

Foodborne Disease

The Global Movement of Food and People

Jennifer McEntire, PhD

KEYWORDS

• Foodborne illness • Parasites • Global • International

KEY POINTS

- Different types of foodborne illness are endemic to certain parts of the world.
- Food produced in other parts of the world may contain illness-causing pathogens that are not normally encountered in the United States.
- Global travel should be investigated when a patient presents with symptoms of foodborne illness.

THE CONTRIBUTION OF GLOBAL TRAVEL TO FOODBORNE ILLNESS

With the acceleration of international travel, clinicians will be treating foreign diseases on a more frequent basis. It is not only people who travel; the food that we eat also increasingly originates or makes a stop in another part of the world and therefore may be contaminated with pathogens that are not typically encountered in the United States.

Between 2011 and 2012, the number of trips overseas by US citizens increased by about 5.5%.¹ **Box 1** shows the number of trips taken to each part of the world, although certain areas may be more commonly associated with foodborne illness than others. One's risk of contracting a foodborne illness during travel may depend on how stringently food and water precautions are taken, as well as the duration of travel without access to safe food/water. How people may inadvertently become exposed during travel, such as brushing teeth, showering, freshwater swimming, drinking beverages on ice, eating of uncooked fresh salads and already peeled fruits, should also be considered.

In this article, the global burden of foodborne illness is discussed and the types of foodborne illness that are endemic in, or associated with, certain parts of the world are identified. Awareness of these patterns allows clinicians to better diagnose and treat patients who may have acquired a foodborne infection overseas, or who may

The Acheson Group, 1 Old Frankfort Way, Frankfort, IL 60423, USA
E-mail address: jennifer@achesongroup.com

Infect Dis Clin N Am 27 (2013) 687–693
<http://dx.doi.org/10.1016/j.idc.2013.05.007>

0891-5520/13/\$ – see front matter © 2013 Elsevier Inc. All rights reserved.

id.theclinics.com

Box 1 Foreign trips by US citizens	
Country/Region	Number of Trips by US Citizens
Europe	11,244,637
Caribbean	6,435,343
Asia	4,312,544
South America	1,702,867
Central America	2,394,332
Oceania	547,271
Middle East	1,500,282
Africa	364,867
Mexico	20,366,668
Canada	11,853,981

Data from ITA Office of Travel & Tourism Industries. US citizen traffic to overseas regions, Canada and Mexico, 2012. [Online]. 2013. Available at: <http://tinnet.ita.doc.gov/view/m-2012-O-001/index.html>. Accessed March 22, 2013.

have eaten a food grown or processed outside the United States that was contaminated with a pathogen not commonly seen in the United States.

FOODBORNE ILLNESS ON A GLOBAL SCALE

As described by others, estimating the burden of foodborne illness worldwide is not possible, because many countries, especially developing countries, do not have systems in place that require clinicians to notify government health officials that foodborne illness has occurred. In 2006, the World Health Organization began an effort called the Initiative to Estimate the Global Burden of Foodborne Diseases to better understand the levels of foodborne illness around the world.²

Research reports and studies specific to certain parts of the world are described later, but it is often difficult to compare data because of the different public health monitoring systems in place in different regions, and the different methods used for analysis. However, there have been attempts to collect and analyze data from various regions to estimate and compare foodborne illness in those areas. A notable study by Majowicz and colleagues³ reviewed cases of nontyphoidal *Salmonella* gastroenteritis and reported the estimates obtained by the model used. These estimates are provided in **Table 1**. Although the estimates are based on numerous assumptions and limited data, they do show that, at least for 1 pathogen, the rate of illness is related to region of the world. Determining why some areas have higher rates of salmonellosis requires additional study, but clearly individuals traveling to these areas have a greater chance of being exposed to *Salmonella*, and likely other pathogens, particularly those that are transmitted by the fecal-oral route.

FOODBORNE ILLNESS IN THE UNITED STATES

There are several causative agents of foodborne disease that are typically encountered in the United States. The US public health agencies work tirelessly to collect data related to foodborne illness, both outbreaks and sporadic cases, so that the burden of disease is understood and so that efforts can be put in place to prevent further illness.

For example, in the United States, the illnesses identified in **Table 2** are notifiable, meaning that clinicians need to inform their state or local public health officials that

Download English Version:

<https://daneshyari.com/en/article/3404116>

Download Persian Version:

<https://daneshyari.com/article/3404116>

[Daneshyari.com](https://daneshyari.com)