



Travel Health - Gaps in Awareness and Practices Among Medical Interns of a Tertiary Care Hospital in India



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Abstract

Introduction: Pretravel health assessments aim to promote risk reduction through preventive measures and safe behaviour. It also ensures that travellers are up-to-date with travel vaccine uptake. However, studies assess pretravel health-seeking practices from a variety of medical and nonmedical sources and vaccine uptake prior to travel to both developing and developed countries. The present study was an effort to address the awareness and practice of pre-travel health care among medical interns of a tertiary care hospital.

Methods: A cross-sectional study was carried out in medical interns of tertiary care hospital. Study participants were Bachelor of Medicine and Bachelor of Surgery (MBBS) interns posted in the preventive medicine departments during the internship program in the same hospital. Awareness and practice of pre-travel health were assessed with help of a preformed self-assessment questionnaire.

Results: Study had 59 (53.6%) males and 51 (46.4%) female respondents. All were of Indian origin and 69 (62.7%) had travelled internationally in the last 5 years. The mean age of study participants was 23.3±1.3yrs with range of 23-30 years. The majority (69.6%) of them had travelled abroad for holiday purposes. Most (73.9%) of them had travelled with family members. Out of 69 who had travelled internationally, 47 (68.1%) had visited a doctor for travel health advice prior to the trip and 29 (42%) had taken the required vaccination for the destination countries in their last international travels. The age and sex of the respondents did not have any statistically significant influence on the uptake of the travel vaccine.

Conclusion: Study findings revealed inadequate awareness and practice of travel medicine among medical interns.

Keywords: Awareness, Practice, Travel, Travel-Related Illness, Vaccines, Hospitals, India

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Introduction

In 21st century due to rapid industrialisation, advancement in science and technology, and increased tourism, peoples are travelling globally for various purposes (e.g. Job, academic meet, education, business, etc.). World Tourism Organization reports that international travelling for various purposes has increased significantly for a few decades. International travel has increased dramatically over the last few decades both in magnitude, speed and geographical reach with 940 million arrivals reported in 2010.¹ Such travel exposes individuals to new cultural, psychological, physiological, and microbiological experiences. Travellers play a significant role in the spread of infectious diseases across international borders, through their travel patterns and behaviours.

Travel across the boundaries may be the only risk factor for

infectious diseases that are well controlled in the travellers' country of residence, particularly vaccine-preventable diseases such as hepatitis A, typhoid, polio, and measles.²

The role of vaccination among travellers is an essential component of national control of travel-associated infectious diseases. Understanding the behaviours of travellers and their attitudes towards a variety of communicable diseases can inform policy aimed at protecting the individual traveller, their contacts, and the communities into which they travel. Behavioural studies of travellers provide insights into the risks of both acquiring and importing infectious diseases.²

A pretravel consultation with a health professional can provide an international traveller with the necessary preventive advice on minimizing health risks during travel, including the risk of infectious disease and the opportunity

for relevant vaccination and chemoprophylaxis. Travellers who seek pretravel health advice from a health professional have been found to have a better knowledge of infectious disease risk, more accurate risk perceptions, and a higher level of intended risk-reducing behaviours.³⁻⁶

Studies have shown that many western travellers do not consult a health professional prior to travel and may not be aware of their need to protect themselves from infectious diseases.⁷⁻¹¹ Studies on the pretravel health-seeking behaviour of travellers within the Asia Pacific are limited; however, recent evidence suggests that the proportion of Asian travellers seeking pretravel health advice is significantly lower than that of western travellers.¹¹

Several conducted surveys have demonstrated that high proportions of travellers are unaware of their travel health risks. In many cases, travellers had not received the immunizations, and medications for prophylaxis despite the range of opportunities for travel health advice available.¹²⁻¹⁵

Every year many medical professionals travel from one country to another for one or more reasons. Being medical professionals, they must be aware of the necessary travel health advisory and follow it. The diverse range of disease burdens across the world and each country with different travel health protocols make it necessary for the medical professional to be aware and practice travel health services. In India, currently, the data is not available on awareness and practice of travel health advisory among travellers as well as medical professionals. This reflects poor monitoring and adherence to travel health advisory in the country. Lack of study on awareness among medical professionals reflects a lack of concern toward the importance of travel health. This study explored the awareness and practice of pre-travel health care among medical interns of a tertiary care hospital.

Methods

A cross-sectional study was carried out in medical interns of tertiary care hospital at Pimpri, Pune, Maharashtra from April 2018 to March 2019. Study participants were Bachelor of Medicine and Bachelor of Surgery (MBBS) interns posted in the preventive medicine departments during an internship program in the same hospital. From a previous study, it was found that 71.4% of participants had taken the required vaccination for the destination countries in their last international travels¹⁵ considering the same proportion of calculated sample size using a formula for proportionate sample size with 10% allowable error at 95% confidence interval was 79 (Open epi software). A total of 110 study participants were included after obtaining informed consent. A convenience sampling method was applied and participants were approached on a continuous basis until the required sample size was achieved. Interns not willing to participate were excluded from the study. Awareness and practice of pre-travel health were assessed with the help of a preformed self-assessment questionnaire. The questionnaire was adapted and modified from previous study¹⁶ as per requirement in the local context. A pilot study was carried out among ten medical interns using a modified questionnaire for validation. The self-assessment questionnaire consisted of questions

related to basic demographic information, history of travel, number of foreign visits during the last five years, knowledge about travel disease, chemoprophylaxis, travel vaccine, and the importance of the pre-travel vaccine. The understanding question consists of the best time to visit traveller's clinic before travel, necessity of pretravel vaccine, advice, and their satisfaction in the earlier pretravel clinic. Knowledge and understanding assessment was done using yes/no response and open-ended questions.

Data were entered in Microsoft Excel 2007. The responses of the participants were statistically analysed using SPSS Version 20. Descriptive analysis for the categorical and continuous variables was performed. Categorical variable results were expressed in frequency (percentages) and continuous variable results were expressed in mean & SD or Median and quartile range depending on the distribution of the variable.

Results

One hundred and ten MBBS intern doctors participated in this study, with 59 (53.6%) males and 51 (46.4%) female respondents. All were of Indian origin. Out of 110 participants, 69 (62.7%) had travelled internationally in the last 5 years. The mean age of the study participants was 23.4±1.3yrs and range of 23-30 years. The majority (69.6%) of them had travelled for the holiday purpose with a mean duration of stay 14±10.7days and a range of 3-60 days. Maximum (73.9%) had travelled with family. Out of 69 travelling internationally, 47 (68.1%) had visited a doctor for travel health advice prior to the trip and 29 (42%) had received the required vaccination for the destination countries in their last international travels. Hepatitis B (75.8%) was the most received vaccine by the respondents who had travelled internationally. Other received vaccines were hepatitis A (34.5%), influenza (13.8%), and typhoid (6.9%) (Table 1).

The age and sex of the respondents did not have any statistically significant influence on the uptake of travel vaccine among the respondents who had embarked on international travel at one point or the others within the last five years prior to this study.

Discussion

In the present study, the number of male respondents was slightly higher than female respondents. In the study conducted at Oman¹⁷ and Australia¹⁸ similar to the present study male respondents were higher in number compared to female respondents; however, in a study conducted in Qatar, female respondents were the predominant group¹⁹ while in a study conducted in America²⁰ there were equal proportions of male and female respondents.

Tourism, visiting family and friends as well as educational visits were the three most common purposes of travel in this study group, which is similar to other studies.^{10,17,21}

International travel has dramatically increased during recent years and there has been an increase in diseases and associated public health problems. Each year, 80 million travellers residing in developed countries visit developing countries where the hygienic and epidemiological conditions are fundamentally different from their home country.²²

In the present study, 69 individuals (62.7%) had travelled internationally in the last 5 years preceding this study and Hepatitis B was the most received vaccine by 75.8% of the respondents who had travelled internationally. Other received vaccines were Hepatitis A (34.5%), Influenza (13.8%), and typhoid (6.9%). In a study by Hassan et al.¹⁵ 63 (33.3%) of the respondents had embarked on at least one international travel in the last 5 years preceding this study and of which 45 (71.4%) had taken the required vaccination for the destination countries in their last international travels. Yellow fever vaccine was the most received vaccine by 82.2% of the respondents who had travelled internationally. Variation in findings and vaccination could be due to the difference in travelled country and the need for vaccine requirement of the travelled country.

The importance of qualified pre-travel advice consultation is increasing due to the increase in demand at international airports and diseases of international spread concern. The impact of travel medicine on health cannot be ignored in relation to endemic diseases of the country to visit and the spread of disease from travellers to the country of visit. There

Table 1. Baseline Information of Study Participants

Demographics	No.	%
Indian	110	100
Gender		
Female	51	46.4
Male	59	53.6
Travelled out of the country		
No	41	37.3
Yes	69	62.7
Purpose of travel (n=69)		
Holiday	48	69.6
Education	8	11.6
Meeting friends or relatives	15	21.7
Travelled with (n=69)		
Alone	8	11.6
Friends	12	17.4
Family	51	73.9
Frequency of travel in the last 5 years (n=69)		
1	37	53.6
2	19	27.5
3	6	8.7
>3	4	5.8
Visited doctor for travel health advice prior to the trip (n=69)		
Yes	47	68.1
No	22	31.9
Had you received travel vaccine before your last trip (n=29)		
Hepatitis B	22	75.8
Hepatitis A	10	34.5
Influenza	4	13.8
Typhoid	2	6.9

is a focus on infectious diseases in travel medicine. This may seem logical, as travel medicine has generally focused on pretravel vaccination and disease prophylaxis, and the continuous upgrading of knowledge that travellers receive.^{23,24}

In the present study, 70% of intern doctors had heard about travel vaccine and chemoprophylaxis for international travels but they were not much aware of vaccine requirement, schedule, and its importance. One-third of them had mentioned hepatitis A & B, JE and rabies as international travel vaccine which are commonly given in immunisation schedule of India, as well. Very few (11.8%) were aware of the importance of yellow fever vaccination in relation to international travel (Table 2). In a study by Hassan et al¹⁵ a majority of the physicians were aware of the travel vaccine and provided advice on to their client. However, in a study performed in Qatar only

44.7% of the physicians provided pretravel medical advice to their clients, including travel vaccination.²⁵ These findings from different studies highlight the need to sensitize physicians and health care professionals to travel medicine. Variation in study findings may be due to differences in the study population and geographical area but by emerging and re-emerging infectious disease trends all over the world, there is a need to focus on travel medicine by policy makers which helps to improve disease burden.

All individual planning should seek advice on the potential hazards in their chosen destinations and understand how best to protect their health and minimize the risk of acquiring the disease. Forward planning, appropriate preventive measures, and careful precautions can protect their health and minimize the risks of accidents and acquiring the disease. Although the medical profession and the travel industry can provide extensive help and sound advice, it remains the traveller's responsibility to seek information to understand the risks

Table 2. Knowledge About Travel Health

	No.	%
Heard about international travel vaccination and chemoprophylaxis		
Yes	77	70
No	33	30
Knowledge about vaccines		
Hepatitis B	35	31.8
Hepatitis A	33	30
Yellow fever	33	30
Japanese encephalitis	13	11.8
Typhoid	12	10.9
Rabies	10	9.1
Cholera	4	3.6
Importance of pre-travel health advice		
Avoid health problem	85	77.3
Take vaccine	30	27.3
Take anti-malarial medicines	6	5.5
Take first aid	3	2.7
Don't know	3	2.7

involved, and to take the necessary precautions to protect their health while travelling.²³ In the present study out of 69 respondents travelled internationally, 47 (68.1%) had visited a doctor for travel health advice prior to their trip. Among the study participants who travelled internationally the reasons stated for not visiting a doctor were that they were either unaware of the importance of the matter (47.8%) or had consulted with a family doctor (31.9%) on phone. Reasons stated in others' studies included distressing protocols and requirement for the vaccination, cost of vaccination as well as a poor monitoring system for ensuring travel vaccination at the entry and exit points of the countries, perception of not being at risk, lack of awareness of travel diseases, lack of consideration of vaccination as an essential matter for travelling, cost of the vaccination, and side effect.^{15,26,27} Variation in findings compared to other studies indicate that there are poor monitoring and adherence to travel guidelines in the study area.

Today's medical intern doctors are future healthcare professionals and important members of society to combat health problems. Additionally, they are an important source of information to the general public to provide counselling, education, and prevention measures for disease when they want to travel internationally, thus the knowledge and understanding of travel medicine among them needs to be standardized. On analysing awareness and practice of the travel medicine in various aspects such as necessity, vaccine need, and time to visit physician, etc, it was found that 96.4% of the interns said that pre-travel health advice is necessary, the most common reason for pretravel advice was to avoid health problem (77.3%) followed by vaccination (27.3%). Out of 69 travellers, 34.5% said that a traveller should visit traveller's clinic four to five weeks before travelling; 87.3% said pretravel vaccination is necessary and 91.8% said that anti-malarial medicines are necessary (Table 3). The present

Table 3. Understanding Pre-travel Health

	No.	%
Best time to visit traveller's clinic before travel (wk)		
1-2	18	16.4
2-3	30	27.3
3-4	19	17.3
4-5	38	34.5
Don't know	5	4.5
Pre-travel health advice is necessary		
Don't know	106	96.4
Yes	4	3.6
Pre-travel vaccination is necessary		
Yes	96	87.3
Don't know	14	12.7
Pre-travel anti-malarial treatment is necessary		
Yes	101	91.8
Don't know	9	8.2
Satisfied with your pre-travel health advice for the last trip	60	86.9

Research Highlights

What Is Already Known?

In India, there is a poor performance of travel health counseling among travelers as well as medical professionals, and this should be important for both groups.

What This Study Adds?

The findings from the study will help to improve pretravel-health importance among medical professionals and also will draw the attention of policy makers regarding strict monitoring and adherence to international travel guidelines among Indians to reduce travel-related diseases.

study reflects serious shortcomings with regard to awareness of vaccines and chemo-prophylaxis for international travel.

Limitations

This study could not ascertain the actual uptake of travel vaccine among the respondents as well as the full compliance with travel vaccination requirements of the various destination countries.

Conclusion

Study findings revealed unsatisfactory awareness and practice of travel medicine among medical intern doctors. Findings of the study also revealed there is need to focus on immediate attention by policy makers for strict monitoring and adherence to international travel guidelines to reduce the travel-related disease. More studies need to be conducted to ascertain the actual awareness and practices in different parts of India to generalise study findings.

Authors' Contributions

Study conception and design: JAL; Acquisition of data: KS and SG; Analysis and interpretation of data: SG and KS; Drafting of manuscript: JAL; Critical revision: KS and SG.

Conflict of Interest Disclosures

The authors declare no conflict of interest in their research.

Ethical Approval

Institutional ethical committee approval (DYPM/CSC/15/2018, May 7, 2018) and informed consent from study participants were obtained for the study.

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