



ELSEVIER



<http://www.elsevier.com/locate/jegh>

ORIGINAL ARTICLE

Occurrence of acute respiratory infection, diarrhea and jaundice among Afghan pilgrims, 2010

Khwaja Mir Islam Saeed ^{a,*}, Jawad Mofleh ^{b,1}, M. Hafiz Rasooly ^{a,2},
M. Iqbal Aman ^{a,3}

^a Afghanistan National Public Health Institute, Ministry of Public Health, Kabul, Afghanistan

^b Eastern Mediterranean Public Health Network (EMPHNET), Amman, Jordan

Received 22 December 2011; received in revised form 23 November 2012; accepted 23 November 2012
Available online 27 December 2012

KEYWORDS

Mass Gathering;
ARI;
Diarrhea;
Hajj;
Afghanistan

Abstract

Background: Annually 30,000 Afghans attend the Hajj in Saudi Arabia that is one of the largest mass gathering events in the world. We aimed to determine the prevalence of three syndromes of interest diarrhea, acute respiratory infections (ARI) and jaundice-among Hajjis gathering at the four transit sites in Afghanistan before, during, and after their voyage. **Methods:** A total of 1659 Hajjis at four transit sites were selected and included a cross-sectional study. Information was collected prior Hajjis departure and upon their return from Saudi Arabia regarding demographics and experience of diarrhea, ARI and jaundice. Standardized case definitions were used for the three health outcomes of interest. **Results:** The occurrence of diarrhea and jaundice remained constant over time. However, ARI increased from 1.4% at pre-transit to 4% at transit area and 37% during the Hajj. ARI rates among residents from the Central and Northern regions of Afghanistan were significantly higher at the post-Hajj stage, at 50% and 69%, respectively. There was no difference in ARI by sex among Hajjis. **Conclusions:** There is a need to review the quality and effectiveness of the flu vaccine. Authorities should come up with the sound strategies to overcome ARI problems during Hajj.

© 2012 Ministry of Health, Saudi Arabia. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Each year in the 12th month of the Islamic calendar (Dhul-Hijjah) Muslims from around the world begin observing activities associated with the annual Hajj, or pilgrimage to Mecca. Hajj is the largest

* Corresponding author. Tel.: 0093700290955.

E-mail addresses: km_islam2001@yahoo.com (K.M.I. Saeed), jjmofleh@yahoo.com (J. Mofleh), dochafez@yahoo.com (M. Hafiz Rasooly), aman.iqbal786@gmail.com (M. Iqbal Aman).

¹ Tel.: 0093799607107.

² Tel.: 0093798036038.

³ Tel.: 0093700615156.

annual Islamic mass gathering in the world with almost 3 million pilgrims known as "Hajjis" attending the event [1]. Being one of the enormous mass gatherings of its kind, the Hajj pilgrimage has its own health challenges. Pilgrims (Hajjis) coming from various parts of the globe represent diverse socio-demographic characteristics and health backgrounds. These factors could be suggestive of posing various health risks to pilgrims and even making them prone to especially communicable diseases, injuries and loss of hundreds of lives [2–4] while attending such a massive event.

Those health risks, particularly infectious diseases, could give rise to diseases such as; meningococcal meningitis, respiratory tract infections, and blood-borne diseases [5]. More importantly, outbreaks of infectious diseases, particularly acute respiratory tract infections (ARI), diarrheal diseases, and meningococcal meningitis, have been frequently reported among Hajjis [6]. Given that the average journey ranges between 30 and 45 days, most pilgrims will most likely be exposed to contracting various health problems. Such stay consists of around 6 days in Jeddah as their entry point to Saudi Arabia preparing for the arranged activities, then around 10 days to perform special prayers in the city of Medina, and almost 8 days in Mecca for performing the key tasks, and, finally, the rest period for preparing to return to their initial destination. That is common for Afghan Hajjis, which is not compulsory for all.

According to a survey completed in France addressing the Hajj associated problems, cough was the main complaint significantly high in individuals >55 years with the attack rate of 51%, and followed by headache, heat stress, and fever. Added to that, some travelers reported suffering from diarrhea and vomiting [7]. In 2006 in another study report published in Marseille, France, the attack rate for ARI was recorded to be up to 60% in cohorts of returned Hajj pilgrims [8]. As reported directly by the pilgrims, the main sources of contamination for ARI involved: sneezing and coughing (58.1%), dirty hands (43.9%), contact with ill persons (40.5%), saliva (17.2%), promiscuity (17.0%), food (12.1%), drink (9.1%), air conditioning (3.4%), and contact with animals (0.4%) [9].

Additionally, one of the other common types of infectious diseases challenging the well-being of the pilgrims was diarrhea [10]. The result of a laboratory study of stool samples in Saudi Arabia revealed that most of the enteric virus infections causing diarrheal diseases occurred following the occurrence of the Hajj season and rotaviruses were significantly more common in non-Saudis than in Saudi citizens [11]. The source also speculated a

likely relationship among the occurrence of hepatitis and travel, specifically among Hajjis undertaking a long and challenging journey. During this congregation, pilgrims stay under the tents shared by a large number of people often living on foods from street vendors and sharing common toilet facilities that can expose them to both hepatitis A and E. These circumstances are suggestive of the notion that pilgrims would be at high risk of developing hepatitis B or C, particularly due to undertaking certain activities, such as head shaving or trimming by fellow pilgrims or street barbers, who often re-use their razor. Hajjis could also get exposed to hepatitis B or C due to getting injured on their hands and possibly feet while sacrificing cattle and walking barefooted [12]. As per these reports supported by anecdotal evidences, a considerable number of Hajjis returning from Hajj report one or more cases of communicable diseases, such as respiratory, diarrheal and other types of infectious diseases.

Although no studies provide data on Hajj problems in Afghanistan, as anecdotally reported, the health concerns as mentioned earlier concern the Afghan public health authorities as this has the potential to pose serious effects on the health of an average of 30,000 Afghan Hajjis and their dependent families. To embark on this and assess the prevalence of ARI, diarrheal disease, and jaundice as a proxy for hepatitis among Afghan Hajjis, a cross-sectional study was conducted capturing data at three points of time: before arrival to the transit areas (departing airports), at the transit area and again upon arrival back from Hajj. Data from this study are also intended to guide the development of prevention guidelines by the Ministry of Public Health (MoPH) to provide a more responsive healthcare to the Afghan Hajjis.

2. Methods and materials

A cross-sectional study was conducted to collect data on three health problems: acute respiratory tract infection (ARI), diarrheal diseases (DD) and jaundice (as a proxy for viral hepatitis). The study was carried out at four points where the Afghan Hajj pilgrims gathered coming from four regions of the country and prepared to travel to Saudi Arabia. These points, called *transit areas*, are located in certain geographical locations of the country, namely: Kandahar, Balkh, Hirat and Kabul, serving residents of the South, North, West and Central regions of the country, respectively. The transit areas were located next to the airports with poor facilities where there is only one large waiting hall

Download English Version:

<https://daneshyari.com/en/article/3327627>

Download Persian Version:

<https://daneshyari.com/article/3327627>

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