision, hearing, scoliosis), health screenings and immunizations are not necessarily required for school entry abroad, but rather are left to the discretion of the parents. Especially in developing countries, some immunizations may be unavailable due to cost, and they will need to be administered on home visits to the United States.

Families who immigrated to the United States and who anticipate moving back to the country of origin or who are planning an extended vacation to their homeland may want to consult a United States pediatrician to determine which vaccines are available in the home or host country and to obtain information on the country's vaccine administration schedule. The World Health Organization Web site contains vaccine summaries listed by country. The parent and pediatrician may consider expediting inoculation for those vaccines not available in the foreign country if safety and efficacy are reasonable. In discussing with their pediatrician their planning for extended stays in countries where tuberculosis is an endemic problem, families may question why bacillus Calmette-Guérin is not usually provided in the United States (due to low incidence of tuberculosis disease and presence of mechanisms for risk-based screening) but may be recommended in those countries.

Increasingly, parents in the United States are familiar with complementary and alternative remedies, but the extent to which these modalities of treatment for children are used abroad may surprise them. The practitioner can caution parents about the use of these agents and provide families with one of the pediatric references for safe use of herbs and other remedies. Prior to travel, the pediatrician can remind parents that safe immunization and acupuncture practices necessitate needle precautions; parents may opt to avoid any injections or needle usage in some settings.

Although a discussion of obstetric care is beyond the scope of this article, Americans will be surprised at the huge variance in customs and facilities worldwide. In some areas, the family must provide for all newborn needs in a hospital setting, including diapers and blankets; in other settings, the availability of doulas along with midwives in homelike birth centers may feel more supportive than some birth centers in the United States. The availability of neonatal intensive care and attitudes toward resuscitating very low-birthweight infants vary widely and should be explored prior to undertaking a pregnancy abroad.

Accessing Mental Health Care and Therapy for Developmental Disabilities

Attitudes and beliefs with regard to mental illness, learning disabilities, mental retardation, speech delay, and attention-deficit disorders are extremely variable throughout the world. Even in Western Europe and other industrialized countries, cultural attitudes and health-care financing practices often do not provide for widespread psychiatric, psychological, psychopharmaceutical, or occupational therapy. Educational disabilities may not be provided for either in foreign schools or even in American schools abroad. Alternatively, some therapies such as physical therapy may be available in hospitals abroad just as they are here. Arranging for continuation of the therapeutic program for a child receiving such services may require significant preplanning with an academic or tertiary care center, frequent trips home, or a decision to cease therapy during expatriation.

Parents can be reassured that ophthalmologic care and basic dental care usually are widely available and are of a professional standard in most industrialized countries. Invasive dental procedures may be risky in those environs where needle hygiene has been an issue, and the parent should look for qualified professionals who are certified by a dental certification system in the host country. Carrying a prescription for eyeglasses or contacts or a duplicate set is helpful for those who have vision needs. The availability of contact lens solution may be an issue in developing areas, and supplies may need to be replenished from the United States by mail order.

Special needs, such as for children who have diabetes or those who may need transfusions (sickle cell disease or hemophilia), may be met by engaging the services of a pediatrician in a travel medicine clinic abroad. These clinics can be identified via the International Association for Medical Assistance to Travelers (www.iamat.org) or the International Society for Travel Medicine (www.istm.org). Blood cannot be transported internationally in an emergency (www.who.org). Transfusions should be avoided wherever possible when traveling because the safety of the blood supply varies by country. European Union member countries and South Africa have certified safe blood supplies, but other areas, including India and Pakistan, have yet to achieve this level of certification. Synthetic blood products and volume expanders are preferable in an emergency pending evacuation to Europe or the United States. Diabetic medications may pose a problem in some countries (due to availability of synthetic insulin, cost, and prescribing practices). Contacting the International Diabetes Foundation (www.idf.org) prior to departure for information or looking

online for host country academic centers that have diabetes clinics is advisable.

Back in the United States

When children are returning from extended travel abroad, a health-care visit promptly on return may be helpful. During the weeks and months after travel, the physician should note arising symptoms that may be attributable to exposures during travel. Practitioners should consider diseases endemic to the area from which the child came. Gastrointestinal complaints that may mimic viral gastroenteritis may be due to hepatitis or a parasite, and appropriate studies may be indicated if resolution is not prompt and spontaneous. Fever and anemia should prompt the ordering of a complete blood count for children who have come from malaria-endemic areas, but the clinician also must order a “malaria” prep or “thick smear” to improve sensitivity of the testing for malaria antigen.

The pediatrician should update the traveling child’s problem list to include any incidents abroad and note, for example, “travel to Africa” for future reference. Immunizations received abroad, if any, should be documented in the record.

Conclusion

Just as we often speak of a “global economy” and “global communications,” children who travel internationally have led us into the era of the “global pediatrician.” The pediatrician is uniquely qualified to consider the needs of the child during these trips. A pediatrician’s familiarity with the anticipated and unanticipated needs of a family

during international travel can help make the travel safe and incident-free.

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Suggested Reading

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