

# PubMed-cited research articles on the Middle East respiratory syndrome

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After more than 3 years of the first reported case of the Middle East respiratory syndrome coronavirus (MERS),<sup>[1]</sup> we sought to examine the number of PubMed-cited articles on MERS from Saudi Arabia (the most affected country)<sup>[2]</sup> and other countries. We conducted a PubMed search on November 15, 2015 using the following search keywords: MERS, MERS-CoV, Human Coronavirus-Erasmus Medical Center (HCoV-EMC), Erasmus Medical Center/2012 (EMC), HCoV-EMC/2012, novel coronavirus, and human coronavirus. We classified the articles according to the affiliation of the authors: Articles from Saudi Arabia if all authors are from Saudi Arabia, collaborative articles if the authors are from different

countries and at least one author from Saudi Arabia, or articles from non-Saudi Arabia. In addition, we classified the articles into the following categories: Diagnosis, epidemiology, virology/pathogenesis, treatment, prevention, review/commentary/editorial/experiences, animal models, transmission, and social (including health care providers and public). We identified a total of 634 articles on MERS [Table 1]. Of those, 70 (11%) were from Saudi Arabia, 56 (8.8%) were collaborative articles, and 508 (80.1%) from non-Saudi Arabia. The most common article categories in descending order were reviews/commentary/editorial/experiences 215 (33.9%) followed by epidemiology

**Table 1: Number and categories of PubMed-cited articles on Middle East respiratory syndrome**

| Variable                                 | All (n=634) | Saudi Arabia (n=70) | Collaborative articles (n=56) | Other countries (n=508) |
|--|-------------|---------------------|-------------------------------|-------------------------|
| <b>Year n (%)</b>                        |             |                     |                               |                         |
| 2012                                     | 16 (2.5)    | 2 (2.9)             | 3 (5.4)                       | 11 (2.2)                |
| 2013                                     | 158 (24.9)  | 14 (20)             | 9 (16.1)                      | 135 (26.6)              |
| 2014                                     | 250 (39.4)  | 32 (45.7)           | 26 (46.4)                     | 192 (37.8)              |
| 2015                                     | 210 (33.1)  | 22 (31.4)           | 18 (32.1)                     | 170 (33.4)              |
| <b>Main category n (%)</b>               |             |                     |                               |                         |
| Reviews/commentary/editorial/experiences | 215 (33.9)  | 40 (57.1)           | 14 (25)                       | 161 (31.7)              |
| Epidemiology                             | 119 (18.8)  | 19 (27.2)           | 16 (28.6)                     | 84 (16.5)               |
| Transmission                             | 80 (12.6)   | 2 (2.9)             | 17 (30.3)                     | 61 (12)                 |
| Virology                                 | 78 (12.3)   | 1 (1.4)             | 5 (8.9)                       | 72 (14.2)               |
| Treatment                                | 55 (8.7)    | 4 (5.7)             | 0 (0)                         | 51 (10)                 |
| Diagnosis                                | 32 (5)      | 0 (0)               | 1 (1.8)                       | 31 (6.1)                |
| Prevention                               | 29 (4.6)    | 1 (1.4)             | 0 (0)                         | 28 (5.5)                |
| Animal models                            | 18 (2.8)    | 0 (0)               | 1 (1.8)                       | 17 (3.4)                |
| Social studies                           | 8 (1.3)     | 3 (4.3)             | 2 (3.6)                       | 3 (0.6)                 |

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119 (18.8%), MERS transmission 80 (12.6%), and virology 78 (12.3%). To date, there is no definite therapy or vaccine for MERS-CoV infection. Multiple studies were conducted to discover potential treatment, 55 (8.7%) or prevention/vaccine, 29 (4.6%) for MERS-CoV. However, there is no randomized controlled trial so far. The number of social studies, describing the knowledge, perceptions, or attitudes toward MERS or provide educational activities is very limited. These numbers contrast with what has happened with the severe acute respiratory syndrome (SARS), wherein 33 months of the onset of the outbreak, there were 2854 PubMed publications, 33 of which were clinical trials.<sup>[3]</sup> This literature search highlights

the urgent need for further research on MERS, which requires high level of collaboration.

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