ORIGINAL RESEARCH

International Travelers' Sociodemographic, Health, and Travel Characteristics: An Italian Study

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Abstract

BACKGROUND Approximately the 8% of travelers requires medical care, with the diagnosis of a vaccine-preventable disease. The aim of our study was to analyze the socio-demographic, health and travel characteristics of the Italian international travelers.

METHODS We conducted a cross sectional study from January 2015 to June 2016, at the Travel Medicine Clinic of Siena, asking the doctor to interview patients who attended the Clinic, recording socio-demographic and travel information, malaria prophylaxis, vaccinations. The data were organized in a database and processed by software Stata®.

RESULTS We collected 419 questionnaires. Patients chose 71 countries for their travels; the favorite destinations were: India (6.31%), Thailand (6.31%), and Brazil (5.10%). The mean length of stay was 36.17 days. Italians, students, and freelancers tended to stay abroad for a longer time (mean: 36.4 days, 59.87 days and 64.16 days respectively). 33.17% of our sample used drugs for malaria chemoprophylaxis: 71.9% of them used Atovaquone/Proguanil (Malarone®), 26.6% used Mefloquine (Lariam®), 1.5% other drugs. The vaccinations that travelers mostly got in our study were to prevent hepatitis A (n = 264), the typhoid fever (n = 187), the Tetanus + Diphtheria + Pertussis (n = 165), the Yellow fever (n = 118) and the cholera (n = 78).

Twenty-eight (6.68%) refused some recommended vaccinations. The vaccines mostly refused were for Typhoid fever (n = 20), hepatitis a (n = 9), and cholera (n = 9).

CONCLUSION Our results demonstrated that Italian international travelers are at-risk because of their poor vaccinations adherence. This implies that pre-travel counseling is fundamental to increase the knowledge of the risks and the compliance of future travelers.

KEY WORDS Travel medicine, Italy, characteristics, vaccination

INTRODUCTION

The reduction of the cost of flights has given many people the opportunity to visit distant countries, especially developing countries, for tourism, business, study, or missionary and service activities. Only 36 hours are necessary to go around the world by plane: a time considerably shorter than the incubation period of the infectious diseases that can be contracted in various parts of the world.[1,2] So, more than 700 million passengers who travel each year have a significant risk of contracting infectious diseases and of becoming a vehicle of infection for other people when they come back home.[3]

This globalization and the consequent increasing risk of travel-related illnesses make health care

professionals fundamental to advise travelers about these potential risks. Travel medicine is a multidisciplinary specialty that requires experts in travel-related illnesses, as well as up-to-date knowledge of the global epidemiology of infectious and noninfectious health risks, health regulations and immunization requirements in various countries, and the changing patterns of drug-resistant infections.[4]

In 2015, approximately 8.2% of the Italian population was foreign born.[5] Members of this immigrant population who move to visit friends or relatives in lower-income countries (VFR travelers) are at a higher risk of travel-related infectious diseases than the general population of international travelers.[6] Several studies have found that the majority of travel-associated malaria and typhoid fever cases in the United States in 1999-2006 occurred in VFR travelers.[7] This kind of travel, particularly to South-Central Asia, was an independent risk factor for enteric fever in this population. Other infectious diseases, including hepatitis A, measles, tuberculosis, and others, are also more common in VFR travelers.[6,8]

Among all efficient public health interventions, vaccines top the list, saving millions of lives each year. They contributed to the decline of the mortality and morbidity of several infectious diseases.[9] However, approximately 8% of travelers who move to developing countries require medical care during or after travel, with a diagnosis of a vaccine-preventable disease.[10]

Several studies have examined the incidence of diarrhea in travelers directed to single destinations,[11,12] the incidence of malaria in returned travelers,[13,14] the incidence of Japanese encephalitis,[15] and the incidence of meningococcal disease and other infectious diseases.[1,2,8,16,17] The aim of our study was to analyze the main characteristics of the Italian international travelers, focusing also on some travel aspects, such as the reasons of their travel, the length of stay, malaria chemoprophylaxis, and vaccinations they decided to do or to refuse.

METHODS

We conducted a cross-sectional study in the period January 2015–June 2016, at the Travel Medicine Clinic of the Local Health Unit of Siena, Italy. We asked the doctor on duty to interview all the patients who attended the clinic. All patients gave informed consent before being included in the study. All procedures were in accordance with the 1964 Helsinki Declaration and its later amendments. The study was approved by the Research Ethics Committee.

Through the questionnaire, we collected sociodemographic information (country of origin, age, sex, job) and other information such as travel destination, reason of the travel, date/month of departure, and length of stay. The physician recorded also the malaria prophylaxis and the vaccinations that they got or refused.

From the answer percentages, means and standard deviation were calculated. Shapiro-Wilk test was performed to assess the non-normality of the variables "age" and "length of stay." The relationship of sociodemographic variables with length of stay was assessed through the Mann-Whitney test for dichotomous variables and through the Kruskal-Wallis test for variables with more than 2 categories. Odds ratios were calculated to assess the relationship between vaccination refusals and the sociodemographic variables. The data were processed by software Stata SE, Version 12.1 (StataCorp, College Station, TX). The level of significance was set at $P < .05$.[18-22]

RESULTS

From January 2015 to June 2016 we collected 419 questionnaires. The sociodemographic characteristics of our samples are shown in Table 1.

Participants chose 71 countries for their travels; the favorite destinations were India (6.31%),

Table 1. Sociodemographic Characteristics of Our Sample

Gender	
Males	50.12%
Females	49.88%
Country of origin	
Italy	84.01%
Abroad	15.99%
Age	Mean 36.77 years (SD 15.8)
Job	
Student	18.23%
Employee	19.06%
Retired	5.52%
Freelance	10.50%
Workman	8.84%
Doctors	9.67%
Teachers/professors	6.35%
Unemployed	2.49%
Engineer/architect	4.42%
Salesman	1.38%
Geologist	1.66%
Lawyer/judge	1.66%
Other	10.22%