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WHO events addressing public health priorities
Introduction

Preparedness and the ability to identify and control emerging diseases, epidemics and potential pandemics require robust surveillance systems. With the emergence of the Middle East respiratory syndrome due to coronavirus (MERSCoV) in 2012, the surge of avian influenza (due to the H5N1 virus subtype) and the ongoing humanitarian crises in the WHO Eastern Mediterranean Region, the establishment and strengthening of surveillance systems for acute respiratory infections in this Region are priorities.

The Eastern Mediterranean Acute Respiratory Infection Surveillance (EMARIS) network held its third meeting in Amman, Jordan, on 14–16 September 2015. These biannual meetings are part of the collaboration between WHO and the US Centers for Disease Control and Prevention Naval Medical Research Unit no. 3 (NAMRU-3) to improve the quality of data on acute respiratory infections, strengthen use of the data and prepare supportive policies for vaccine introduction and use. The meeting was attended by national focal points for respiratory infections and representatives of national influenza centres (NICs) in 15 countries, with experts from WHO and the Centers for Disease Control and Prevention. The objectives of the meeting were to:

identify means to improve the quality and effectiveness of surveillance for severe acute respiratory illness (SARI) and influenza-like illness (ILI),

review the findings in selected countries to estimate the influenza burden and

agree on a plan for further development of the EMARIS network.

SARI and ILI surveillance

The pandemic influenza preparedness framework represents a global approach to preparedness and response and supports countries in the Region in establishing or

strengthening surveillance programmes. NAMRU-3 has supported countries in establishing SARI sentinel surveillance. Despite advances in setting up surveillance systems for SARI and ILI, however, global studies indicate a lack of research and data from the Region. In order to facilitate reporting, the Regional Office and NAMRU-3 are devising a unified reporting system in the form of an online database with a minimum number of required variables.

In 2011, the International Health Regulations (2005) review committee asked WHO to formulate measures of the severity of influenza pandemics, to be updated annually. The tool, the pandemic influenza severity assessment, measures three main indicators: transmission, severity of disease and impact. It is being pilot-tested in 12–13 countries.

Outbreaks are detected mainly through indicator-based national surveillance systems; however, it might be useful also to involve the private sector in such surveillance, to determine any differences from the public system in the overall picture of SARI and ILI. Event-based surveillance complements indicator-based surveillance by detecting unreported cases and unusual events. Use of hotlines and designating people in the community, such as health care workers and community leaders, to report any unusual events can result in timely detection, especially in remote areas.

Data on influenza can be translated into estimates of disease burden, which give decision-makers the evidence necessary for public health policies on influenza prevention and control. WHO has established a working group for estimating the burden of disease, which uses the manual on national studies to standardize its work. Estimates have been made, despite missing data, unreliable seasonality and the lack of a standardized form for sharing information. Once countries have enough data, they can use the manual to conduct regular studies of the influenza and translate the information into action. The pandemic influenza preparedness framework supports countries in estimating disease burden.

Many of the active NICs in the Region have optimal capacity for viral isolation, polymerase chain reaction, serological testing and sequencing. They should share their data, ship virological specimens to WHO collaborating centres and provide training in virological surveillance. Not only influenza but also re-emerging and novel respiratory viruses are strong candidates for pandemics or public health emergencies of international concern. NICs should therefore go beyond testing for influenza to identify other circulating pathogens responsible for respiratory infections. The NICs would not have to change their mandates, and each Member State could adapt the work according to its requirements and resources. Capacity-building for this purpose will be required. NICs should also ensure that they have sequencing capacity; NAMRU-3 has conducted training in sequencing in some countries in the Region. Sending viruses for further

testing at WHO collaborating centres is important both for detecting unidentified circulating viruses and for giving NICs an indication of the quality of their results. These centres also provide further training on virus isolation, propagation and detection, antigenic and serological analysis, assessment of sensitivity to antiviral drugs and sequence analysis of influenza virus genes.

EMARIS network: institutional framework and future directions

The EMARIS network should have a clear mandate and terms of reference to give it formal standing in Member States. In order to share progress and experience, the meetings should be attended by SARI and ILI focal points. Publishing data and research papers will help fill the information gap from the Region, and this special supplement of the Eastern Mediterranean Health Journal represents a step in this direction. Abstracts should be submitted to international conferences for better representation. EMARIS might organize its own scientific meetings to attract a wider scientific audience. Twinning projects are another use of this network: several countries in the Region are transferring experience, laboratory testing and capacity-building to other countries, especially Member States with little capacity.

Mathers C, Vos T, Lopez A, Salomon J, Ezzati M, editors. National burden of disease studies: a practical guide, 2nd edition. Geneva: World Health Organization; 2011 (http://www.who.int/healthinfo/global_burden_disease/tools_national/en).

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