

Middle East respiratory syndrome coronavirus (MERS-CoV): MERS-CoV remained the biggest health security threat in the Region throughout 2014. An upsurge of human infections and hospital outbreaks of MERS-CoV during the months of April–May in two countries of the Eastern Mediterranean Region posed the biggest challenge for international response. The international spread of the disease to countries both inside and outside the Region that were associated with travel raised a heightened public health concern globally. The Regional Office conducted a series of activities throughout the year that supported countries to improve their surveillance, preparedness and response capacity to mitigate the threats of MERS-CoV. The congregation of more than 4 million Muslim pilgrims in Saudi Arabia during the hajj of 2014 posed the biggest threat and apprehension of rapid and sustained international spread of the disease if the capacity of the countries sending and receiving the pilgrims were not built to predictably monitor, assess and rapidly detect any threat of introduction and sustained transmission of the virus. Adequate public health efforts were undertaken by the Regional Office throughout the year to achieve these objectives.

2014 witnessed a rise in the incidence of emerging and re-emerging infectious diseases posing a perennial threat to health security in the Region. About half of the 22 countries in the Region have reported a high incidence of emerging infectious diseases in the past year, sometimes with explosive outbreaks.

The pandemic and epidemic disease programme of the WHO Regional Office continues to provide strategic, operational and technical support to countries in the Region for detection, risk assessment, risk communications and rapid response to emerging infectious diseases and prevent international spread of these infections.

This photo story presents the highlights of the programme's major achievements in 2014.

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Efforts to bridge knowledge gaps intensify as countries endorse plan for a multicountry research study

Throughout the year the Regional Office continued its efforts to coordinate with the countries to contain the outbreak caused by MERS-Co, a novel respiratory virus that emerged between April and June 2012 in one of the countries of the Region. In an effort to unravel the source of human

infection caused by this virus, the Regional Office organized a technical consultative meeting in Riyadh, Saudi Arabia, from 2 to 3 March 2014. The meeting was attended by representatives of ministries of health and ministries of agriculture of affected countries in the Region, Food and Agriculture Organization of the United Nations, International Organisation for Animal Health, WHO collaborating centres, as well as other international health agencies involved in the global response to MERS-CoV. The meeting finalized the protocol for conducting a multi-country case-control study on MERS-CoV in the affected countries and an agreement to use a standardized protocol and apply common data collection instruments uniformly and consistently across all countries.

Currently, the accumulated evidence shows that the virus is zoonotic in origin and may be circulating in camels. This multicountry case-control study would be the first step towards generating firm evidence on how humans are getting infections from camels or any other animals through direct or indirect contact which can then be the basis for drawing appropriate public health recommendations for preventing human infections.

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An upsurge of cases and hospital outbreaks are investigated as the concerns for emergence of a public health crisis loomed

During 2014, an upsurge of cases in Saudi Arabia and United Arab Emirates, as well as hospital outbreaks reported from these two countries and Islamic Republic of Iran following reporting of its first laboratory-confirmed case of MERS-CoV, raised global health concern. The Regional Office rapidly investigated these events in these three countries through sending teams comprising of WHO staff members and experts drawn from the WHO's Global Outbreak Alert and Response Network (GOARN). The team while supporting national health authorities to investigate the increase in the number of people infected by MERS-CoV, also provided recommendations aimed at stopping the transmission in health care settings, as well as preventing infections that are primarily acquired in the community. These missions and its recommendations proved to be key to containing the spread of infections and limiting the transmission both in households and hospital settings.

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Capacities of front-line health care workers identified as key to early detection and rapid response

In view of the continued threats from MERS-CoV throughout the year in 2014, the Regional Office at the request of the Supreme Health Council of Qatar organized a 5-day practical course

on outbreak investigation and response in Doha, in which 25 front-line health care workers participated.

Recognizing the rapid increase in outbreaks in many countries in the Region, this particular course aimed at building public health capacity and hands-on skills of front-line health care workers on investigation and rapid response to any emerging health threats. This training course was co-facilitated by the Field Epidemiology and Training Programme of the Ministry of Health and Population in Egypt.

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Framework of action defined for infection prevention and control in health care as the threat of hospital outbreaks grow

In response to hospital outbreaks caused by MERS-CoV in Saudi Arabia and the United Arab Emirates during the months of April–May 2014, the Regional Office, in collaboration with the Ministry of Health of Saudi Arabia, hosted a training workshop in Riyadh to scale up infection prevention and control measures across all countries in the Region through a framework of action. The course was conducted in recognition of the weakness and significant gaps that exist in applying appropriate infection prevention and control (IPC) practices in health care settings.

In view of the fact that a number of health care workers have recently been infected with MERS-CoV while providing care necessitated the development of such framework. A total of 22 participants from 11 countries in the Region attended this course which was co-facilitated by the two WHO collaborating centres – the WHO Collaborating Centre for IPC based in Riyadh, Saudi Arabia, and the WHO Collaborating Centre for Emerging Infections based in Cairo, Egypt.

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Educational materials rolled out as mass gatherings of millions of Muslim pilgrims begin

During the third quarter of the year, the Regional Office responded to the urgent need for rolling out appropriate educational materials for the millions of Muslim pilgrims who began to assemble in Saudi Arabia for the hajj. To prevent any upsurge of cases during the hajj, the Regional Office produced and rolled out to all the countries a series of communication materials, including animated films on MERS-CoV that demonstrate simple preventive measures to avoid infection. General awareness was essential to apprehend risk of international spread of MERS-CoV with the returnee pilgrims. These materials and information products targeted hajj and umrah

pilgrims, the general public and health workers, and were made available in three languages – Arabic, French and English.

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Enhancing surveillance, preparedness and response highlighted to prevent any major public health crisis

Since the emergence of MERS-CoV in 2012 to September 2014, half of the countries in the Region (11 out of 22) reported laboratory-confirmed cases. Except in countries of the Middle East, most of the cases were travel-associated. An intercountry workshop held in Casablanca from 3 to 5 September 2014 focused on developing plans to enhance surveillance for severe acute respiratory infections as the key for early detection, recognition and response to MERS-CoV, as well as measures that could effectively limit the virus transcending into a major public health crisis.

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Appropriate techniques for data collection, analysis, and field investigation emphasized as the Region gears up for preparedness to MERS-CoV

In addition to strengthening a number of public health preparedness measures across countries of the Region, a team from WHO were deployed in Saudi Arabia during the hajj of 1435 H (2014 G). The team, deployed at the request of the Ministry of Health of Saudi Arabia, oversaw the implementation of appropriate public health measures for prevention, early detection and rapid response to MERS-CoV, as well as any other outbreaks among the pilgrims to Makkah. No case of MERS-CoV infection was reported among the pilgrims during this hajj or in countries of returning pilgrims.

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Preparedness pays off as no MERS-CoV infection reported among hajj pilgrims

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Regional risk communication campaigns launched as number of seasonal influenza cases increase

In the first half of 2014, the number of seasonal influenza cases increased in Egypt, Syria and Jordan, and in other countries of the Region. Although, the rise in number of influenza cases during the winter season was natural and expected, the rapid spread of influenza viruses among susceptible populations and the severity of illness among specific groups of hospitalized patients caused by these viruses compelled the Regional Office to launch an extraordinary risk communication response in these countries.

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Readiness for outbreak response enhanced: training for GOARN partners held in Jordan

The Regional Office hosted the first pre-deployment course on international outbreak response for the regional partner institutions of WHO's Global Outbreak Alert and Response Network (GOARN) between 25 and 31 March 2014 in Jordan. A total of 24 participants, selected mostly from public health institutions and the ministries of health of the Region, completed the course. The training was expected to improve the surge capacity of the Regional Office for international outbreak response in the Region considerably as the Region has been frequently hit by outbreaks of yellow fever, Rift Valley fever, dengue fever, Crimean-Congo haemorrhagic fever, cholera and in the recent past, Middle East respiratory syndrome coronavirus (MERS-CoV). The training course fulfils a long required need in the Region to establish a mechanism for rapid deployment in response to a regional outbreak that may outstrip a country's capacity to contain it.

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Preparedness for diarrhoeal disease epidemics stepped up among Syrian refugees as intense heat during the summer months, coupled with acute water shortage, posed a grave risk

To prevent diarrhoeal disease epidemics, specifically cholera, occurring among the estimated 1.1 million Syrian refugees displaced in Lebanon, Jordan, and Iraq, the Regional Office stepped up its preparedness efforts. A technical assessment mission was conducted in two of the largest and accessible, informal settlements for Syrian refugees, in the Bekaa and Sidon areas of Lebanon as part of these efforts. In addition, similar cholera epidemic risk assessment missions were conducted in Dohuk and Sulaymaniyah in the northern region of Iraq by WHO and the International Center for Diarrhoeal Disease Research, Bangladesh. The recommendations of

the WHO mission helped the concerned ministries of health to step up preparedness measures to mitigate the risk of cholera and other epidemic diarrhoeal diseases taking place among Syrian refugees during the summer months.

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Stopping cholera among displaced populations remained priority as the resilience of public health system for detection and response gained momentum

The ongoing crises in Syria and Iraq have required urgent support to enhance surveillance for early detection of any disease; and to improve epidemic readiness measures for rapid and optimal response to disease outbreaks among the most vulnerable populations of the affected countries. These populations of concern live in overcrowded settlements with poor water and sanitation facilities; and also often have limited access to health services and adequate nutrition. These conditions increase the risk of high morbidity and mortality due to communicable disease outbreaks. Epidemic risk assessments for cholera were conducted in Iraq and Lebanon in view of the large number of displaced populations for stepping up preparedness measures. Additional measures to enhance capacity for optimal response to cholera outbreaks among internally displaced persons living in crisis-affected countries included organizing a regional course on control of cholera and epidemic diarrhoeal diseases in the humanitarian emergencies in Beirut towards the second half of 2014. These activities significantly contributed to preventing outbreaks of cholera or other epidemic diarrhoeal diseases in the countries currently affected by the crises in Syria and Iraq.

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Ebola turns into international health emergency as the Regional Office steps up preparedness

On 8 August 2014, WHO declared the Ebola epidemic currently ravaging parts of West Africa as a Public Health Emergency of International Concern (PHEIC) under the International Health Regulations (2005). With this development, the Regional Office stepped up preparedness and readiness measures across all countries in the Region. The Regional Office coordinated with its Member States to step up measures for isolation, investigation, and diagnosis of any suspected case should it occur in any of the countries in the Region as many countries have direct or indirect air links to the countries in West Africa reporting cases of Ebola virus disease. Following the declaration of the event as a PHEIC and as per the recommendations of the IHR Emergency Committee, the Regional Office has further stepped up its efforts to implement and monitor that every country in the Region has the ability for detection, investigation and management of Ebola cases, as well as assured access to quality laboratory diagnostic test for confirmation.

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Assessment mission concluded in 20 countries as measures bolstered to address major gaps identified in preparedness and readiness measures

As part of the regional plan to assess the preparedness and operational readiness measures for countries in the Region to deal with a potential outbreak of Ebola virus disease (EVD), a team of WHO staff and experts from partner organizations visited 20 countries in the Region by the end of 2014.

Using a standardized and uniform approach and combining the use of an assessment checklist and observation of level of preparedness in key installation and meeting and visiting key locations, the team identified critical gaps and weaknesses for early detection and response to a potential outbreak of EVD in six functional areas – leadership and coordination, capacities at the points of entry, surveillance and contact tracing, infection prevention and control, laboratory diagnosis and risk communication. The findings of the WHO assessment were shared quickly with Member States and a plan to address these major gaps was developed.

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Risk communications for Ebola strengthened across all countries as key to protection

As the preparedness and operational readiness measures for Ebola virus disease were scaled up throughout the Region, the Regional Office produced additional information resources to help countries prepare for early detection and response to any possible introduction of Ebola virus disease. These included: 1) an animated video on Ebola providing essential information on how to protect oneself, one's family and the community against Ebola; 2) Ebola posters, leaflets, roll-ups for four target groups, namely the general public, health workers, point of entry officials, and travellers; and 3) a series of infographics illustrating the possible scenarios for introduction of Ebola in the Region, as well as the essential public health measures for early detection and prevention of transmission. All these materials have been produced in three languages –Arabic, English and French.

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Pandemic influenza preparedness framework paves the way to improved regional response to influenza

Implementation of Pandemic Influenza Preparedness (PIP) framework activities began in August in seven countries in the Region – Afghanistan, Djibouti, Egypt, Jordan, Lebanon,

Morocco, and Yemen. The PIP Framework is an international arrangement, adopted by World Health Assembly in 2011, for sharing of influenza viruses with human pandemic potential and access to vaccines and other benefits. The arrangement aims to improve global pandemic influenza preparedness and response. In 2014, a number of key activities have been conducted in the Region to help improve preparedness for influenza and other respiratory infections caused by a novel virus. A multicountry meeting was organized by WHO involving epidemiologists and virologists from PIP-beneficiary countries in the Region. It was an opportunity to understand current practices, systems and tools available in severe acute respiratory illness (SARI)/influenza-like (ILI) surveillance, discuss possibilities to integrate laboratory and epidemiological data using PIP opportunities. The meeting also agreed on a framework for the collection of SARI/ILI data and implementation of integrated surveillance. Additionally, Lebanon has initiated SARI surveillance with PIP support. The process started with assessment, designation of focal point at Ministry of Public Health, identification and negotiations with selected sentinel sites and training of the health workers. The whole process was led by Ministry of Public Health and supported by WHO country office.

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