Intercountry Adoptions: Medical Aspects for the Whole Family

Stanley E. Grogg, DO
Barbara C. Grogg, MS, RN

In the United States, the number of intercountry adoptions has steadily increased in the past 15 years. Healthcare providers should understand the medical aspects of such adoptions in order to better advise families and aid them in making an informed decision when adopting a foreign-born child. Pretravel consultation is addressed, including immunizations, safety issues, and how to create a personalized prophylactic medical travel kit. Review of pictures, videos, and the medical history of the potential adoptive child is also discussed, as is air travel with children. Postemigration medical examinations—including developmental and psychosocial evaluations, general work-up with laboratory studies, and immunizations—are outlined. This article reviews the medical aspects of intercountry adoption for adoptive parents in the United States. The osteopathic approach of caring for the whole family lends itself to advising families on intercountry adoptions.

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The number of intercountry adoptions has nearly tripled in the past 15 years as a result of the decreasing number of US-born children available for adoption, legal concerns (eg, birth parents’ rights), increasing costs, and unpredictable timetables. The US government continues to implement more stringent guidelines for intercountry adoptions. The Convention on Protection of Children and Co-operation in Respect of Intercountry Adoption, commonly referred to as the Hague Convention, now requires that many adoption agencies receive US-government accreditation. The Hague Convention aims to prevent the exploitation of children and to ensure that birth parents and adoptive parents are treated fairly during the adoption process.

Intercountry adoptions are usually facilitated by an adoption agency required to adhere to US state and federal regulations as well as regulations in the child’s country of origin. Current immigration laws stipulate that, to enter the United States, intercountry adoptees must have been orphaned, abandoned, or have only one living parent in their country of origin. In most cases, adoptive children must be younger than 16 years. Prospective adoptive parents should be sure to choose a reputable adoption agency to help coordinate the application process, find the right child for their family, plan any international trips to meet the child, and provide post-adoption support.

Usually, adoption agencies will present potential parents with information about a child that is available for adoption. This information will probably include medical records and pictures, but sometimes video footage will also be available. Prospective parents often seek the help of a family physician to assist them in navigating through the available information so that they can make fully informed decisions about whether they are capable of parenting the proposed child. Ideally, this physician should be familiar with the adoptive family and their community before reviewing the adoptive child’s medical information. The training osteopathic physicians receive on caring for the whole person—and whole family—prepares them to provide families with accurate, comprehensive care for intercountry adoptions.

According to 2000 US census data, more than 250,000 (13%) of the country’s 2 million adopted children were born outside of the United States. During the 1980s, the majority of children adopted from overseas were from Korea. By 1999, 70% of foreign-born adoptees were from China, Russia, and Eastern Europe. In 2006, the most common countries of origin for children adopted from overseas were China, Guatemala, and Russia.

When examining the medical literature regarding intercountry adoption, the most detailed information available is about children adopted from Korea. The published literature on Eastern European adoptees indicates that these children are usually from orphanges and arrive in the United States with questionable immunization records as well as delayed emotional and mental development as a result of little or no family bonding. A study of Guatemalan adoptees found that chil-

From the International Travel Medicine Clinic in Tulsa, Okla, and the Department of Pediatrics at the Oklahoma State University Center for Health Sciences (Dr S. Grogg) also in Tulsa.

Through their International Travel Medicine Clinic, the authors of this article have advised families on intercountry adoptions for more than 20 years. They also provide ongoing healthcare for adopted children as they assimilate into their new homes and communities.

Address correspondence to Stanley E. Grogg, DO, Oklahoma State University Center for Health Sciences, 1111 W 17th St, Suite 250, Tulsa, OK 74107-1800.

E-mail: sgroggdo@travelmedicine.com

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dren who resided in foster care prior to adoption had better growth rates (e.g., height, weight, head circumference) and cognitive scores than children who resided in orphanages. For physicians, developing a general awareness of the different issues associated with a prospective adoptee’s country of origin is the first step in caring for these children and their new families.

**Physician Preparation for the Foreign Adoptee**

When reviewing medical records that have been e-mailed or faxed from physicians in other countries, physicians must be aware the contents may not be accurate by US standards. Medical terminology and usage may vary among countries, and translation challenges can often lead to inadvertent misrepresentation or misinterpretation. For example, Bledsoe and Johnston provided a useful example of the differences in terminology between countries using the term “perinatal encephalopathy.” In the United States, this phrase often indicates a future predisposition toward mental retardation or cerebral palsy. In Russia, however, the term is used for any examination (physical or mental) that suggests a risk of neurologic injury. While seeing this diagnosis on a child’s medical records would be alarming to a US physician, it would be considered a commonplace finding by a Russian physician.

In addition, a child may be given a neurologic diagnosis to allow him or her to be placed on a high-priority adoption list. One of the most common fraudulent adoption schemes is to “export” supposedly healthy children who are later found to have illnesses requiring significant medical attention. One way to determine if potential adoptive children may have congenital and developmental disorders is through the use of pictures and video footage (Figure 1). However, physicians who view these materials with patients should emphasize the difficulty of providing an accurate long-distance medical assessment and should caution them that there could be serious abnormalities that medical records and pictures or video footage cannot capture. Prospective parents should be encouraged to provide physicians with as much information as possible from the child’s medical history, including immunization status. More complete information allows physicians to give families a more complete idea of what to expect from the child in order to make a fully informed decision about the adoption.

Medical problems that may occur at the time of child-custody transfer include chronic upper respiratory illness, diaper rash, diarrhea, failure to thrive, feeding problems, impetigo, otitis media, scabies or lice, transitional depression, and vomiting. Tongue-thrusting and head-bobbing behaviors can be troubling to new parents, but these self-stimulating activities may be coping mechanisms used by children as they become accustomed to new environments. Furthermore, night terrors, posttraumatic stress disorder, and other behavioral disorders should be reviewed with adoptive parents as potential side effects that they might expect during the child’s adjustment period. Although attachment issues can seem overwhelming to new parents, it is important that families understand that most children will require some time to develop secure relationships and find comfort in their new surroundings.

Many of the developmental disorders and attachment issues experienced by recent adoptees may be related to malnutrition or prenatal alcohol exposure in their countries of origin. Abdominal pain, excessive physical violence, malaise, precocious sexual behavior, preoccupation with food, and stealing behaviors may occur when the child enters his or her new home. In general, the longer a child has been in an orphanage, the more likely the chance that developmental delays will be present. If a child is adopted before the age of 2 years, however, there is a good chance that such delays can be reversed.

It is important for healthcare providers to avoid giving “standard” parenting advice to adoptive families as these children may have experienced loss, deprivation, separation, and instability in their countries of origin. The adoptee will require careful developmental, behavioral, and attachment evaluations, and progress-monitoring over time will help ensure positive developmental outcomes in the future.
Family Medical Preparation

Most families will travel to their new child’s country of origin—many by choice, others by requirement. These visits may last from a few days to several weeks. Adoptive parents may choose to take other family members, such as siblings, along to share the experience. Each traveler should be thoroughly prepared for the trip, and a pretravel physician visit is recommended for each prospective traveler.

A pretravel visit generally requires the same amount of time as a new patient visit. This appointment should take place at least 1 or 2 months before the departure date to ensure that each traveler has enough time for any additional testing or vaccinations that may be ordered. For each traveler, a complete medical history and physical examination should be conducted to determine fitness for international travel. Discussion points should include:

- medications for chronic conditions
- medications for potential travel-related illnesses
- other supplies
- food and water safety precautions
- travel safety

Recommendations will depend on the family’s destination, expected duration of travel, method of travel, season(s) of travel, and individual health evaluations. Travelers should be aware that foreign accommodations may be of poor quality (ie, not conforming with American standards for hygiene). In addition, travelers may be subject to sudden and significant changes in altitude. Finally, inadequate sanitation, underdeveloped medical services, and nonpotable water supplies may await prospective parents in their adoptive child’s country of origin. Although many of these conditions represent unavoidable risks to travelers, physicians can address them to ensure that travelers “expect the unexpected.”

Families should also be encouraged to visit the International Travel page on the US Department of State’s Web site: http://travel.state.gov/travel/travel_1744.html. The US Department of State’s Office of American Citizens Services and Crisis Management uses this site to publicize information from its Consular Information Program, which is designed to “inform the public of conditions abroad that may affect their safety and security.” The Office of American Citizens Services and Crisis Management is responsible for issuing consular information sheets, public announcements, and travel warnings. This data includes information on each country’s health conditions, crime rates, and entry requirements. The locations of all US embassies and consulates are also provided on this Web site. Many other good resources are also available to assist members of the public and healthcare providers with up-to-date, detailed information for all international travel destinations.15-18

Any family member’s preexisting illness or disability should be addressed before leaving the United States. If any member of the traveling family has a chronic disease condition (eg, diabetes, asthma), parents should ascertain the availability of appropriate (or required) health services in the travel destination. Similarly, all required medications should be packed for travel in adequate quantities. Brand and generic medication names should be listed with dosages noted in travel documents. Current prescriptions should be clearly labeled and ready for inspection at customs checkpoints. Also, the family’s health insurance policy should be carefully reviewed to ensure adequate coverage in the travel destination. Even if it is possible to obtain reimbursement for medical expenses incurred abroad, some circumstances may require treatment that is not covered by health insurance (eg, medical evacuation due to

Figure 2. Routine and special travel immunizations for prospective parents traveling overseas to visit foreign-born children for possible adoption. *Special immunizations may be recommended prior to travel depending on destination, length of visit, and season. ‡The Centers for Disease Control and Prevention does not recommend the cholera vaccine for most travelers, nor is it available in the United States.
severe illness or injury). Supplementary health insurance policies may be needed. Many travelers elect to purchase optional short-term policies designed for travelers.

All prospective travelers should ensure that their routine immunizations are current. In addition, travelers should be prepared to have any special immunizations that may be required or recommended for their travel destination by the Centers for Disease Control and Prevention (CDC). Such immunizations should be scheduled 6 to 8 weeks before departure because many vaccines are not considered effective until a certain amount of time has elapsed. In fact, some special vaccinations are provided in multiple doses at scheduled intervals. Routine immunizations that may need to be updated before undertaking international travel include: *Haemophilus influenzae* type B; hepatitis A (HAV) and hepatitis B; inactivated poliovirus; measles, mumps, and rubella; pneumococcal polysaccharide vaccine; diphtheria, tetanus, and pertussis; and varicella (Figure 2). Specific vaccinations may be indicated, depending on season of travel and travel destination, including cholera (unavailable in the United States), influenza, Japanese encephalitis, meningococcal meningitis, rabies, typhoid, and yellow fever. Vaccine development is a dynamic process and new vaccinations and vaccine combinations should be considered as they are released.

**Personalized Medical Kit**

Before the trip, a medical kit should be prepared for traveling family members and the adoptee (Figure 3). Prepackaged kits can be purchased, but patients may prefer to assemble their own. Medicines routinely taken by family members for chronic conditions should be packed in adequate supply because unexpected complications in the adoption process may extend the family’s travel plans. Obtaining the necessary medications for chronic conditions in another country may be difficult. As noted previously, all medications should be kept in the original packaging to prevent difficulties when passing through customs. If the medications are prescribed or contain narcotics, it may also be helpful to have a letter from a physician confirming their necessity.

Other potentially useful medications include antibiotics, antihistamines for allergic disorders, an epinephrine autoinjector (EpiPen, Twinject, Anapen) for severe allergic reactions, pediculosis preparations, sleeping pills, and topical agents (eg, steroid, antibacterial, antifungal, and diaper rash preparations). Acetaminophen, ibuprofen, or both should be included for pain and fever along with saline nasal sprays for dry nares.

For prospective siblings traveling to the adoptee’s country of origin, azithromycin (Zithromax) is appropriate for both bacterial respiratory infections and many intestinal infections. For adults, ciprofloxacin hydrochloride (Cipro) can be beneficial for bacterial infections. In addition, an ophthalmic antibiotic can be used for bacterial eye infections. The choice of prescribed antibiotics should be based on the sensitivity of organisms.
endemic to the travel destination. For traveler’s diarrhea, both azithromycin and ciprofloxacin and can be used for children and adults. Both medications are available in tablet or liquid formulations. Through patient education at the pretravel office visit, the adoptive family can be empowered to use prescription antibiotics appropriately. However, though there are some appropriate indications for prophylactic antibiotics, in general, preventive use of these medications is not recommended for most travelers as they might lend travelers a false sense of security, inadvertently leading them to disregard commonsense food- and water-safety recommendations.21

Because travelers’ diarrhea is common with international travel,15 families should take care to include preventive medications in case they become ill. Rifaximin (Xifaxan), a relatively new preparation for travelers’ diarrhea, can be considered for anyone older than 12 years, but it is available by prescription only. For younger children with severe diarrhea, the World Health Organization (WHO) recommends the use of oral rehydration salts in powder form.22 The new preparations should be mixed with purified water and administered if the child develops vomiting or severe diarrhea. Oral rehydration salts may be obtained prior to departure but should also be available in most foreign countries.

For adults and children older than 12 years, over-the-counter Bismuth subsalicylate (Pepto-Bismol or Kaopectate) is readily available and can be taken for many gastrointestinal disorders. Because pediculosis is common in orphanages,23 an agent like permethrin topical cream 5% (Acticin, Elimite, Nix) should be included.

Other helpful medications for a prophylactic medical travel kit would include motion sickness aids, such as dimenhydrinate (Dramamine, Gravol, Vertirosan), scopolamine transdermal patches (Transderm Scop) or tablets (Scopace), or meclizine hydrochloride (Antivert, Bonine). If proposed travel plans will require patients to travel in altitudes to which they are unaccustomed (eg, above 10,000 feet), acetazolamide (Diamox) should be included as a precaution against altitude sickness. Adults should consider a short-acting anxiolytic/hypnotic drug such as eszopiclone (Lunesta), zaleplon (Sonata, Starnoc), or zolpidem (Ambien), to help them sleep on the plane and to assist them with overcoming “jet lag” on arrival at their travel destination.

Common medical supplies should also be included in the travel kit: sunscreen with a sun protection factor of 15 or higher, bandages, gauze, first aid tape, and a thermometer. Sterile syringes and needles should also be considered for inclusion in travel kits because sterilization equipment is not always available in developing countries. For many destinations, insect repellants with diethyltoluamide (DEET) for exposed skin and permethrin for clothing may be needed. However, these substances should not be used on infants younger than 2 months. When using products containing DEET, application should be limited to exposed areas of the skin. These areas should be washed with soap and water as soon as possible after returning indoors. Typically, the greater the percentage of DEET in the preparation, the longer the duration of action. Products may contain concentrations of DEET ranging from less than 10% to more than 30%. Formulations composed of 30% DEET are the strongest currently recommended for use on infants and children.24

**Travel Safety Precautions**

Before traveling overseas, individuals should make a copy of all travel documents including itinerary, passport, identification, travelers’ checks, credit card information, and a list of all current medications with complete dosage information. This information should be left with a friend or relative in the United States in case these items are lost or stolen during the trip.19

To avoid being victimized by crime or theft, it is advisable not to overdress or to travel with expensive jewelry or watches. Money and credit cards should not all be stored in one location (eg, wallet, waist pack), which would provide an easy target for thieves. Instead, these materials should be spread among one’s personal belongings.19 An additional precaution that may be helpful, though not required, is to register travel information with the US Department of State at https://travelregistration.state.gov. This precaution allows contact to be established if there is a crisis at home or in the travel destination.19

The greatest threats of injury for children traveling internationally are from vehicle-related accidents and drowning.21 Seat belts and infant (or child) car seats should be used.26 Generally, it is advisable to avoid night driving overseas.25 Bringing an infant car seat from the United States may be a good choice for international travelers because any such equipment that
New parents should also be made aware of other potential sources for child injury, such as burns and falls. Adoptive parents may be surprised to learn that fire-detection devices are lacking outside of the United States. In fact, in many developing nations, electrical wires hang freely from ceilings and street posts (Figure 4). Travelers should also be aware of the quality of building construction in their travel destination and in their hotel. In some countries, staircases may be without safe railings. Balconies may have widely spaced balusters that would not stop a small child from passing through the openings. In many countries, travelers must remember to bring plug adapters and voltage converters for electronic devices if this equipment will not be available on location.

As alluded to earlier in this article, the most commonly occurring diseases affecting travelers are diarrhea and associated gastrointestinal illnesses. Diarrhea is caused by bacterial or viral pathogens, or protozoan and helminthic parasites. To avoid infection, all food consumed during international travel should be cooked, fruit should be peeled by the consumer, and dairy products should be avoided. Travelers should also be aware of water-purification methods in their travel destinations. If there is any concern that water could be contaminated, bottled water is recommended. Consumers should also be aware the ice prepared from contaminated or non-potable sources are likewise contaminated.

In certain countries and at specific times of year, travelers will need malaria prophylaxis. Several medications, including chloroquine phosphate, mefloquine (Lariam) and sulfadoxine-pyrimethamine (Fansidar), can be prescribed to treat malaria. To prevent parasite infestation, shoes that completely cover the feet should be worn outdoors at all times; sandals should be left at home. Hands should be cleaned frequently with soap and water as well as with sanitizing agents to help prevent disease transmission. Travelers should also be discouraged from swimming, wading, or playing in fresh water lakes and rivers.

**Air Travel With Children**

Preparing children for international air travel requires planning. Adoptive parents should arrive at the airport early in preparation for their flight. Parents may wish to request bulkhead seating. Although there is usually no “under the seat” storage in that row, there is usually more legroom. In addition, with bulkhead seating, there will be no passengers in front of the recent adoptee, who may have difficulties in an unfamiliar environment.

When traveling by air, the use of a Federal Aviation Administration–approved child safety seat is recommended for all children who weigh less than 40 pounds. Rear-facing seats should be used for children who weigh less than 20 pounds, but children who weigh between 20 and 40 pounds should be placed in a forward-facing child safety seat. Alternatively, children older than 2 years and weighing between 22 pounds and 40 pounds may use the new Federal Aviation Administration–approved child harness restraining system. For children who weigh more than 40 pounds, the airplane safety belt will provide adequate protection. Booster seats are not allowed on any flight. Instead, they must be checked as luggage. Passengers should verify airline seat assignments for children. Parents may not be aware of new requirements that children 2 years of age or older obtain ticketed seats.

Adoptive parents should pack books, games, and snacks to help entertain the child during the trip. Diphenhydramine hydrochloride (Benadryl) may be a good sleep aid for the adoptee. However, some children may react to this medication with hyperactivity instead of drowsiness. Therefore, the medication should be given to the child at least once before travel to ensure that the child doesn’t have a paradoxical reaction. Having a child suck on a bottle or “sippy cup” during take off and landing can be helpful for keeping the eustachian tubes open and unobstructed, reducing ear pressure and related pain in flight.

**Medical Examination for the Adoptee**

Before an adoptee can be issued an entry visa for the United States, a medical examination is required from a US government–approved physician in the child’s country of origin. Prospective parents should not rely on the results of this examination to detect all possible disabilities or illnesses. This formality should be seen as a method of assessing the presence of potential contigions in the child that would be just cause for visa ineligibility. If the child has a disease or illness that makes him or her ineligible for a visa, prospective parents will need to decide if they wish to continue with the adoption despite the illness. If so, they can wait for the illness to be adequately treated and then reapply for a visa. Alternatively, they can apply for a waiver of visa eligibility from the Bureau of Citizenship and Immigration Services. An English-speaking physician in the adoptee’s native country can be contacted through the adoption agency or through an American embassy if there are concerns about examination results or if the parents desire a second medical opinion. Ideally, the foreign physician would complete a physical examination and answer any questions prior to the family’s departure.

The US Immigration and Nationality Act requires that anyone seeking a visa for permanent residence in the United States comply with the vaccination guidelines outlined by the Advisory Committee on Immunization Practices. The exception to this rule is foreign-born adoptees younger than 11 years. These children are exempt from having immunizations updated before departure from their country of origin, but adoptive parents are required to sign a waiver indicating their intent to comply with immunization requirements within 30 days of the child’s arrival in the United States.

Once the adopted child is brought to the United States, a
A complete blood count with red blood cell indices will help to document anemia and iron deficiency in adopted children. Glucose 6-phosphate dehydrogenase deficiency, which can lead to chronic anemia, occurs most often in individuals from Asia, the Mediterranean area, and Africa. Therefore, children adopted from these regions should be screened for this condition.

Due to the high likelihood of disease transmission during international travel, stool samples should be obtained from the child and checked by enzyme immunoassay for ova and parasites including *Giardia lamblia* and *Cryptosporidium* antigen. If the child is symptomatic (eg, diarrhea, gastrointestinal problems), stool cultures for *Salmonella* species, *Shigella* species, *Campylobacter* species, and *Escherichia coli* series bacterial organisms are also necessary. In addition, urinalysis, blood urea nitrogen, and creatinine tests will help detect the presence of renal disorders.

Once the physical examination is complete, the child’s immunization records should be reevaluated and updated. The Advisory Committee on Immunization Practices and CDC immunization guidelines recommend that international immunization records be considered valid if vaccines, dates of
administration, number of doses, interval between doses, and patient age are comparable with current US schedules. If there is any doubt, the child should be reimmunized or, alternatively, antibody titers should be obtained. Antibody titers are readily available for tetanus, diphtheria, polio, measles, rubella, and varicella. Although commonly administered in the United States, several vaccines such as Haemophilus influenzae type B, pneumococcal (PCV-7), and varicella are not typically administered outside the United States and will need to be updated. Similarly, though in the United States, vaccinations for measles, mumps, and rubella are collectively grouped as the “MMR” vaccine, international immunization records may document a measles vaccine as such even though it does not contain mumps and rubella.

Some diseases are more prevalent in specific countries and would require screening after the child’s arrival in the United States. Russia has rising rates of multidrug-resistant tuberculosis, emphasizing the importance of administering TSTs for Russian-born adoptees. Giardia lamblia is common in Eastern Europe, but not as common in Korea. Human immunodeficiency virus and syphilis are not common in foreign-born adoptees, but the prevalence of these diseases is, unfortunately, rising in Eastern Europe. Hepatitis B and HCV are also common in children from Eastern Europe. Because of the high prevalence of alcohol ingestion in the countries that comprise the former Soviet Union—and because of limited public awareness in those cultures of its adverse effects—fetal alcohol syndrome is common in children adopted from that region. Chinese and Russian children have a high likelihood of dietary iodine deficiency. Because of the ongoing use of lead-based paints for structures and ceramics as well as the continued use of coal for heat and leaded gas in vehicles, an Asian child is more likely to have lead poisoning. Poor environmental conditions are often evaluated in the country of origin and documented in the child’s medical records, but tests should be repeated in the United States to confirm any diagnoses.

In many cases, the adoption agency is required to send progress reports to the adoptee’s country of origin with information about the health and adaptation of the adopted child. The adoptive family may require physician assistance with US adoption procedures. They may also require additional patience from their physicians while completing the process at home. Foreign-born adopted children can bring a family the special joy of knowing they have made an incredible difference in someone else’s life.

Conclusion
Many American families are undertaking international travel to adopt children. Healthcare providers need to be aware of the medical issues surrounding foreign adoptions in order to help these families make informed decisions.

Preadoption medical visits for these families should include a thorough medical history and physical examination for each traveler, immunization and prescription updates, medical documentation and paperwork completion, and recommendations for over-the-counter medications and other items likely to prove useful in an emergency medical travel kit.

In addition, the adoptive family needs to understand safety issues particular to their travel destination. Inexperienced parents should be made aware of general safety precautions when traveling with children.

When the family returns to the United States with an adoptee, a medical office visit with appropriate laboratory tests and developmental evaluations should be completed and discussed as soon as possible. Healthcare providers play an important role in the adoption process as educators, family advocates, and medical advisors.

References
management of infectious diseases in international adoptees.


**Editor’s Note:** To aid prospective adoptive parents in their search for a family physician, the American Academy of Pediatrics Section on Adoption and Foster Care offers an online map with information about physicians and clinics with a special interest in adoption medicine: http://www.aap.org/sections/adoptions.

Stanley E. Grogg, DO, also encourages readers to visit http://www.orphandoctor.com for more information on adoption medicine.

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