Opinion

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Illnesses of Unknown Etiology

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Introduction

A public health event (PHE) is defined as any occurrence that may have negative consequences for human health, including those that have not yet caused disease or illness but that have potential and those that may require a coordinated response . This framework focuses on PHEs of initially unknown etiology, which are PHEs for which the cause has not yet been determined. For such events, the One Health approach is recommended, where the ministry of health works in close collaboration with other ministries and multisectoral partners to enhance teamwork and improve efficiencies in preparedness, response, and monitoring and evaluation (M&E).

Categorization of PHEs of initially unknown etiology: Between 2000 and 2012, the ministries of health in the WHO African Region identified a mean of 100 PHEs annually. The majority of those occurred in areas characterized by poverty, armed conflict and/ or suboptimal health care delivery or access. Typically, during its alert management stage, a PHE is initially categorized as being of unknown etiology. Once there is laboratory confirmation of the cause of illness, the PHE can be categorized as infectious or noninfectious, with infectious events further classified as zoonotic or non-zoonotic. presents a map on the distribution of PHEs identified in the WHO African Region during 2012. All the PHEs were initially classified during the alert management stage as being of unknown etiology. Like some non-infectious PHEs, infectious PHEs – which include zoonotic diseases and foodborne or waterborne illnesses such as cholera, shigellosis, salmonellosis and amoebiasis -often traverse geopolitical boundaries. In both 2011 and 2012, aside from Vibrio cholerae, which accounted for approximately 30% of confirmed PHEs, an estimated 24% of confirmed infectious disease outbreaks were zoonotic (see WHO EMS). Other important PHEs related to infectious diseases recently identified in the African Region and reported via ProMED Mail 2 and WHO EMS were due to avian and pandemic influenza, meningococcal meningitis, anthrax, measles, acute poliomyelitis, yellow fever, malaria, dysentery, plague, dengue, or the Ebola, Marburg, Crimean-Congo, Lassa and Rift Valley viral haemorrhagic fevers.

PHEs and the One Health approach: Scientific and public health experts agree that the majority of infectious agents identified as causes of human illness in recent decades originated in domesticated animals or wildlife, such as SARS, the highly pathogenic avian influenza, Ebola and Marburg. The importance of zoonotic diseases in the Region reinforces the logic for using the One Health multisectoral approach to evaluate PHEs. Multisectoral national teams of professionals working together on the diseases involving the animal, human and ecosystem interface can strengthen efficiencies by sharing important and timely health information from their respective surveillance systems and working collaboratively in the field. This type of coordination and teamwork can lead to better understanding of the epidemiology of emerging or re-emerging diseases, as well as identify unknown modes of transmission, elements that will improve the efficiency of disease prevention and control efforts.

Aims and target audience of this framework: The overall aim of this framework is to minimize human morbidity and mortality associated with PHEs by providing the ministries of health in the WHO African Region with technical and managerial guidance for early and effective preparedness for and response to PHEs.