

orous biosecurity measures and regular vaccination programmes must be implemented in poultry farms.

Keywords

Influenza; Pandemics; Public health; Disease outbreaks; Eastern Mediterranean Region

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Middle East respiratory syndrome coronavirus (MERS-CoV): threats, gaps and containment strategies

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Background: Middle East respiratory syndrome coronavirus (MERS-CoV) causing acute severe respiratory diseases was first reported in 2012 in Saudi Arabia. The causative agent was identified as a coronavirus which was named MERS-CoV.

Purpose: This study reviewed the published literature to investigate the incidence and mortality rate of MERS-CoV to identify the main threats and gaps and frame containment strategies.

Methodology: MEDLINE and CINAHL electronic databases were searched using a pre-defined search strategy. Additional references from the bibliographies of retrieved articles were also reviewed and experts (respiratory disease consultants) involved in case management in the United Arab Emirates were contacted. Selection criteria were: original research articles on MERS-CoV incidence. The initial literature search identified 47 papers. Of these, 16 original articles met the selection criteria. All were type II evidence— population-based clinical MERS-CoV studies.

Findings: Since 2012 cases have been reported in 14 countries, with most of the reporting from the Arabian Peninsula region. A total of 212 cases have been reported in Saudi Arabia up to April 2014, of which 88 died. The countries most affected by the disease are Saudi Arabia with 183 cases, of which 74 (40%) died and the United Arab Emirates with 19 cases, of which 7 (37%) died. So far, all the cases have been linked to six countries in or near the Arabian Peninsula. No cases have been identified in the United States of America. The virus has spread from sick people to others through close contact.

Conclusions: The disease is following a propagated epidemic curve and trending to more spreading and adding more and more cases. In time, increasing numbers of index cases will lead to a change in the epidemiological curve pattern to an explosive epidemic curve, which is considered threatening for coronavirus as the case fatality rate is extremely high and mortality rate can reach up to 50%. Gap analysis studies are needed to determine why the virus is still circulating and propagating in spite of the advanced preventive and control measures applied so far. The main question that needs to be addressed is how to reach the sources of infection and to break the transmission chain.

Keywords

MERS-CoV; Incidence

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Knowledge, attitudes and practices of poultry-keepers about avian influenza in households in high-risk governorates in Egypt, 2017

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Background: Avian influenza viruses are highly contagious among birds and recurrence of human infection has raised concerns of a possible H5N1 influenza pandemic. Keeping poultry in households for breeding is the main pathway for transmission of the disease to humans. Therefore, raising awareness of proper poultry breeding and improving keepers' knowledge of the disease reduces the risk of bird flu.

Objectives: This study explored the knowledge, attitudes and practices (KAP) about avian influenza among poultry-keepers in households in Egypt.

Methodology: A cross-sectional survey was conducted in 2017 in six high-risk governorates (three in Upper and three in Lower Egypt) using a structured pretested questionnaire administered in face-to-face interviews with 300 poultry-keepers. The questionnaire included demographic data and questions exploring KAP. The total score for each KAP was categorized as: poor/negative = 0–50%; fair/neutral = > 50–70%; and good/positive = > 70–100%.

Findings: The mean age of the respondents was 33 (range: 19–55) years; females represented 64% of the respondents. Of the 300 poultry-keepers, 55% had good knowledge. Just over half (51%) knew that the disease was transmitted to humans through handling infected birds. Only 40% of poultry-keepers recognized the risk of slaughtering sick birds and their ability to transmit the infection to humans. With regard to attitude, 42% of respondents had a neutral attitude and 40% agreed that following the correct breeding methods would help prevent transmission of the disease to humans. Practice scores were poor among 46% of keepers. The preventive practice reported by > 65% was avoiding the exchange of birds between neighbours. KAP was significantly higher among females, respondents with a higher educational level and economic status, and participants reporting the media as their source of avian influenza information ($P > 0.05$).

Conclusions: Intensification of health awareness programmes on proper methods of keeping poultry among poultry-keepers is essential to enhance their understanding and prevent the spread of avian influenza to humans.

Keywords

Highly pathogenic avian influenza, Knowledge, Attitudes and practices, Poultry-keeping, Households, Egypt

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