



**Asia-Pacific  
Economic Cooperation**

**APEC Emerging Infectious Disease Network  
(EINET): Expert Roundtable Series on Hot  
Topics in Emerging Infectious Diseases**

**APEC Health Working Group**

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# **APEC Emerging Infectious Disease Network (EINET): Expert Roundtable Series on Hot Topics in Emerging Infectious Diseases**

## **Preface**

Asia Pacific Economic Cooperation Emerging Infections Network (APEC EINet) was founded by Dr. Ann Marie Kimball in 1996 at the University of Washington in Seattle, USA. During its fourteen years of existence, APEC EINet provided timely and reliable information on emerging infections in the Asia Pacific region. APEC EINet also sought to promote collaboration between the 21 APEC member economies to enhance preparedness and better inform pandemic response in the Asia Pacific.

When APEC EINet began, the internet was still in its infancy, and the production of timely, regional updates on infectious disease surveillance, outbreaks, and relevant journal publications was a valued asset throughout APEC economies. Since then, computer access has become nearly ubiquitous in the region and internet bandwidth has steadily increased. This combination has allowed easy access to critical information from the WHO and through infectious disease data aggregation websites such as ProMED and, more recently, HealthMap.

Similarly, the use of videoconferencing technology for pandemic planning and discussion of response strategies and policies was cutting edge at its inception. Our experience demonstrated the promise of video conferencing technology as an important and effective mode of international public health collaboration and communication. While we see videoconferencing as forum to share ideas and learn from one another on a routine basis, we also believe that it could be a useful alternative medium for communication during times of crisis. However, as computer hardware, software, and communications infrastructure have improved, pandemic information sharing has become increasingly accessible, and is now a practical tool for regular use.

Nineteen out of twenty-one economies have successfully participated in one or more of the video symposiums: Australia; Brunei Darussalam; Canada; Chile; Indonesia; Japan; Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; People's Republic of China; Philippines; Chinese Taipei; Singapore; Thailand; and United States. Hong Kong, China; and Russia have been invited but have not participated.

With 91% of APEC economies having successfully participated in at least one APEC virtual symposium or 'Hot Topics' videoconferencing event, APEC EINet believes the proof of concept stage has been completed.

## **News Briefs**

Since November 1997, EINet has published regular news briefs regarding infectious disease media coverage of importance to APEC economies. As of 9 June 2010, our bimonthly emerging infections news briefs and influenza updates have been sent to a subscriber base of more than 700 policy makers, business leaders, scientists, and medical/public health professionals. News briefs are archived on the EINet website

and have been widely distributed, often down to the level of local public health departments, due to their value as a trusted and concise resource for surveillance data and the latest relevant research. Twenty-six news bulletins were issued during 2010.

## **Virtual Symposia**

In 2006 we held our first video symposium which included ten economies discussing basic preparedness planning across the community for pandemic influenza. For the first session Vietnam had to travel to Thailand to participate. Several economies were unable to participate technically. We used access grid because it was non-proprietary, and used R and E network access with assistance from the Asia Pacific Advanced Networking Consortium.

Following the first session, we began to target sessions strategically to answer topical questions from the APEC Health Task Force. In 2008, we held a Virtual Symposium bringing together private and public sectors of APEC economies to collaborate on sharing pandemic preparedness and business continuity planning methods. The multipoint videoconference lasted approximately 4.5 hours and was attended by 16 APEC members who shared best practices in public-private partnerships for pandemic influenza preparedness planning. This we consider our second “Hot Topics” session, the first being the 2006 effort.

In response to the H1N1 pandemic that arose in the spring of 2009, and building off of its prior success in videoconferencing for pandemic influenza preparedness, APEC EINet collaborated with the Regional Emerging Diseases Intervention (REDI) Centre in Singapore.

On November 5, 2009 we hosted six APEC economies (Australia, Mexico, Philippines, Singapore, Chinese Taipei and the United States) to discuss lessons learned from the first wave of the 2009 A/H1N1 pandemic, and the preparations for subsequent waves.

On March 11, 2010 EINet organized and hosted a third “Hot Topics” videoconference connecting six APEC economies (Canada, People's Republic of China, New Zealand, Singapore, Thailand and the United States) to share lessons learned from the 2009/2010 pandemic influenza experience. As with the earlier virtual symposia, both the overall experience and the quality of the presentations were highly rated by participating economies.

The fourth EINet Hot Topics video symposium took place on December 2, 2010, and focused on the theme of regional preparedness and strategies for the containment of infectious diseases emerging after natural disasters and hectic weather events. Nine APEC economies (Canada, Indonesia, Malaysia, People's Republic of China, Philippines, Chinese Taipei, Singapore, Thailand, and the United States) convened virtually through video conferencing technology to share lessons learned and examine case studies from the three presenting economies (People's Republic of China *“Infectious Disease Surveillance and Control after Wenchuan Earthquake, China, 2008”*, the Philippines *“Lessons Learned in Leptospirosis Surveillance and*

*Response After a Natural Disaster” and the United States “Infectious Disease Issues Associated with Hurricane Katrina”).*

## **EINet website**

The EINet website functions as an emerging infections data repository, a secure site for video conferencing file sharing, and an international distance learning resource for the APEC community. As of 9 June 2010, during the last 12 months the EINet website averaged 37,202 visits and 108,497 page views per month. In addition to the US, 11 other APEC economies were represented among the top 25 countries when ranked by website usage: Canada, Russia, Australia, Japan, New Zealand, Mexico, Indonesia, Philippines, Singapore, Thailand, and Malaysia.

This high level of use reflects the value readers ascribe to the content. In a recent survey conducted by EINet among its subscribers, 90% of the EINet website visitors agreed or strongly agreed that the website increased the level of preparedness against emerging infectious diseases in the Asia Pacific. Visiting the website once every two weeks, compared to never visiting, was associated with a statistically significantly increased odds of being confident with the level of one’s EID awareness, and there was a trend between increase in EINet website visits and being confident with one’s emerging infectious disease awareness level.

## **SUMMARY:**

APEC EINet goals during this project included: 1) to improve public health preparedness against emerging bio-threats, 2) to strengthen public health responses to emerging infectious diseases after traumatic weather events, and 3) to strengthen and enhance communication, coordination, and collaboration among the relevant sectors, such as public health, trade, and communications among APEC economies.

EINet furthered these goals by gaining participation and cementing collaboration of APEC economies using advanced network-supported activities and emerging real-time communication technology to improve regional preparedness. Other activities included the maintenance of the EINet website, which hosts the posting of EINet new bulletins. These bi-monthly bulletins gather epidemiological-centered news and peer-reviewed articles from global venues; EINet also occasionally publishes articles or briefings detailing its findings regarding technological advances that further live communication. Key lessons learned and insights gained throughout this project include:

- 1) The substantial value of the “informal” communication that occurs when economies are allowed to speak frankly about their experiences, and are allowed to learn from one another through questions and open discussion.
- 2) The ease of facilitating the transmission of clinical and medical best practices when economies are encouraged to share their experiences with one another.
- 3) The vital nature of open, transparent communication, which strengthens economy bonds and trust in EINet’s trustworthiness and accuracy.

EINet has also supported its goals through the ongoing infectious disease news brief service, which serves more than 700 subscribers. Publishing this news

service has allowed EINet to observe intriguing disease trends, such as the whooping cough outbreak in the United States, development and the gradual decline in the ongoing influenza epidemic globally, and the growing number of tuberculosis cases in Asia. These trend-related insights help EINet recognize emerging infections of interest; this realization supported and helped direct the planning the fourth EINet video symposium.

The 2 December 2010 video symposium convened nine APEC economies in a live, real-time videoconference that focused on preparation and coping strategies for emerging infectious diseases that occur in the wake of traumatic natural disasters and hectic weather events. The People's Republic of China, the Philippines, and the United States of America presented case studies before a live, real-time video symposium of participants from a total of nine APEC economies.

In brief, the following insights were realized during the video symposium:

- The importance of networking closely with regional contacts in order to access other applicable contacts.
- The value of advance planning, in the sense of involving economies as early and transparently as possible in the video symposium efforts, and of exercising persistence in communications.
- The fact that in the environment of the video symposium, striking clinical and epidemiological information is likely to emerge, which would not be as likely to be shared outside of this environment.
- The realization that accurate epidemiological record-keeping is vital prior to the occurrence of natural disasters, and that advance planning for natural disasters, and the flexibility to recognize and adopt ad hoc novel technologies and strategies for prevention and containment is crucial.
- The recommendation that these video symposia continue, as they are perceived as a useful and efficient way of sharing mutually beneficial health information.

Presenting economies were unified in recommending that further video symposia be held. Economies stated that they have greatly benefited from each other's experiences and advice, and feel better prepared to deal with similar natural disasters and consequences thereof in their own economies.

In terms of the news bulletins, EINet has transferred its focus gradually away from influenza H1N1 as the pandemic has waned—instead, EINet has realized the benefits of flexibly shifting to coverage of other emerging diseases, such as tuberculosis, whooping cough, and rabies. Respondents continue to comment that the ongoing news bulletins are quite helpful, and provide a valuable summary of global APEC economy disease trends.

During the time of APEC EINet's existence, there have been numerous infectious disease threats in the region. Three of these endangered not only population health but social stability and the economic order. 1)The discovery of pathogenic H5N1 avian influenza in humans in 1997 instilled fears of an ensuing influenza pandemic

with its epicenter in South East Asia.2) Five years later, in late 2002, Severe Acute Respiratory Syndrome (SARS) arose in Guangdong province in South China. When it quickly spread to Canada; Hong Kong, China; Singapore; and Viet Nam, the SARS threat to APEC region was quickly realized.3) Finally, the 2009 H1N1 pandemic which originated in Mexico also demonstrated the threat of infectious disease not only to the APEC economies but to the world. During each of these crises, APEC EINet was privileged to play a key role in informing and empowering public health and business leaders to make wise decisions. This role was formally recognized by APEC in a special publication following SARS (citation).

The vision for the future is to address key topical areas which threaten the ongoing economic integration and flow of commerce in the APEC community. Specifically the Asia-Pacific is uniquely vulnerable to Climate Change, which is an emerging ECOTECH priority. The community has experienced unprecedented hectic weather<sup>1</sup> and geophysical events<sup>2</sup> which appear to be increasing in their intensity. Each of these will require operational responses from many sectors including emergency responders and health practitioners. Experience demonstrates that the video symposia approach through “Hot Topics” is an efficient means of identifying common themes in post disaster infections which are shared across economies, and of sharing lessons learned.

Since its inception, APEC EINet has sought to provide timely and reliable infectious disease information and to promote collaboration in the APEC region. In reflecting upon these goals, the EINet team is well pleased with what we have achieved. We look forward to continue our collaboration to assure a healthy and prosperous future for the region.

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<sup>1</sup> 2009 Hurricane Season: Typhoon Ketsana viewed December 16 at :  
[http://www.nasa.gov/mission\\_pages/hurricanes/archives/2009/h2009\\_Ketsana.html](http://www.nasa.gov/mission_pages/hurricanes/archives/2009/h2009_Ketsana.html)

<sup>2</sup> McGuire, W. “Climate Forcing and Geological and geomorphological Hazards” Phil. Roy. Soc. A2010,368:2311-2315.