



# The ROI of Travel Vaccines:

AN INVESTMENT WITH A HEALTHY RETURN

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Your company just landed that hard-won overseas contract, and now you are preparing to send a team of highly trained specialists around the globe to implement the deal. But, sending employees overseas involves much more than securing passports, plane tickets, and hotel reservations. It is also crucial to make sure your employees are up-to-date on travel vaccines and knowledgeable about health issues that may come up abroad. Indeed, a Travel Medicine program is key to protecting your investment – in your people and in your business.

It's highly likely that your company is staffed with globe-trotters. Global travel is at all-time high, and much of that is driven by corporate travel. The latest statistics from the United Nations World Tourism Organization show that 1.035 billion tourists traveled the globe in 2012,<sup>i</sup> making this the first year in which international tourist arrivals exceeded the 1 billion mark. Of those billion plus travelers, approximately 27 percent, or 280 million employees,<sup>ii</sup> traveled on business.

In 2012, nearly **280 million** employees traveled on global business trips. Were your employees part of this figure?



However, as businesses seek new deals, new markets, and lower production costs in ever-more remote places, the exposure to risk increases for both employees and employers. Business travelers navigating outside of their familiar territories are at increased risk for injury, illness, and exposure to diseases that are unknown at home, potentially heightening the corporate liability of employers.<sup>iii</sup>

One way for employers to protect the health and well-being of employees – and mitigate the company’s own liability – is to prevent disease in the first place via a Travel Medicine Program that includes pre-travel vaccinations, a pre-travel physical exam, and a travel health consultation.

What are the benefits of vaccines? The life-saving benefits of immunizations in

general are apparent and widely documented. According to the World Health Organization (WHO), 2 to 3 million deaths are prevented globally each year as a result of immunizations.<sup>iv</sup> Industry-leading private actors such as the Gates Foundation recognize the overwhelmingly positive impact of vaccines; the Foundation has invested \$10 billion toward a singular goal: to strengthen global immunization programs and save 10 million lives by 2020.<sup>v,vi</sup>

But, many of the health risks that come with global travel – yellow fever, typhoid fever, and Japanese Encephalitis, among others – are not routinely vaccinated against, or frankly even known, in the U.S. Without guidance, employees may be unaware of the disease risk in their destination country and unsure of what steps to take to protect their health. By providing a Travel Medicine

program and pre-travel vaccinations for your employees, however, you help to ensure your traveling employee population is aware of, inoculated against, and equipped with a strategy to handle health concerns abroad. A Travel Medicine program will result in considerable return on investment (ROI) from diminished employee medical costs, less absenteeism, and greater productivity. More importantly, it may save a life.

Diseases that have been eradicated or are unknown in the US are endemic in many foreign countries. Is your workforce protected?

## The Health Risks of International Travel: Disease Exposure

Many diseases, such as Hepatitis A, typhoid fever, malaria, Japanese Encephalitis, and measles, that have been eradicated or are unknown in the US are still quite prevalent abroad. As employees trot the globe, these diseases present serious risks to employee health.

### Common Diseases Abroad:

Hepatitis A  
Typhoid Fever  
Malaria  
Japanese Encephalitis

Measels  
Polio  
Influenza

Take Hepatitis A, for example. This disease is largely not a concern in the US, but the WHO has reported that **1.4 million cases of hepatitis A occur annually**. This viral liver disease can result in a severe illness that lasts for months. It is transmitted primarily through food and water contaminated with fecal matter. Sanitation standards in many developing countries are far below what employees in the US are accustomed to, making this disease a serious, and not uncommon, risk abroad.



## The Health Risks of International Travel: Disease Exposure (CONT.)

Typhoid Fever and malaria are also major threats when traveling to certain parts of the world. Nearly **21.5 million cases of typhoid fever**, a life-threatening illness, are reported annually, according to the Centers for Disease Control and Prevention (CDC). Additionally, **250 million cases of malaria** are recorded every year,<sup>vii</sup> and, left untreated, a case of malaria can result in severe complications and even death. The risks of disease abroad are not just hypothetical. A recent case study shows just how tragic the lack of pre-travel education and vaccination can be:

When 15-year-old Cara Munn traveled to China for a summer study abroad program with her prep school, no one from the program warned her or her parents about insect-transmitted diseases in China, and no one took steps to ensure the high school students were taking precautions against insect bites during the trip. The result – Cara Munn contracted encephalitis after a tick bite on a school hiking trip near Mount Panshan. Cara's family arranged for her medical evacuation, but her illness brought with it a host of life-long injuries, including the inability to speak. A jury found her school, which sponsored and led the trip, guilty of negligence. Cara Munn and her family were awarded **\$41.7 million in damages.**<sup>viii</sup>

With global air travel on the rise, both the CDC and WHO have reported an increased risk of exposure to infectious diseases. The number of measles cases in the United States, for example, grew from 60 to 222 in 2011 – a 270 percent increase. Experts blame the rising number of U.S. measles cases on unvaccinated overseas travelers who unknowingly bring the disease back home with them after exposure abroad, and measles spreads particularly quickly among the non-vaccinated population.

### Disease Risk is on the Rise:

Globalization, co-mingling of populations, and air travel increase the risk of exposure to infectious disease.

What is the best way to prevent infection? According to the CDC, the best way to prevent disease is by getting vaccinated. Not only does the pre-eminent health organization avow the need for vaccination, but nations have recognized the necessity of vaccination when populations from all corners of the globe are in close contact.

In the past, countless unvaccinated pilgrims from the Muslim Hajj used to return home with polio and meningococcal strains. However, Saudi Arabia now requires the Meningitis vaccine before pilgrims may enter the country for this event, which is the largest annual human gathering in the world<sup>x</sup> to prevent the spread of disease among a population in close contact.

### What is the best way to prevent infection?

According to the CDC, the best way to prevent disease is by getting vaccinated.



## The Health Risks of International Travel: Stress

Not only are business travelers at a higher risk of disease exposure, the simple reality of travel puts travelers at a higher risk of illness and injury. A sudden illness or injury for an employee abroad is not just an individual health hazard; it is also a growing logistical headache for companies as they expand into new global markets with healthcare systems and standards that hardly match those in the U.S.<sup>x</sup>

International travel is taxing. Traveling employees tend to suffer from higher levels of stress due to packed schedules, time away from family, and changes to routine. As a result, conditions that are under control at home will be exacerbated with the stress of an overseas trip and may surface in dangerous ways.<sup>xi</sup> In addition, once overseas, traveling employees are less likely to exercise and follow a healthy diet and more apt to forget to take prescription medication or run out of it.<sup>xii</sup> A unhealthy routine takes a toll on the immune system, and it puts business travelers at a higher risk of illness.

### What can this combination of health risks result in?

- A U.S. executive found himself on the floor of the bathroom during a plane trip to Paris – he had collapsed while having a heart attack, and the airplane had to make an emergency landing in Newfoundland. The man was hospitalized there for seven days.
- An offshore oil rig in Bohai Bay, Northeast China, experienced a measles outbreak that infected three people and left all 130 onboard workers at risk.<sup>xiii</sup>
- A 60-year-old engineer, who had been sent to Iraq for nine months, experienced shortness of breath so severe that he could not do his job just a few days into his assignment due to the extreme heat conditions in his overseas post.<sup>xiv</sup>

### Travel Takes a Toll on Health:

- Exposure to diseases that are uncommon at home
- Higher levels of stress from change to routine
- Less exercise
- Unhealthy diet
- Skipping or running out of medication



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## Mitigate Health Risks with Travel Medicine

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However, much of the risk of disease and illness abroad can be mitigated by a Travel Medicine program that includes country-specific health advice, vaccinations, and a pre-travel physical exam. Such a program protects a company's investment in its employees and saves employees the heartache and hassle of being sick while away from home. By providing protection against novel disease and by helping to pinpoint underlying health issues, the risk of medical emergencies occurring abroad is greatly mitigated.

The risks of travel and resulting need for Travel Medicine are clear, and appointments should ideally be scheduled well in advance of departure. According to the American Family Physician, travelers should schedule a pre-travel consultation and vaccinations at least six weeks prior to traveling outside of the United States, as many vaccines must be given in a series for optimal immunity.<sup>xv</sup> What does a typical travel medicine appointment consist of? An office visit will include a review of prior immunizations to

determine whether booster shots are required. Routine vaccinations, against diseases such as polio, measles, or hepatitis B, may be required since, as outlined above, these diseases are still active in many countries.<sup>xvi</sup> Other, destination-specific vaccinations such as yellow fever, typhoid fever, and rabies, may also be needed depending on the employee's destination and health history. Finally, a routine physical exam helps to identify latent health issues. By scheduling an office visit well in advance of a trip, business travelers and their employers can rest easy, knowing that vaccinations provide crucial protection from foreign diseases.

### How Does Travel Medicine Mitigate Risk?

- **Travel vaccines:** Protect against disease
- **Health advice:** Prepare for health risks in the destination country
- **Pre-travel physical exam:** Identify latent conditions

A typical Travel Medicine appointment requires about an hour of time. Contrast that hour time investment with the nightmare and headache of being sick or possibly hospitalized for days while traveling abroad. The choice is clear: it pays to be prepared.

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## Decreased Healthcare and Insurance Costs

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A Travel Medicine Program does not just save time and protect health; it also saves money via decreased healthcare and insurance costs. First of all, according to the U.S. Department of State, most American health plans are not accepted abroad, meaning employees would have to pay out of pocket for emergency care. In many places, doctors and hospitals still expect payment in cash at the time of service. Not only is this a hassle and further stress on the sick employee, but the task of reconciling these receipts and expense reports is an accounting nightmare.

Furthermore, medical coverage from a United States insurer may not cover treatment of complications from a vaccine-preventable disease.<sup>xvii</sup> In other words, if an employee becomes severely ill from a disease such as typhoid fever or hepatitis, further treatment can become an additional, and heavy, cost burden.

Notably, most insurance plans do not cover travel vaccinations in the first place. Therefore, if employers do not offer a Travel Medicine program, it is up to the employee to seek out and pay for Travel Medicine services on his or her own. Often, employees simply don't take that extra precautionary step – they are too busy, uncertain

about where to obtain the services, or unaware of the risks that await them abroad – and they skip pre-travel vaccinations altogether. In the case an employee does have the time to do research and find a travel medicine clinic on his or her own, he or she will have to submit expense reports and receipts for pre-travel medical expenses, the processing of which results in more paperwork and hassle for human resources managers. In other words, leaving vaccination up to the individual means compliance is likely to be low, sickness is more likely, resulting healthcare costs are high, and extensive administrative time is lost.

## Cost Savings

From the standpoint of an employee traveling overseas, the benefits of vaccinations should be obvious. An hour visit with a Travel Medicine Specialist is by far preferable to even a day of sickness abroad. The benefits of travel medicine to the employer are also manifold as travel vaccinations help prevent lost workdays on important assignments, not to mention the risk of medical evacuation for serious illness.

Medical evacuation for serious illness is extremely costly. If a company does not have an insurance program in place that covers this possibility, the expense of repatriation or evacuation can range from \$10,000 for a last minute commercial plane ticket and travel preparations to \$100,000 for a full evacuation with on-board medical assistance.<sup>xviii</sup>

### Business Traveler Statistics:

Average Salary: **\$130,000**

Travel Days/Year: **19.4**

Wage Paid while Traveling: **\$6,910**

### What does it mean?

The average business traveler takes four, five day trips per year.

**\$23,302** = Total business travel wages and expenses per employee/year

**\$1,201** = Business travel wages and expenses per employee/day

**Business travel is a significant investment. Protect your investment with a Travel Medicine program.**



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## Cost Savings *(CONT.)*

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### Repatriation is expensive, costing between \$10,000 and \$100,000 per incidence.

No business wants to spend \$100,000 unnecessarily. However, even a few days of lost employee time overseas represents a significant financial loss.

The average international business traveler earns \$130,000 annually and travels 19.4 nights per year<sup>xix</sup> – which brings the average wages paid while on international assignment to \$6,910. The average cost of an overseas business trip is \$4,098, and the average employee takes 3.8 trips on an annual basis.<sup>xx</sup> Therefore, assuming an employee makes four, five day trips over the course of a year, the company has invested a total of **\$23,302** in that employee's wages and travel expenses. In another way of looking at it, a single day of missed work abroad costs corporations an average of **\$1,201**.

Contrast that daily cost with the average cost of a corporate pre-travel consultation and immunizations. A consultation, physical exam, vaccinations, and medications may cost about \$550. This represents 2.3% of the total travel investment on an annual basis. However, many travel vaccinations provide immunity for years to come. A pre-travel consultation to address current health alerts, administer country-specific vaccines that may never have been given previously, and administer a physical exam is recommended before every trip. Notably, the cost of each appointment is likely to go down with time and more travel as many vaccines will already have been administered in the past. Indeed, over five years, the average business traveler takes 15.9 trips. Given a likely declining cost per appointment, the Travel Medicine investment over time becomes just a fraction of a percent of total travel investment.

“Vaccination makes good economic sense,” the WHO said in a recent briefing, “and meets the need to care for the weakest members of societies.” Travel Medicine and vaccinations save your company money and represent an important investment in the health of the traveling employee population.



## Conclusion and Implications

Global business travel to ever-more remote locales is on the rise, making corporate pre-travel health programs more important than ever. Simply stated, a Travel Medicine program with pre-travel vaccinations and consultations make good business sense. The initial monetary investment is small, representing a fraction of travel costs, but the savings from no lost work days or medical expenses abroad have the potential to be astronomical.



## Resources

<sup>i</sup>United Nations World Tourism Organization, "International Tourism to Continue Robust Growth in 2013," January 28, 2013.

<sup>ii</sup>Office of Tourism and Travel Industries "Survey of International Air Travelers Program" 2005.

<sup>iii</sup>"Duty of Care of Employers for Protecting International Assignees, their Dependents, and International Business Travelers," by International SOS and written by Dr. Lisbeth Claus, Ph.D., SPHR, GPHR, Professor of Global HR at the Atkinson Graduate School of Management

<sup>iv</sup>World Health Organization, "World Immunization Week 2012," 2012.

<sup>v</sup>Armstrong, Paul. "Gates: \$10B Vaccine Program Could Save 8.7M Lives," CNN.com, January 29, 2010.

<sup>vi</sup>Nebehay, Stephanie. "Gates Says Vaccine Investment Offers Best Returns," Reuters.com, 17 May 2011.

<sup>vii</sup>"Health Alerts," PassportHealthUSA.com, February 2013.

<sup>viii</sup>CT Post, Jury awards \$42M in Chinese tick bite case, <http://www.ctpost.com/local/article/Jury-awards-42M-in-Chinese-tick-bite-case-4389978.php#ixzz2REdhm3TR>

<sup>ix</sup>Shearley AE. The societal value of vaccination in developing countries. Vaccine 1999

<sup>x</sup>[http://www.nytimes.com/2005/12/20/business/20sick.html?\\_r=0](http://www.nytimes.com/2005/12/20/business/20sick.html?_r=0)

<sup>xi</sup>[http://www.nytimes.com/2005/12/20/business/20sick.html?\\_r=0](http://www.nytimes.com/2005/12/20/business/20sick.html?_r=0)

<sup>xii</sup>[http://www.nytimes.com/2005/12/20/business/20sick.html?\\_r=0](http://www.nytimes.com/2005/12/20/business/20sick.html?_r=0)

<sup>xiii</sup>"Duty of Care of Employers for Protecting International Assignees, their Dependents, and International Business Travelers," by International SOS and written by Dr. Lisbeth Claus, Ph.D., SPHR, GPHR, Professor of Global HR at the Atkinson Graduate School of Management

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<sup>xv</sup>Dick, Lew, "Travel Medicine: Helping Patients Prepare for Trips Abroad," *American Family Physician*, August 1, 1998.

<sup>xvi</sup>Steffen, Robert, and Bradley A. Connor, "Vaccines in Travel Health: From Risk Assessment to Priorities," *Journal of Travel Medicine*, 2005.

<sup>xvii</sup>"Overseas Workers Require Special Treatment," RiskVue.com, January 2003.

<sup>xviii</sup>"Overseas Workers Require Special Treatment," RiskVue.com, January 2003.

<sup>xix</sup>U.S. Department of Commerce Office of Travel and Tourism Industries: "Profile of U.S. Resident Travelers Visiting Overseas Destinations"

<sup>xx</sup>U.S. Department of Commerce Office of Travel and Tourism Industries: "Profile of U.S. Resident Travelers Visiting Overseas Destinations"