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**Title:** Surveillance of Australian Hajj pilgrims for carriage of potentially pathogenic bacteria: Data from two pilot studies

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Dear Editors,

Thank you for your promising comment on our submission. We have revised it according to the reviewers' and editors' suggestions. All modifications are shown in red font in the revised manuscript, and point-by-point responses to the reviewers are listed below.

We look forward to hearing your final decision.

Sincerely yours

Mohammad Irfan Azeem, on behalf of the authors.

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## **Reviewer 1**

Comment 1: Put at the foot of the tables the meaning of the acronym used

**Our response:** Addressed in the revised manuscript (page 25, 27, 28)

Comment 2: Mention as limitations of the study, the few strains studied and the lack of serotyping.

**Our response:** Addressed in the revised manuscript in the Discussion (page 18 lines 1,2)

## **Reviewer 2**

The authors examined pharyngeal swab taken from Australian pilgrims using NAT or bacterial culture to know pharyngeal acquisition of pathogenic bacteria during or after Hajj and showed relatively high carriage of *S pneumoniae* and little meningococcal carriage.

Comment 1. As the authors also mentioned, the authors used different methods for detecting bacteria between during and after Hajj. Two data cannot be compared directly.

**Our response:** We have addressed this as one of the limitations of our study in the revised manuscript (page 17 lines 25-30)

Comment 2. In the discussion, the authors compared their own data to those of previous reports. Was the same method used for detecting bacteria in these reports?

**Our response:** Because of the differences in study designs it was not possible to make valid comparison with the reports of other investigators, therefore summarised descriptively in the discussion in the context of our findings

Comment 3. Why was *Staphylococcus aureus* frequently detected Australian pilgrims after Hajj?

**Our response:** The rate is similar to community-based *Staphylococcus aureus* nasal carriage rate elsewhere in Australia (addressed in the revised manuscript on Page 17 lines 10-11).

Comment 4. The style of some references is not appropriate for this journal. Page numbers should be described completely. For example: No. 2 “Curr Opin Pulm Med. 2013; 19:192-7.” Should be changed to “ Curr Opin Pulm Med. 2013; 19:192-197

**Our response:** We have now fixed the reference style.

### **Reviewer 3**

It is an interesting surveillance study for carriage of pathogenic bacteria, the first one among Hajj pilgrims.

Few comments:

Comment 1. Page 9, results: Please explain the discordance in the number of participants between first and second phase (183 vs 93).

**Our response:** The discordance in the number of participants between first and second phase was due to unavailability of some participants for post-Hajj sampling within 2 months after Hajj, because often pilgrims make side trips to other countries after Hajj and do not return to Australia directly. (Addressed in the revised manuscript in the Discussion page 18 lines 2-5).

Comment 2. Page 9-10, results: Please provide, if available, the sensitivity to antibiotics for all pathogenic bacteria isolated.

**Our response:** *Streptococcus pneumoniae* was isolated in only one case but could not be serotyped and sensitivity was not done. This is mentioned in the limitation section of the Discussion (page 13, lines 1,2).

Comment 3. Page 9-10, results: Please provide possible explanations for the lower isolation rate of *Streptococcus pneumoniae* in the second group.

**Our response:** The reason is unclear: difference in diagnostic methodologies applied is perhaps the best explanation, but may also be due to loss of carriage by the time pilgrims arrived home or it could be an effect of antibiotic use (17.2% reported receiving antibiotics while at Hajj). (page 14 lines 12-21)

Comment 4. Page 9-10, results: Please provide possible explanations regarding the fact that all *Staphylococcus aureus* isolated strains are methicillin-sensitive.

**Our response:** These rates are similar to the methicillin-sensitive *Staphylococcus aureus* (MSSA) carriage rate in Australia (addressed in revised manuscript on page 17, lines 11,12); a study conducted elsewhere in Australia also found a very low MRSA carriage rate (5/699, 0.7%) in the general community in Australia (reference 60 in the manuscript).

Comment 5. Page 9-10, results: Please define if there is any correlation between age, sex or any other individual characteristic and carriage status for any pathogenic bacteria.

**Our response:** Addressed in revised manuscript (page 12, lines 15-18 and page 13, lines 11-12).

Comment 6. Page 10, lines 11-12, "Sixteen (17.2%) participants had taken antibiotics during Hajj; either amoxicillin, amoxicillin/clavulanic acid and/or roxithromycin". Please define how many of them have received antibiotics before sample taken. Please correlate antibiotic reception with carriage status.

**Our response:** Sixteen (17.2%) participants had taken antibiotics during Hajj and none took antibiotics within 2 weeks prior to swab collection. This is clarified in the revised manuscript page 13, lines 13-17).