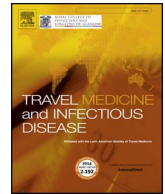




Contents lists available at ScienceDirect

Travel Medicine and Infectious Disease

journal homepage: www.elsevier.com/locate/tmaid

Expected immunizations and health protection for Hajj and Umrah 2018 —An overview

Jaffar A. Al-Tawfiq^{a,b,*}, Philippe Gautret^c, Ziad A. Memish^{d,e,f}^a Johns Hopkins Aramco Healthcare, Dhahran, Saudi Arabia^b Indiana University School of Medicine, Indianapolis, IN, USA^c Unité de Recherche sur Les Maladies Infectieuses et Tropicales émergentes (URMITE) CNRS-IRD UMR 6236, Méditerranée Infection, Faculté de Médecine et de Pharmacie, Aix-Marseille-Université, Marseille, France^d College of Medicine, Alfaisal University, Riyadh, Saudi Arabia^e Infectious Diseases Division, Department of Medicine, Prince Mohamed Bin Abdulaziz Hospital ("PMAH"), Ministry of Health, Riyadh, Saudi Arabia^f Hubert Department of Global Health, Rollins School of Public Health, Emory University, Atlanta, GA, USA

ARTICLE INFO

Keywords:

Hajj
Pilgrimage
Mass gathering
Vaccine requirements
Saudi Arabia

ABSTRACT

Background: The annual Hajj and Umrah are one of the largest recurring religious mass gatherings across the globe drawing pilgrims from more than 185 countries. The living circumstances and activities of the pilgrims may create an environment for the occurrence and spread of communicable diseases. Each year, the Health authority of the Kingdom of Saudi Arabia, in coordination with international health authorities, updates health requirements for pilgrims. The Hajj for 2017 took place from August 24 to September 5, 2017. Here, we review the expected obligations for immunizations for the 2018 Hajj and Umrah.

Results: The Hajj and Umrah vaccine requirements include mandatory vaccinations against yellow fever, quadrivalent meningococcal polysaccharide (every 3 years) or conjugated (every 5 years) vaccines and polio-myelitis vaccine. Influenza vaccine utilizing the 2016 (Southern Hemisphere vaccine to all pilgrims) was recommended but was not obligatory for pilgrims. Ciprofloxacin is required for individuals > 12 years excluding pregnant women as chemoprophylaxis to be given at the port of entry for Pilgrims coming from the meningitis belt. With the ongoing outbreaks of measles in Europe, it is recommended that all pilgrims have an updated immunization against vaccine-preventable diseases (diphtheria, tetanus, pertussis, polio, measles and mumps).

Conclusion: The mandatory vaccines remain the same with continued vigilance for the development of any new or emerging infectious diseases. Continuing surveillance for Zika virus, cholera and MERS-CoV are ongoing.

1. Introduction

The annual Hajj and Umrah are one of the largest recurring religious mass gatherings across the globe drawing pilgrims from more than 185 countries. The number of pilgrims from each country is determined based on the number of Muslims in each country and is based on a ratio of one pilgrim per one thousand Muslims in that country [1]. The Hajj season occurs at a fixed time each year from the 8th to the 13th day of the 12th month (Dhu al-Hijjah) in the Islamic calendar which is 11 days shorter than the Gregorian calendar. Thus, the Hajj season occurs in different time of the Gregorian calendar. On the other hand, the Umrah season is year round and is more intense during the month of Ramadhan (the month of fasting). The month of Ramadhan occurred May 27 to June 24, 2017 and will take place May 15 to June 14, 2018. Hajj is compulsory for all Muslims who have the resources once in a life

time and the Umrah is not compulsory. The number of the annual Hajj pilgrims is about three million with two million non-Saudis pilgrims arriving from overseas countries and mainly arriving by air and others from neighboring countries may travel via land [2–4]. In 2016, the majority (94%) of pilgrims arrived by air, 5% arrived by land and only 1% arrived through the sea. The number of pilgrims per year is shown in Fig. 1. The Kingdom of Saudi Arabia (KSA) provides healthcare free of charge to all pilgrims during the Hajj as done previously through 25 hospitals which have 5000 beds including 500 critical care beds and 550 emergency care beds and 155 healthcare centers staffed with 30,000 Ministry of Health staff [2–4]. In this year's Hajj more than 540,000 pilgrims were serviced in these healthcare facilities with emergency departments serving 23,000 pilgrims. The annual required vaccinations for the Hajj and Umrah seasons are issued by the Saudi Ministry of Health including the 2017 recommendations [5]. In this

* Corresponding author. P.O. Box 76, Room A-428-2, Building 61, Johns Hopkins Aramco Healthcare, Dhahran 31311, Saudi Arabia.
E-mail addresses: jaffar.tawfiq@jhah.com, jaltawfi@yahoo.com (J.A. Al-Tawfiq).

<http://dx.doi.org/10.1016/j.tmaid.2017.10.005>

Received 6 September 2017; Received in revised form 6 October 2017; Accepted 9 October 2017
1477-8939/ © 2017 Elsevier Ltd. All rights reserved.

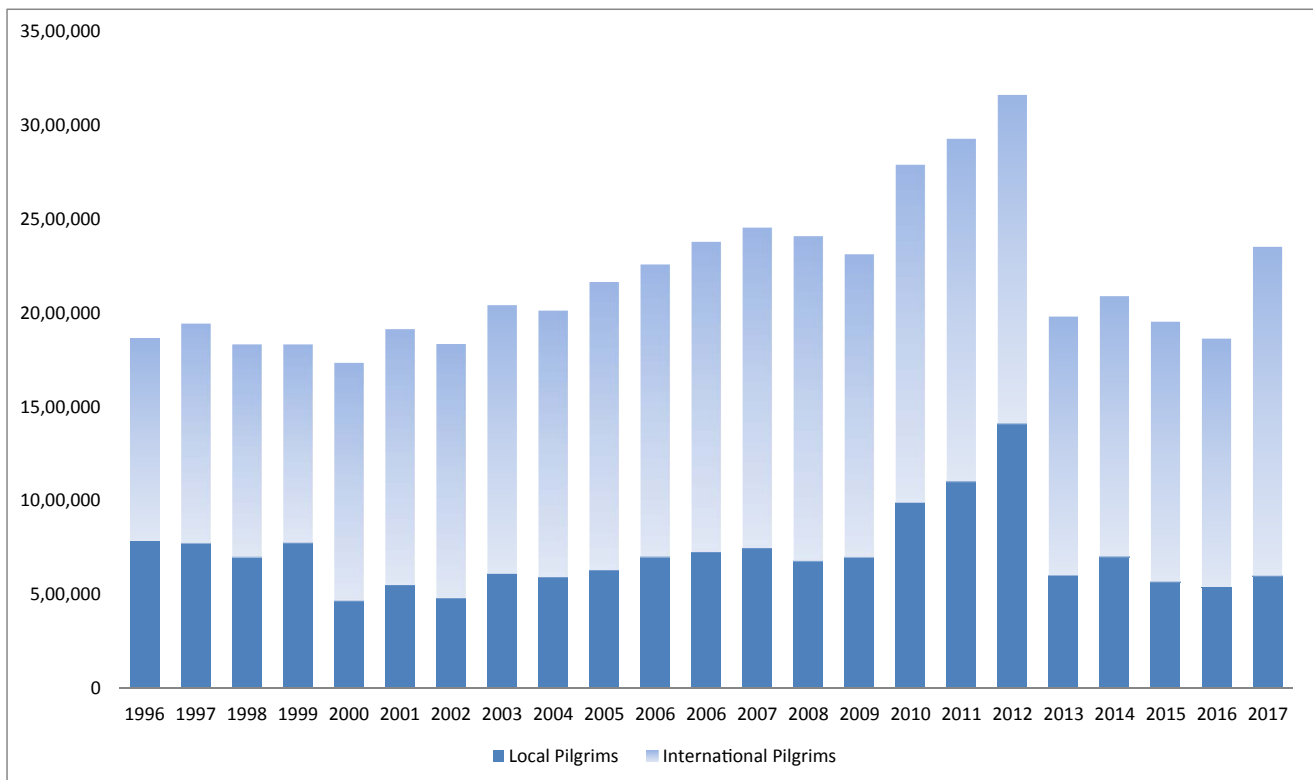


Fig. 1. Annual Number of Pilgrims per year from 1996 to 2017.

article we summarize the recommended vaccinations for the 2018 Hajj and Umrah season.

1.1. Medical advice for Hajj and Umrah travelers

Each year the Saudi Ministry of Health publishes Hajj and Umrah requirements with emphasis on the required vaccinations. These guidelines are updated annually to reflect the changes in the epidemiology of important infectious diseases [1,2,6,7]. The mandatory and recommended vaccines for the 2018 season are discussed further.

1.2. Vaccination during the Hajj and Umrah season

The vaccination requirements during the Hajj and Umrah are divided into: mandatory vaccinations (Meningococcal vaccination, Poliomyelitis vaccine, and Yellow Fever vaccine); recommended vaccination (Influenza), and other immunization against vaccine-preventable diseases (diphtheria, tetanus, pertussis, polio, measles and mumps).

1.3. Meningococcal vaccination

Nisseria meningitidis is associated with a high rate of carriage of 80% [8]. In a recent study, 3.4% of 1055 arriving pilgrims were classified as nasopharyngeal carriage of *N. meningitidis* and of them 66.7% had serogroup B [9]. The requirement of the meningococcal vaccination for pilgrims came in effect in 1987 after the occurrence of meningococcal outbreaks [2]. The vaccine initially was a bivalent A and C meningococcal vaccine and then was expanded to the quadrivalent vaccine (A,C,Y, W135) in May 2001 [10,11]. This expansion of the vaccine resulted from the occurrence of two meningococcal outbreaks with serogroup W135 in 2000 and 2001 [12–14]. The mean numbers of Hajj-related invasive meningococcal disease cases decreased from 13 to 2 cases per year in 1995 compared to 2011 [11]. The requirement of the quadrivalent meningococcal vaccine includes all pilgrims from any

country. Either polysaccharide or conjugated vaccine could be used with differing need for re-dosing according to ministry of health guidance (every 3 yrs for the polysaccharide vaccine while for the conjugated vaccine every 5 yrs). The advantages of the conjugated vaccine include the ability to eradicate carriage and prevent outbreaks among returning colonized pilgrims. Moreover, ciprofloxacin (500 mg tablets) is administered as an oral chemoprophylaxis to pilgrims arriving from the African meningitis belt [2,6,8,15,16]. In one study, the carriage rate of *N. meningitidis* was 3.6% and 1.4% in a paired cohort of pilgrims from high endemic countries at arrival and departure, respectively [9]. In an earlier study, the carriage rate of *N. meningitidis* after a single dose of ciprofloxacin was 5.2% before and 4.6% after the Hajj ($P = 0.65$) [17]. The carriage rate of *N. meningitidis* among returning pilgrims varies from 0% to 0.6% [17–20] and thus ciprofloxacin was not adopted as a strategy post-Hajj. The compliance rate with the recommended meningococcal vaccination among arriving international pilgrims is 97–100% [9]. In one study 1055 arriving pilgrims at King Abdul Aziz International Airport, 98% of the pilgrims had the quadrivalent polysaccharide vaccine and 2% had the quadrivalent meningococcal conjugate vaccine (MCV4) [9]. Recently, *N. meningitidis* serogroup B is becoming an important cause of meningococcal meningitis in Europe, Australia, and north America and may cause outbreaks [21–24]. Currently, a vaccine is available against *N. meningitidis* serogroup B [25] and there is no sufficient data to recommend the addition of this vaccine to the required Hajj vaccines [9]. An ideal meningococcal vaccine would contain the 4 currently available serogroups in addition to serogroup B.

1.4. Poliomyelitis

Poliomyelitis is a vaccine preventable disease; however, poliomyelitis eradication is hindered by the potential spread by international travelers [26]. There are reports of Hajj associated poliomyelitis cases. In a mathematical model, it was estimated that there is a potential of 21 importations of poliovirus into Saudi Arabia via Hajj pilgrims [27].

Download English Version:

<https://daneshyari.com/en/article/8743966>

Download Persian Version:

<https://daneshyari.com/article/8743966>

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