Addressing Emerging Viral Diseases with Vaccines and other Medical Countermeasures

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Viruses, especially RNA viruses represent an ongoing threat for emerging infectious diseases with the potential for significant public health impact. In addition, their random appearance that cannot as yet be predicted with any degree of certainty makes planning and responding to such threats extremely challenging. Vaccines represent a cornerstone of an effective response, along with infection control practices, epidemiology, diagnostics, and interventional treatments. Because traditional development timelines for vaccines are measured in decades, emphasis has been placed on streamlining various common steps in order to more expeditiously move projects forwards. To further assist the vaccine development community, NIAID has focused on making available infrastructure for rate limiting activities, including, but not limited to animal model development and vaccine testing, specimen collection for inclusion within repositories, preclinical testing for vaccine candidates, and clinical trial capability for evaluation of potential vaccines. The current Ebola outbreak in West Africa will highlight these various elements to demonstrate the utility of this comprehensive approach.