

## Current major event

### Burden of ARD in the EMR

Recently, a literature review on the burden of acute respiratory diseases of epidemic and pandemic potential in the Eastern Mediterranean Region (EMR) of WHO has been conducted.

### Editorial note

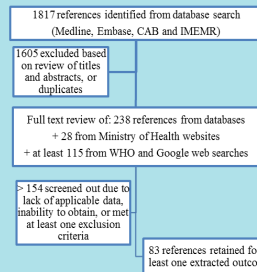
There are gaps in the knowledge about the burden of severe respiratory disease in the Eastern Mediterranean Region (EMR). The recently conducted literature review provides information on the burden of epidemic- and pandemic-prone acute respiratory infections (ARI) in the Region which may help in the development of evidence-based disease prevention and control policies. Relevant published and unpublished reports were identified from searches of various databases; 83 documents fulfilled the search criteria (*Please see the box*). The infections identified included: ARI, avian influenza A (H5N1), influenza A (H1N1)pdm09 and Middle East respiratory syndrome coronavirus (MERS-CoV) infection.

The review provides evidence that pneumonia and acute respiratory disease are important contributors to child mortality in the Region, ranging between 22% and 30.5%. Novel pathogens and those capable of causing severe excess morbidity and mortality, namely influenza A (H1N1)pdm09, A(H5N1) and MERS-CoV, were found to mainly affect adults. Influenza A(H5N1) was reported in four countries in the Region. Three of these, Djibouti, Iraq and Pakistan, have had a small number of cases and appear to have controlled the epidemic effectively with no new human cases reported in the last 5 years. Nonetheless, multiple outbreaks of influenza A(H5N1) in poultry and wild birds have occurred in Pakistan and Iraq since 2006. Egypt continues to report human cases and has the highest number compared to the rest of the world, with the second highest number of fatalities (case fatality 33% overall and 47% in the 45+ years age group).

The 2009 A(H1N1) influenza pandemic was a good example of how a novel

| Disease                           | Population at risk (year) (reference)   | Study design                | Case definition as reported  | Prevalence (%) or incidence per 10 000 person-years (age, if available)  |
|-----------------------------------|---|-----------------------------|--|--|
| <b>Inpatient</b>                  |   |                             |  |  |
| Pneumonia                         | Riyadh, Saudi Arabia<br>All patients at King Fahad National Guard Hospital (2013) (35)  | Point prevalence survey     | Community acquired pneumonia                                       | Overall 30.3%; (43.4% 50+ y, 12.1% 40-49 y, 3.9% 30-39 y, 6.6% 20-29 y, 6.6% 10-19 y, 14.5% 1-9 y, 7.9% < 1 y) |
| <b>Inpatient &amp; Outpatient</b> |   |                             |  |  |
| RSV infection                     | Damanhour, Egypt<br>Population-based surveillance of ARI in 3 hospital and 3 outpatient settings (2009-2012) (47)   | Descriptive cross-sectional | RSV associated hospitalization<br>RSV associated outpatient visits | 2.4* (174.5* in children < 1 y)<br>60.8*   |
| <b>Outpatient</b>                 |   |                             |  |  |
| ALRI                              | Bam, Islamic Republic of Iran<br>Post-earthquake assessment of disease (2004) (36)  | Descriptive cross-sectional | Lower respiratory tract infection                                  | 312*   |
| <b>Surveillance</b>               |   |                             |  |  |
| ARI                               | Karachi, Pakistan<br>Community surveillance in 4 peri-urban communities in Pakistan (2002/03) (37)  | Cross sectional survey      | Acute respiratory infection  | 4403*  |
| ALRI                              |   |                             | Pneumonia and severe pneumonia                                     | 821*   |
| ARI                               | Sudan EWARS communicable disease weekly bulletin (2013/14) (38,39)<br>West Darfur (38,39,69-72)<br>North Darfur (38,39,69-72)<br>Population of Oman (2013) (40) |                             | ARI<br>ARI<br>ARI in < 5 year olds                                 | Range low to high:<br>239 to 848*<br>759 to 1149*<br>1206 to 1721*<br>11200*                                   |
| Influenza                         | Syrian Arab republic<br>All governorates. (2013) (73)   |                             | Report   | Cases influenza reported by health facilities  |
|                                   | Yemen, national data (2013) (74)  |                             | Annual statistical health report                                   | Cases of influenza   |

### Summary of references identified and



strain of transmissible influenza virus can affect an essentially susceptible population. Of the respiratory deaths attributed to A(H1N1)pdm09, 17 900 are estimated to be from the EMR, with a rate of 3.0 per 100 000.

This review revealed a number of specific gaps in the surveillance system for ARI in the Region. Notably, there is a paucity of disease burden data that are statistically comparable between countries in the EMR. A number of countries had either no or very few reportable data. While it is suspected that the data abstracted for this review are not entirely representative of the whole Region, the information provides an initial evidence base to support improved surveillance and reporting in the countries of the EMR.

Acute respiratory infection is consistently ranked among the top causes of morbidity and mortality. It has been referred to as a “forgotten pandemic”. It is expected that the current review may help in the development of evidence-based disease prevention and control policies in the Region for ARI.

## Update on outbreaks

MERS-CoV in Saudi Arabia;; Cholera in Somalia.

### Current public health events of international concern

[cumulative N° of cases (deaths), CFR %]

#### Avian Influenza : 2006-2016

|                |                    |
|----------------|--------------------|
| Egypt (A/H5N1) | [350 (117), 33.4%] |
| Egypt (A/H9N2) | [3 (0) ]           |

#### MERS-CoV: 2012-2016

|              |                     |
|--------------|---------------------|
| Saudi Arabia | [1414 (601), 42.5%] |
| Bahrain      | [1 (1), 100%]       |

#### Cholera : 2016

|         |                    |
|---------|--------------------|
| Somalia | [8838 (433), 4.9%] |
|---------|--------------------|

#### Yellow fever: 2015-2016

|        |                     |
|--------|---------------------|
| Angola | [3137 (345), 10.9%] |
| DRC    | [1644 (71), 4.3%]   |

#### Lassa fever : 2015-2016

|         |                   |
|---------|-------------------|
| Nigeria | [273(149), 54.5%] |
| Benin   | [54(28), 51.8%]   |

#### Avian Influenza A (H7N9) : 2013-2016

|       |                    |
|-------|--------------------|
| China | [775 (307), 39.7%] |
|-------|--------------------|

#### Avian Influenza A (H5N6) : 2016

|       |          |
|-------|----------|
| China | [4 (0) ] |
|-------|----------|

#### Wild poliovirus: 2014-2016

|             |           |
|-------------|-----------|
| Pakistan    | [371(0) ] |
| Afghanistan | [54(0)]   |

#### Zika Virus Infection: 2007-2016

60 countries and territories have reported transmission so far