

# Travel Health, Gaps in Knowledge, Attitudes, and Practices Among Dubai Travellers, Dubai, UAE

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## Abstract

**Background:** International travel can pose various risks to health, depending on the characteristics of both the traveller and the travel. Travellers may encounter sudden and significant changes in altitude, humidity, microbes, and temperature, which can result in ill health. In addition, serious health risks may arise in areas where accommodation is of poor quality, hygiene and sanitation are inadequate, medical services are not well developed and clean water is unavailable. **Objective:** to assess knowledge, attitude and practice towards travel health among Dubai's travellers traveling abroad. **Methods:** A cross sectional survey was carried out in Jebel Ali Free zone's companies employees where on line self-administrated questionnaire has been distributed to the employees of randomly selected 20 companies. 162 responses were collected. **Results:** The study showed that only 22.8% of respondents had sought pre-travel health advice from travel clinic, 77.8% of respondents were less than 40 years old, and of (40.7%) of respondents planned their trips only one to 2 weeks before travel. The most frequently reported destinations were, Asia (30.2%), India (24.7%) followed by Africa which constitutes (16%). There was a good knowledge regarding importance of vaccination (96.2%), and malaria drug prophylaxis (83.4%), but there was a low attitudes towards vaccinations (55.6%). **Conclusions:** The result of this short study period provided a valuable insight into the knowledge, attitude and practice of the respondents with significant low awareness of pre-travel health advice as reflected by the low uptake of specialist travel medicine advice with regard to travel vaccinations and malaria Prophylaxis which highlighted an important educational need for Dubai travellers.

## Keywords

Travel Health, Knowledge & Attitude, Dubai

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## 1. Introduction

International travel can pose various risks to health, depending on the characteristics of both the traveller and the travel. Travellers may encounter sudden and significant changes in altitude, humidity, microbes, and temperature, which can result in ill health. In addition, serious health risks may arise in areas where accommodation is of poor quality, hygiene and sanitation are inadequate, medical services are not well developed and clean water is unavailable. This can be minimized by suitable precautions taken before, during and after travel. <sup>(1)</sup>

The number of people travelling internationally is increasing every year. According to Dubai Department of Tourism and Commerce Marketing (DTCM), the number of tourists who visited Dubai in 2012 reached more than ten million. <sup>(2)</sup> Many travellers are putting themselves at risk by failing to take the necessary precautions recommended by the World health organization. <sup>(1)</sup>

Although Dubai is the focus of the fastest-growing tourist and travel industry, few data are available on the knowledge, attitudes and practices (KAP) from this region with regard to determine whether travellers obtain travel health related information about vaccination, malaria chemoprophylaxis,

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self-treatment, foodborne and waterborne infections, respiratory tract infections, sexually transmitted infections and other infectious diseases and health risk with attention to the itinerary, trip duration, travel style, and health background and activities of the traveler. <sup>(1, 3)</sup>

Several surveys have demonstrated that high proportions of travellers are unaware of their travel health risks. In many cases, travellers have not received the immunizations, medications for prophylaxis despite the range of opportunities for travel health advice available. <sup>(3- 5)</sup> A number of reasons explain why this is the case. In part, this is due to low risk perception and lack of awareness of the important of the pre-travel health advice from travellers. <sup>(6-8)</sup> In other cases, it is a result of the ignorance of health professionals as general practitioners often lack training and knowledge in travel medicine.

Some travellers have clearly received incomplete, sometimes incorrect or misleading advice from Pharmacies, and travel industry and this result in inadequate protection in an important proportion of travellers. <sup>(9-12)</sup>

To ensure that future travellers receive optimal travel health advice and appropriate preventative measures for a safe trip; this study is carried out to assess knowledge, attitude and practice towards travel health among Dubai's travellers traveling abroad.

## 2. Subjects and Methods

### 2.1. Study Setting and Design

A cross sectional study was carried out in Jebel Ali free zone located at 40 kilometres, north to Dubai.

### 2.2. Study Population

Jebel Ali free zone employees, they are mainly from Europe, Gulf Cooperated Countries, and other Middle East Countries, East Asia including Indian Sub-continent, Far East, Africa, the United States and Caribbean, Australia and New Zealand and United Arab local employees.

There are more than 2200 companies including Jebel Ali Industrial area (according to the Environment and safety office statistics), total number exceed 80,000 employees.

Inclusion criteria:

- Large companies in the free zone area
- Represents both local and non- local Dubai population
- Exclusion criteria:
- Companies that their main employees are unskilled labourers

### 2.3. Sampling Size and Procedure

Using the computer program Epi-info version "6.04", 12% estimated sougning traveller health clinic, <sup>(13)</sup> 5% degree of precision and 95% confidence interval , the minimum sample size required is 163, 10% of non-response was added, it reached 179.

Twenty companies' employees, was selected randomly according to the above criteria; only the odd numbers had been selected from between the 40 companies.

### 2.4. Data Collection Plan

On line self-administrated questionnaires was distributed through the head office of environment and safety (EHS) email to respondents. They were asked about their knowledge, attitudes towards importance of travel vaccine and malaria prophylaxis in addition to the awareness of the best time for visiting the traveller's clinic and the importance of seeking pre- travel advice

For those who visited the travel clinic have been asked about the pre travel health advice, and all the respondents were asked about any health problems related to their travel.

### 2.5. Data Analysis

Data was analysed using the software program "SPSS "version 19. Frequency tables with descriptive statistics using mean and standard deviation for quantitative data was carried out. Chi-square test was used for categorical data. P <0.05 was the cut off level of significance.

## 3. Results

### 3.1. Socio-Demographic and Destinations Characteristics

Table (1) revealed that, the highest percentages of the participants was in the age 30- <40 years (43.2%), followed by the age <30 years (34.6%) with the mean age of 33.65±8.71 years. The majority of them were non-locals and males (85.8% & 82.7 % respectively).

The most frequently reported destinations were, Asia, which represents 30.2% of the travel destinations, India (24.7%), followed by Africa (16%), and travellers to Europe constitute only 7.4%. The main purpose of the trip was tourism (56.2%), followed by business (21.6%).

10.5 % reported both previous reasons for travel.

### 3.2. Knowledge

Table (2) illustrated that, with regard to the importance of pre- travel advice; it was found that, 64.8% were able to recognize all the options such as to avoid health problems,

taking vaccination, and antimalarial prophylaxis, 30.2% of travellers were able to identify only one part of the 4 options for the pre travel consultation which is to avoid health problem abroad.

**Table (1).** Distribution of the study sample according to socio-demographic and destinations characteristics, Dubai 2013.

Characteristics	No (n =162)	%
<i>1. Socio-demographic</i>		
Age (years)		
<30	56	34.6
30 -	70	43.2
40 -	27	16.7
50 +	9	5.6
-		
X ± SD	33.65±8.71	
Sex		
Male	134	82.7
Female	28	17.3
Nationality		
Local	23	14.2
Non-Local	139	85.8
<i>2. Destinations</i>		
Destinations		
Africa	26	16.0
India	40	24.7
Asia	49	30.2
Europe	12	7.4
More than one destinations	35	21.7
Main reasons for travel		
Tourism	91	56.2
Business	35	21.6
Tourism & Business	17	10.5
Others	19	11.7

Regarding the best time to visit the traveller's clinic before travel, 40.7 % reported 1 to 2 weeks before travel, whereas 12.3% stated 3-4 weeks before travel, and only one quarter (25.3%) were aware that the best time is 4 to 6 weeks before travel.

The majority of respondents (96.2% & 83.4% respectively) were aware about the importance of vaccination and antimalarial prophylaxis.

### 3.3. Attitude

Table (2) demonstrated that, 55.6% reported disagreement about the towards visiting the traveller's clinic before each travel. On the other hand, 64.2% recognized the importance of antimalarial drug prophylaxis even if they use the personal prophylactic measures.

### 3.4. Practice

Concerning visit to traveller's clinic, table (3) illustrated that, only 22.8% of travellers sought travel health advice and had visited the travel health clinic before travel. Among those who did not seek pre-travel health advice, 44% were not aware of the need to do so as no body advise them, 42.4% sought pre-travel advice about their destination from their

family doctor, 8.8% felt that they already knew what to do to protect their health while traveling. 3.2% of travellers thought that vaccines were expensive.

**Table (2).** Distribution of the study sample according to their knowledge and attitude toward vaccination and antimalarial drug prophylaxis and importance of pre-travel advice, Dubai 2013.

Variable	No (n =162)	%
<i>Knowledge</i>		
Importance of pre-travel advice		
To avoid health problem	49	30.2
To take vaccination	6	3.7
To take antimalarial	2	1.2
All of the above mentioned advice	105	64.8
Best time to visit travellers clinic before travel		
1 – 2 weeks	66	40.7
2 – 3weeks	15	9.3
3 – 4 weeks	20	12.3
4 – 6 weeks	41	25.3
I don't know	20	12.3
Importance of vaccination		
Yes	156	96.2
No	3	1.9
I don't know	3	1.9
Importance of antimalarial drug		
Yes	135	83.4
No	8	4.9
Do not Know	19	11.7
<i>Attitude</i>		
Visit to travel clinic if vaccinated		
Agree	52	32.1
Not Agree	90	55.6
Do not Know	20	12.3
Take of antimalarial prophylaxis		
Agree	27	16.6
Not Agree	104	64.2
Do not Know	31	19.1

Table (4) illustrated that the majority of travellers aged <30 years (82.1%) were more likely to visit the travel clinic before their travel followed by those age 30- <40 years (77.1%) and only 55.6 % of those aged 50 years or more ever visited the clinic. Males and non-locals were more likely to visit the travel clinic than females and non-locals, but all theses the differences were not statistically significant.

**Table (3).** Distribution of the study sample according to their visits to the traveller's clinic, Dubai 2013.

Variable	No (n =162)	%
<i>Visit the traveller's clinic before travel</i>		
Yes	37	22.8
No	125	77.2
<i>Reasons for not visiting traveller's clinic •</i>		
No body inform me	55	44.0
I use to see my family doctor	53	42.4
Because I know what to do	11	8.8
Far away from my place	2	1.6
Expensive	4	3.2

• Excluding those who visit the traveller's clinic

Regarding the health advice received in travel health clinic (table 5), it was found that; 75.7% of the respondents

received health advice about each of the vaccination and food / water, 54.1% received advice about traveller's diarrhoea and 35.1% about malaria prophylaxis.

**Table (4).** Distribution of the study sample according to their visits to the traveller's clinic and socio-demographic characteristics.

Socio-demographic characteristics	Visited traveller's clinic			P value*
	Yes (n =37)	No (n =125)	Total (n =162)	
Age (years)				
<30	No 10 % 17.9	46 82.1	56 100.0	0.345
30-	No 16 % 22.9	54 77.1	70 100.0	
40-	No 7 % 25.9	20 74.1	27 100.0	
50+	No 4 % 44.4	5 55.6	9 100.0	
Sex				
Male	No 28 % 20.9	106 79.1	134 100.0	0.197
Female	No 9 % 32.1	19 67.9	28 100.0	
Nationality				
Local	No 6 % 26.1	17 73.9	23 100.0	0.434
Non Local	No 31 % 22.3	108 77.7	139 100.0	

• Based on Chi-square test

**Table (5).** Distribution of the study sample according to the main health advices received at traveller's clinic, Dubai 2013.

Health advice	No (n =37) <sup>o</sup>	%
Vaccination advice	28	75.7
Food and water advice	28	75.7
Travelers' diarrhea	20	54.1
Malaria prophylaxis	13	35.1
Travel safety	5	13.5
Travel insurance	4	10.8
Others	2	5.4

<sup>o</sup> Multiple response (numbers are not equal to 37 and percent is not equal to 100 %)

### 3.5. Satisfaction

**Table (6).** Distribution of the study sample according to the satisfaction about the administrated services in the traveller's clinic, Dubai 2013.

Satisfaction about travel health services	No (n =37)	%
Respondents' satisfaction		
No	12	32.4
Yes	25	67.6
Causes of dissatisfaction*		
Only vaccination advice given	2	16.7
Only some advices given	4	33.3
No any advice given	3	25.0
Expensive	3	25.0

\* Excluding 25 respondents who are satisfied

As regards the travellers satisfaction with travel health information given at the travel health clinic, Table (6) revealed that, more than two third of the travellers (67.6%) were satisfied. Causes of dissatisfaction were; 33.3% of travellers stated that only some advice given and 16.7% received only advice about vaccination and 25% were not satisfied because of the vaccines were expensive.

## 4. Discussion

The importance of qualified pre-travel advice consultation is increasing due to the increasing travel in Dubai. The impact of travel medicine on health cannot be ignored. There has been a focus on infectious diseases in travel medicine. This may seem logical, as travel medicine has generally focused on prèt ravel vaccination and disease prophylaxis, and continuous upgrading of knowledge that travellers receive. (1,7)

Regarding knowledge, 83.4% of respondents have knowledge about important of antimalarial prophylaxis and 64.8% are able to recognize the components or the content of the health advice that should be delivered. This figure consistent with the Australian travelers to developing countries where 76% of travellers believed that vaccination provides the essential protection. (13)

Regarding attitude, the present study revealed that, only 55.6% of respondents perceived the importance of vaccination and 64.2% had a positive attitude towards antimalarial drug prophylaxis. This figure is far lower than the figures reported for European traveler's attitude where 80% considered vaccinations essential, but the figure is consistent with attitude against malaria where 64% of the European travellers had a positive attitude. (14)

In spite of the fact that the random sample was taken from only Jebel Ali Free zone clients in which there were high proportion of experienced business travelers, but the traveller KAP reflect serious shortcomings with regard to vaccines and taking antimalarial prophylaxis, especially in case of travelers practices as only 22.8% of travellers sought travel health advice from travel clinic before travel which also lower than the Australian, American and European studies where 32%, 36% and 40% respectively of travellers sought travel health advice from travel health clinic. (13,15,14) But it is far lower than the Spanish and South African studies where 83.1% & 86% of the traveller respectively sought health-related advice. (16,17) On the other hand , it is little more higher than the Qatar airport study (19%) of travellers sought travel health advice. (18)

The survey's findings promote the discipline of travel medicine as a separate specialty. It is clear that Dubai

travelers are better satisfied with advice received from travel medicine specialists (67.6%).

Of particular concern is that only 22.8% of travellers sought travel health advice from travel clinic before departure. The reason for this low percentage may be a result of low risk perception as 44% of the respondents stated that they did not seek travel advice because nobody advise them to do so. Another important factor also is the increasing number of last minute travellers that suggest that time and convenience are substantial factors as 40.7% of the respondents planned their trip less than 2 weeks before travel. These reflect that the last-minute travellers were a key group to consider for targeted travel health advice and support from health professionals and other institutions is highly needed, particularly family physicians, are important in the field of travel medicine, and further training in the field of travel medicine is advised as 42.4% of respondents stated that they use to see their family doctor before.

Many travelers suggested increasing the awareness about travel clinic through travel agency, when they purchase their tickets, at the same time, the travel agency can direct them to the travel health clinic and the travel health web site, which they can consult. However, two recent studies suggested travel agents are interested in the issue of travel health and see themselves play a role in referring clients to travel clinics and/or distributing health information prepared by travel clinic (19), which might be interesting, provided high-quality information or referral is made available (19, 20).

## 5. Conclusion and Recommendations

In summary, there is a considerable shortcoming in KAP with significant low awareness of pre-travel health advice as reflected by the low uptake of specialist travel medicine advice (22.8%), with regard to travel vaccinations and malaria Prophylaxis with documented preventable diseases such as respiratory diseases, traveller's diarrhoea, typhoid and injuries. Therefore there is an urgent need to increase awareness of the travel medicine for Dubai traveler's through media attention, simple health education material and travel web sites for both public and health professionals.

Travel agencies could be provided with educational material developed by travel medicine clinic and can also play a role in referring traveller's to travel clinics, would be the best strategies to improve this situation.

Standardized airport questionnaire surveys should be carried out at regular intervals to monitor the success of such interventions.

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