

**A Special APEC Report**

**Lessons of SARS: The APEC/EINET Experience**

May 06, 2003

***Submitted by:***

Ann Marie Kimball, MD, MPH, FACP

Director, APEC Emerging Infections Network

Professor, Epidemiology and Health Services

School of Public Health and Community Medicine,

University of Washington

Phone: +1 206 616 2949, Pager: +1 206 680 7549, Fax: +1 206 543 3964

Nedra Floyd Pautler, MA, MS

Information Manager, APEC Emerging Infections Network

School of Public Health and Community Medicine,

University of Washington

Phone: +1 206 616 9245, Fax: +1 206 616 9415

**Summary**

Severe Acute Respiratory Syndrome (SARS) erupted on the international scene in February of 2003. The disease, characterized as an atypical pneumonia with a significant fatality rate (approx. 4%), made its way into the Asian travel hubs of Hong Kong, Singapore, Chinese Taipei and Hanoi, Vietnam in a few short weeks. As the story unfolded, SARS was actually traced back to an infection that sickened people of Guangdong Province in the Peoples Republic of China in mid November of 2002.

While SARS is alarming, it was not unexpected. Historically, respiratory viruses such as influenza, measles and even nonviral diseases, such as tuberculosis, have traveled with people by air, rail and sea.

As travel linkages have drawn APEC member economies ever closer together, the risk of shared infections also has increased. The APEC Leaders Declarations of 2001 and 2002 attest to the shared understanding of the need to prioritize the control of emerging infections within the scope of regional Cooperation. Even more presciently, the Asia Pacific Emerging Infections Network was the first APEC project approved in the "health" domain in 1996. Its mission is to address exactly the type of challenge offered by SARS.

SARS offers lessons for professionals in public health and commerce that can give both comfort and an ongoing sense of mission as communications and surveillance processes are developed throughout the Asia Pacific. Communications and surveillance processes are pivotal in protecting lives and the ensuring the free flow of people, trade and investment across borders.

## **SARS Lesson 1.**

### **Health workers in the field sharing information via modern communications technology can save lives through pre-emptive action**

A mysterious illness in Quangdong Province of China first came to the attention of the World Health Organization (WHO), PROMED and others early in 2003. The seriousness and infectiousness of the illness was unknown and health officials were monitoring the situation. This illness moved to being a hum in the background in surveillance systems to the spotlight when the first alerts were sent from WHO and PROMED during the second week of February. At that time the syndrome was attributed to mycoplasma Pneumonia or to chlamydia by Chinese authorities.

EINet first highlighted the growing illness in its February 21, 2003 bulletin, describing it as an unidentified pneumonia that had killed 5 people and led to the hospitalization of 305 in Quangdong Province, including doctors, nurses and health care workers.

This was followed by the distribution of the March 12 WHO alert in the EINet biweekly newsletter on March 21, and a series of special bulletins as information about the contagion began to change and treatment modalities in Hong Kong were communicated.

Because of the practical and informal nature of the APEC EINet, it began receiving first-hand communications from the Mekong Basin, Vietnam, Hong Kong and the Philippines, which enhanced perspective of the challenges faced on the ground. It was through these communications that the rapidity of the spread of SARS became apparent. Informal reports from hospital workers in Hong Kong revealed their concern and the comprehensive quarantine at the hospital before this information was available from more formal public sources.

It is hoped that the use of e-mail, online information services, and other informal communication between health workers in the region saved lives by alerting health practitioners to the developing dangers of the virus. This is a form of early warning and communication that would not have been possible if the SARS Virus had appeared ten years ago.

The APEC EINet is proud to have been a part of this informal early warning system. From this experience APEC EINet urges the increased use of modern communications technologies by health professionals to share evolving medical information through e-mail and other online resources such as EINet.

## **SARS Lesson 2.**

### **Quick reference to a myriad of authoritative and up-to-date online resources is valued by professionals in the field.**

Comments from people using EINet indicate that this form of online resource serves as a central clearing house for access to the most authoritative information available on the Web for emerging diseases.

At the Research Institute for Tropical Medicine (RITM) in the Philippines, where suspected cases of SARS are referred for voluntary quarantine, health professionals made particular use of online information in dealing with the growing number of SARS cases.

Dr. Dorina Bustos from RITM said the most important element of EINet information was the “very prompt and consistent updates” of information as the epidemic unfolded.

EINet also has served as the clearinghouse for Avian Influenza and Enterovirus 71 by listing internet links within its email news bulletin and posting them on its Web site in the economy and disease resource section.

### **SARS Lesson 3.**

#### **Informal communication between health-care and policy-making interest groups leads to better decisions made on the ground.**

The APEC EINet is one of the few networks to involve public health officials with officials from trade, customs and other areas of government. The SARS epidemic has sparked travel advisories, screenings at airports and other public safety measures. It is clear that the SARS epidemic has brought undue economic costs to APEC member economies. To what extent the communication of accurate information has enhanced decision making is difficult to quantify.

EINet is confident that the inclusion of policymakers from a broad range of portfolios along with health department officials has resulted in a more informed process of decision making and policy formulation regarding quarantine and screening.

#### **EINet: What it is and how it works**

The APEC Emerging Infections Network was launched in 1996 in order to use telecommunications technology for the rapid sharing of information on emerging infectious disease threats in APEC economies. The goal of EINet is to minimize the economic costs of emerging infectious diseases, to reduce the need for trade sanctions in order to protect economies from disease spread and, very importantly, to prevent the loss of life caused by the spread of infectious diseases.

EINet is a three-legged stool:

- **Interpersonal contacts/relationships among health care and policy professionals.** Although telecommunications can quicken the pace of international communications and disease surveillance, it cannot replace the building of trust and competence between professionals of various cultures, economies and professions that face-to-face contact can

achieve. EINet, in large part, is a group of professionals who know and trust each other. The Health Side Meeting of the APEC Industry, Science and Technology Working Group has enabled the creation of relationships that the telecommunications legs help support. Some economies have been eager participants in the Health Side Meeting from its beginning while others have begun participating as they have seen it grow. For example, during the first several years the People's Republic of China had not participated in the Health Side Meetings, but in 2000 EINet was invited to the University of Beijing School of Public Health, and Chinese public health leaders at that meeting joined the Seattle 2002 Network of Networks meeting to discuss improving surveillance linkages in the Pacific Rim. Bringing the People's Republic of China into the discussion can be considered an important step forward in a long process. Representatives from 17 of the 21 APEC economies receive the EINet News Bulletin.

- **Regular Electronic Updates.** Every other week an electronic news bulletin is sent to subscribers updating them on the latest emerging disease information. The bulletin provides a consistent presence in APEC economies, alerts subscribers to new developments and new resources. It is the key method by which EINet maintains and builds on the relationships established through face-to-face contact.
- **Web site.** Through the Web site, participants have access to a free emerging infections distance learning course, reports from APEC economies, and authoritative links to disease specific information. (<http://www.apec.org/infectious>)

The link between the spread of disease and trade patterns can be traced to Biblical times and before. The human disease and economic risks are inherent in trade. Those of us concerned with these issues must be at least as adaptable to new opportunities as the microbes we monitor. EINet uses modern mobility and telecommunications to create professional relationships that encourage the sharing of information among those on the frontline of combating disease and protecting trade.

### **Vision for the Future**

SARS has demonstrated the tremendous power of collaboration through modern communications. We believe our value is primarily reinforcing accurate information for our diverse community of users. Public Health systems must be built for tomorrow as well as for today. APEC embraces a vibrant dynamic community based on trade and commerce which spans the Pacific. New technologies and applications, such as Internet II, software innovations in diagnostics and surveillance, innovative distance learning modalities and enhanced resource access tools are becoming available.

APEC/EINET provides a natural community for collaboratively adapting these new technologies to the mission of keeping the public safe from emerging infections for the foreseeable future. A second Network of Networks meeting for the Asia Pacific economies needs to be scheduled as soon as possible to build on the lessons of SARS and move the region forward with innovative and appropriate strategies to meet the epidemics of tomorrow.