Regional disease surveillance networks are models for the kind of transnational cooperation that can provide a flexible and coordinated response to the spread of pandemic threats. Members of the Middle East Consortium on Infectious Disease Surveillance (MECIDS), a network of public health experts and Ministry of Health officials from Israel, the Palestinian Authority, and Jordan, have developed an extremely effectively working relationship that not only managed the 2006 H5N1 outbreak but was most recently tested following the 2009 H1N1 influenza outbreak.

### Regional Collaboration

The initial response to an infectious disease outbreak is primarily a domestic government function. However, national governments cannot handle global microbial threats alone, and inadequate surveillance and response capacity in a single country can endanger national populations and the public health security of the entire world. Enhanced cooperation among states is increasingly vital to address the complexity of transboundary disease outbreaks and resulting health problems.

Effective regional disease surveillance networks have the potential to support long-term health, stability, and security in a region and can be valuable mechanisms for under-resourced countries to collaborate on and coordinate capacity building. MECIDS has brought together public health experts and Ministry of Health officials from Israel, the Palestinian Authority, and Jordan to improve the region's ability to detect and respond to infectious disease threats.

### Cooperation in Action

In response to an outbreak of avian influenza (H5N1) in 2006, the Ministries of Health of Israel, the Palestinian Authority, and Jordan coordinated preparedness plans and outbreak response to mitigate the potential public health crisis. The outbreak crossed the borders of all 3 MECIDS member countries in under 10 days, but the surveillance network's strategic planning and uniform response helped maintain public confidence.
Prompt reporting and sharing of information between Israeli and Palestinian contacts in the Ministries of Health and Agriculture allowed Jordanian authorities to swiftly cull 20,000 birds in a 3-km protective zone and fully contain the avian flu outbreak. After-action feedback from the MECIDS partners made clear that successful personal and working relationships fostered over years of cooperation had allowed transparent reporting and coordinated response and control measures to mitigate the impact of the outbreak.

The MECIDS partners invited representatives from the World Health Organization (WHO) to conduct a work-shop on the International Health Regulations (IHR, 2005) implementation in November 2007. As a result of this workshop and supplementary joint meetings, the 3 partner countries developed a statement of understanding regarding the IHR procedures, which they are implementing as part of their national avian influenza preparedness plans.

In 2007 and 2008, MECIDS conducted a series of national pandemic influenza tabletop exercises to identify current gaps in preparedness and cross-sectoral cooperation and to develop a plan of priority actions. In August 2008, the partners conducted a regional exercise to test, in particular, cross-border cooperation and procedures. The regional exercise not only brought together the public health experts and Ministry of Health officials from the MECIDS countries, but also engaged representatives from multiple sectors in 3 countries, including transportation, education, interior, laboratory, and media. These exercises were conducted with the cooperation of WHO Geneva and WHO’s Eastern Mediterranean and European Regional Offices and the Turkish Ministry of Health.

MECIDS had been preparing for an event like this for some time. In response to H1N1 cases in Israel, the partners held emergency meetings and agreed to prompt and coordinated border and airport screening, laboratory testing, information exchange, and common communication strategies. This coordination was in large part due to the existence of trust and to well-exercised national and regional pandemic preparedness plans. Representatives from Egypt, which is not formally a member of MECIDS, also participated in these discussions.

In 2009, in response to H1N1 influenza outbreaks throughout the world, WHO raised the influenza pandemic alert from Phase 4 to Phase 5 and highlighted the opportunity for global solidarity to address the pandemic. Two days earlier, a group of Israeli, Palestinian, and Jordanian health officials had already held an emergency teleconference to discuss a joint plan of action to mitigate the spread of the disease.

In the following months, WHO and the U.S. Centers for Disease Control and Prevention (CDC), along with national and local health officials, responded aggressively to the emergence of the disease. By September of that year the number of laboratory-confirmed cases in the MECIDS region had risen to more than 4,000 with 32 deaths.

Testing Preparedness: The 2009 H1N1 Outbreak

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Lessons for the Global Community

Emerging and re-emerging diseases have increased the need for surveillance capabilities to promote collaboration across sectors and country borders to ensure early identification and rapid response to disease outbreaks, so crucial to the prevention of pandemics. Important lessons from the Middle East partnership can be readily translated to the global community:

- The trust built through developing collaborative action plans has proven its worth across one of the most difficult boundaries in the world.
- Neighboring countries facing common infectious disease threats can successfully build operational collaborative surveillance networks to strengthen public health capacity and to help meet their international legal obligations.
- A regional or subregional network with a common plan to improve its capacities can collectively generate funding and expert support that responds directly to the most urgent needs.
- Sharing experience, innovative approaches, and best practices associated with regional networks can contribute to enhancing the overall global capacity for infectious disease surveillance.

The MECIDS alliance provides a valuable model for other parts of the World experiencing conflict, suggesting that it is possible to find common ground and promote health security.