CRS Insights

Middle East Respiratory Syndrome (MERS-CoV): World Health Organization Responses
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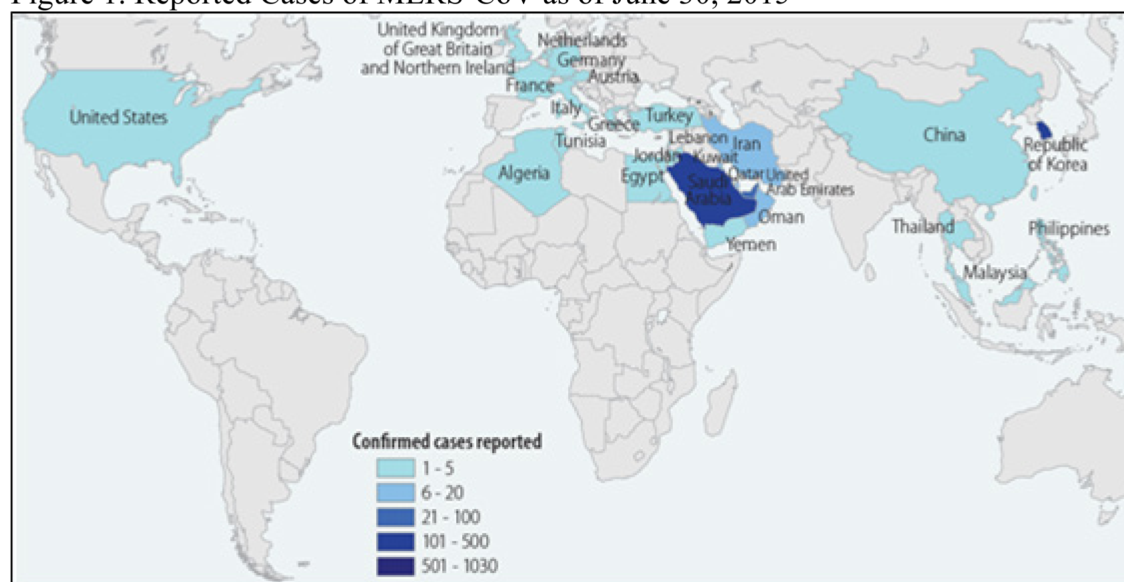
In September 2012, Middle East Respiratory Syndrome coronavirus (MERS-CoV) was first identified in Saudi Arabia and has spread to more than one dozen countries (**Figure 1**). MERS-CoV is an infectious respiratory disease that can be fatal. There is no vaccine or specific treatment for the disease, but the treatment of symptoms, which can include fever, cough, and shortness of breath, may improve patient outcomes. Over 1,300 cases have been reported to the World Health Organization (WHO) since 2012. Roughly 36% of reported cases have resulted in deaths. On May 20, 2015, a MERS-CoV outbreak began in the Republic of South Korea (ROK). As of June 30, 2015, the World Health Organization (WHO) has associated 182 cases (including one in China and one in Thailand) with this outbreak, including 33 deaths.

Figure 1. Reported Cases of MERS-CoV as of June 30, 2015



Source: Adapted by CRS from WHO, "Global map of countries with confirmed cases of MERS-CoV and maps of previous years," http://www.who.int/emergencies/mers-cov/en/.

WHO Authorities

The WHO was established in 1948 within the United Nations system to direct and coordinate U.N. international health responses, including responses to disease outbreaks. The organization acts as an advisory body that provides technical support to Member States. In 2005, the 196 Member States of the WHO, including the United States, developed a set of rules, known as the International Health Regulations (IHR (2005)). The IHR (2005), which entered into force in 2007, outlines specific duties for WHO and Member States (referred to as State Parties), including reporting certain disease outbreaks and public health events to WHO (**Figure 2**).

Figure 2. Key Obligations of IHR (2005) Implementation

State Parties Obligations	WHO Obligations
Designate a "National IHR Focal Point."	Designate IHR "Contact Points" at the headquarters or WHO regions.
Assess events occurring in national territories and notify WHO of all events that may constitute a public health emergency of international concern (PHEIC).	Conduct global public health surveillance and assessments of significant public health events, and disseminate public health information to States.
Report to WHO evidence of a public health risk identified outside national territories which may cause international disease spread.	Offer technical assistance to States in their response to public health risks and emergencies of international concern.
Collaborate with other States Parties and with WHO on IHR (2005) implementation.	Support States to assess their existing national public health structures and resources, as well as to develop and strengthen the core public health capacities for surveillance and response, and at designated points of entry.
Develop, strengthen and maintain the capacity to detect, report and respond to public health events.	Determine whether or not a particular event notified by a State under the Regulations constitutes a public health emergency of international concern.
Respond to public health risks which may spread globally and to requests for verification of information regarding events that may constitute a PHEIC.	Develop and recommend the critical health measures for implementation by States Parties during a PHEIC (with advice from external experts).
Respond appropriately to WHO-recommended measures.	Monitor the implementation of IHR (2005) and update guidelines so that they remain scientifically valid and consistent with changing requirements.

Source: Compiled by CRS from WHO, *Frequently asked questions about the International Health Regulations (2005)*, see http://www.who.int/ihr/about/faq/en/#faq12, accessed on June 15, 2015.

The role that WHO plays in containing disease outbreaks is informed by a variety of factors, especially the capacity of the country to control the outbreak and whether the WHO Director-General has characterized the health event as a public health emergency of international concern (PHEIC)—the most serious outbreak designation. A group of international experts, known as an IHR Emergency Committee, provides technical advice to the WHO Director-General, including recommendations on whether to deem an event a PHEIC. Upon declaring a PHEIC, the WHO Director-General may make temporary recommendations to affected countries or to all State Parties on matters of travel, surveillance, treatment, and infection control. State Parties are expected to follow these temporary recommendations, share information, assist neighboring countries, and take certain other actions in response to a PHEIC.

Although WHO provides support to countries in helping to contain disease outbreaks, several factors affect its effectiveness, including:

- **No Enforcement Mechanisms.** WHO has no authority to compel states to comply with the IHR (2005) or its recommendations. As of June 2014, IHR (2005) implementation was limited with 64 countries having reported implementing the Regulations; most of these were high-income countries. Several of the WHO obligations, as specified in the IHR (2005) are conducted "upon the request" of the State Parties, particularly those related to developing, strengthening, and maintaining the public health capacities of State Parties. The extent to which State Parties influence the declaration of a PHEIC process and IHR (2005) enforcement has been debated, particularly during the Ebola outbreak.
- **Limited Capacity to Implement IHR (2005).** Most low-income and some middle-income countries have limited capacity to implement IHR (2005). Human resource constraints, low health budgets, and inadequate infrastructures impede IHR (2005) implementation.
- **Sluggish Donor Support.** Per Article 44 of IHR (2005), State Parties have agreed to provide or facilitate the provision of technical cooperation and logistical support in the "development, strengthening, and maintenance of the public health capacities required" under IHR (2005). International assistance for carrying out IHR (2005) has been limited. WHO, with support from the United States, has launched the Global

Health Security Agenda (GHSA) to accelerate IHR (2005) implementation by bringing attention to the issue and securing international commitment to take concrete steps to help countries comply with IHR (2005). See CRS In Focus IF10022, *The Global Health Security Agenda and International Health Regulations*.

WHO Responses to the MERS-CoV Outbreak in Korea

Although MERs-CoV has been introduced into other countries by travelers to the Middle East, this is the first time that a MERS-CoV case has caused an outbreak of such magnitude outside of Saudi Arabia. On May 20, 2015, the Republic of Korea reported to WHO that it had detected a MERS-CoV case. An outbreak soon ensued (see CRS In Focus IF10165, *South Korea: Background and U.S. Relations*). The two bodies are collaboratively working toward containment. Specific actions taken by WHO to facilitate containment include

- partnering with clinicians and scientists to understand the virus and the disease it causes, and to determine outbreak response priorities, treatment strategies, and clinical management approaches;
- conducting risk assessments and joint investigations with national authorities;
- convening scientific meetings, including one that resulted in the mapping of the MERS-CoV genome;
- developing guidance and training for health authorities and technical agencies; and
- establishing an Event Management Team to coordinate and provide support in various areas, including information and epidemiology, technical expertise, and risk communication.

On June 13, WHO and the ROK completed a three-day joint mission to assess the situation. The team concluded that the MERS virus had not become more transmissible, but that the spread of the outbreak was facilitated by several factors, including

- lack of previous experience among health workers with MERS CoV;
- substandard infection prevention and control measures in some hospitals, due in part to overcrowding in emergency rooms and patient rooms; and
- local practices, such as "doctor-shopping," where patients seek care at a number of facilities; and visits to undiagnosed patients by many family and friends.

The WHO has been monitoring the global spread of MERS-CoV and the IHR Emergency Committee has convened nine meetings on the matter since July 2013. At the last meeting, held on June 16, 2015, the IHR EC concluded that the conditions for declaring a PHEIC for MERS-CoV had not been met, due to high levels of monitoring; adherence to infection prevention and control protocol; and declining number of new cases. Nonetheless, the committee urged affected countries to track MERS cases carefully and regularly report them to WHO. For more information on U.S. responses to the MERS CoV outbreak, see CRS Report R43584, *Middle East Respiratory Syndrome (MERS): Is It a Health Emergency?*

Note: Samantha Brew, CRS Intern, contributed to this Insight.