

## **Executive Summary**

### ***Report on the Recommendations made and respective fulfillments of 2001 Southern Cone and Amazon Networks meetings***

#### ***III Meeting of the Network for Surveillance of Emerging Infectious Diseases in the Amazon Countries. Salvador, Bahia, Brazil March 9-11, 2001***

##### ***Malaria***

###### **Countries**

###### **Recommendations**

Each country will have a national coordinator for monitoring drug resistance; a common protocol developed by PAHO/WHO and adapted to the Region of the Americas will be used for *Plasmodium vivax* and *Plasmodium falciparum* resistance; the databases for the studies of resistance will be shared among all countries, and their structure will be discussed; a Steering Committee was created at the national and sub-regional level in order to supervise the studies and sentinel sites; and Dr. Ruebush will monitor the studies.

###### **Fulfillment**

The countries have started and consolidated their monitoring activities in antimalarial drug resistance for Bolivia, Brazil, Colombia, Peru, and Venezuela. There is a national coordinator in each of these countries. All the countries developed work plans and the activities included selection of sentinel sites and evaluation studies. Coordinated actions between Bolivia and Peru and Peru and Ecuador were carried out. Dr. Ruebush monitored testing in Peru. In Suriname, two professionals were trained.

###### **PAHO and WHO (Roll Back Malaria)**

###### **Recommendations**

Support the organization of national and sub-regional networks for monitoring antimalarial drug resistance.

###### **Fulfillment**

Both PAHO and WHO provided technical cooperation for the strengthening of national networks. Sub-regional coordinators with duty station in Costa Rica and Ecuador were hired. Some sentinel sites were provided with supplies and equipment, while others received training.

###### **USAID**

###### **Recommendations**

Provide financial support to carry out network activities are carried out

###### **Fulfillment**

The budget from USAID to participating countries of the Amazon Region was almost US\$ 2 million for the first year. That amount was available toward the end of 2001. The project is coordinated by PAHO in five countries (Colombia, Ecuador, Guyana, Suriname and Venezuela); USAID coordinates the network in Peru; while PAHO and USAID share the coordination of the network in Bolivia.

## ***II. Other emerging infectious diseases***

### **Countries**

#### **Recommendations**

Carry out actions for the monitoring of antimicrobial resistance to antibiotics in species that are isolated from the community and nosocomial infections following quality assurance standards. The surveillance results are analyzed and disseminated periodically.

#### **Fulfillment**

Twenty countries participated in the regional network for surveillance of antimicrobial resistance to Salmonella, Shigella and *Vibrio cholerae*. Twelve countries implemented surveillance of other species isolated from the community (*Escherichia coli*, *Neisseria meningitidis*, *Streptococcus pneumoniae* and *Haemophilus influenzae*) and nosocomial infections (*Enterococcus spp.*, *Klebsiella pneumoniae*, *Acinetobacter spp.*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Escherichia coli*, and *Enterobacter spp.*). All countries are improving their quality assurance. Results of the surveillance are periodically disseminated.

### **PAHO**

#### **Recommendations**

A system to be implemented for the evaluation of the country surveillance systems for emerging/reemerging infectious diseases; two topics to be included in the next meetings are national systems for monitoring antimicrobial resistance, and emerging and reemerging viral diseases.

#### **Fulfillment**

Evaluation guidelines were developed for the evaluation of country surveillance systems for emerging infectious diseases. The first country evaluation was made in Paraguay. The agenda of this joint network meeting (Atlanta 2002) includes both topics, national systems for monitoring antimicrobial resistance; and emerging and reemerging viral diseases.

***IV Meeting of the Network for Surveillance of Emerging Infectious Diseases of the Southern Cone, Asunción, Paraguay, 30-31 May–1 June, 2001***

## **Influenza**

### **Countries**

#### **Recommendations**

**Surveillance:** Implement WHO case definition; expand the monitoring system of sentinel physicians; carry out meetings on diagnostic techniques; increase the number of isolated and characterized viruses. **Strain shipment:** ship out strains at least once a year to the WHO Collaborating Center, and ideally three corresponding shipments at the beginning, middle and end of flu season; establish mechanisms that facilitate virus transportation (a proposal for opening an account to be used by Southern Cone countries). **Communication:** submit data weekly to FluNet monitoring system; establish an information system at the national level (Web page, bulletins, etc.); improve the access of the peripheral sentinel units to the systems of communication. **Pandemic:** prepare national plans. **Research:** evaluate the possibility of developing vaccine production at the national levels; initiate serological studies in workers in contact with birds and avian virus; conduct cost-effective studies on vaccination.

#### **Fulfillment**

**Surveillance** Countries are using WHO case definition and are expanding the sentinel physician system. **Strain shipment:** Two hundred thirty three isolates were sent to WHO Collaborating Center. **Communication** Only three countries reported to FluNet and communication among countries is sporadic. **Pandemic** None of the countries prepared the national plans in the event of a pandemic; **Research** two countries did cost-effective studies in the use of the vaccines and one of them established national vaccine production and conducted serological studies in workers in contact with birds.

## **PAHO**

### **Recommendation**

Support the shipment of samples to WHO Collaborating Center.

### **Fulfillment**

PAHO supplied resources to National Centers of Influenza of the six Southern Cone countries for the isolation and shipment of samples to WHO Collaborating Center.

## **Hemolytic Uremic Syndrome**

### **Countries**

#### **Recommendations**

Estimate the incidence rate of HUS in children under 5 at the national and regional levels in Southern Cone countries, adjusted by residence; establish strategies for the monitoring of STEC in children with HUS and bloody diarrhea to update clinical and laboratory data; propose standardized procedures for laboratories in all countries of the region; suggest that National Institute of Infectious Diseases, Argentina, (INEI) "Dr. C. G. Malbrán" be considered as the Regional Reference Center; analyze the risk factors of infections by STEC from each country or region; define prevention and promotion strategies to be utilized at the country level; evaluate the potential impact of the implementation of prevention and promotion strategies; evaluate the economic impact of the disease on the health system; and that an inter-institutional commission be established for addressing the problem and its control.

#### **Fulfillment**

Argentina and Chile continue to conduct studies on the epidemiology of HUS and implementation of the monitoring of STEC. Similar studies started in Bolivia, Brazil, Paraguay (there are 200 isolates of *E. coli* already collected to be classified) and Uruguay (a human case was diagnosed). The INEI, Argentina, is considered to be Regional Reference Center. Countries did not start assessments of potential impact of the implementation of prevention and promotion strategies nor the economic impact of the disease on the health system.

## **CDC and PAHO**

#### **Recommendations**

Support in the implementation of recommendations

#### **Fulfillment**

The CDC provided financial support for Argentina, Bolivia, and Uruguay; PAHO provided financial support to Argentina, Bolivia, and Paraguay.

## ***III. Other emerging/reemerging diseases***

### **Dengue**

#### **Countries**

#### **Recommendations**

Promote vector control education and behavioral changes to the young populations; seek long-term control strategies to achieve substantial change in attitude of the population; carry out larvicidal and adulticidal resistance surveillance of *Aedes aegypti*; prepare recommendations for control programs in the area of sampling laboratory diagnosis; and disseminate information on yellow fever to health care workers.

#### **Fulfillment**

The actions relating to information, education and communication to young populations (and adults) aimed to improve vector control are still weak and not developed. An exception is Chile where there is not *Aedes aegypti*, resistance of *Aedes aegypti* to larvicides and adulticides is routinely determined by Brazil but is occasionally done in other countries. The countries have sampling guidelines for laboratory diagnosis, but information on yellow fever among health care workers is still limited (with the exception of Bolivia and Brazil).

## **PAHO:**

### **Recommendations**

Strengthen the training in the diagnosis of yellow fever for those countries that lack the technology (Chile and Uruguay); promote the exchange of diagnostic reagents among the Southern Cone countries; and send information to the countries on laws or regulations aimed at dengue control

### **Fulfillment**

Using PAHO fellowships, professionals from Chile's and Uruguay's Ministry of Health were trained in the diagnosis of yellow fever in the Institute Evandro Chagas in Belen, Brazil. Information on laws or regulations aimed to control dengue from Argentina, Barbados, Panama, Puerto Rico, and Uruguay, were disseminated among countries of the network. The exchange of reagents between the countries was limited.

## **Hantavirus**

### **Countries**

#### **Recommendations**

Carry out epidemiological analyses of HPS cases according to severity level of clinical presentation; strengthen quality control system by using the regional reference laboratory; conduct case-control studies aimed at clarifying the magnitude of the person-to-person transmission in the region; prepare a panel of pathogens for the laboratory diagnosis of respiratory distress syndromic surveillance; formulate a clinical definition for mild cases of HPS; report to health workers the activities carried out to promote the detection of emerging diseases by physicians.

#### **Fulfillment**

Epidemiological HPS studies were carried out. In Paraguay, a new reservoir was found. The Regional Reference Center, INEI, Argentina, continue to collaborate with the national laboratories providing diagnostic reagents and quality control services. Studies on person-to-person transmission in the region are being carried out in Argentina and Chile. However, a panel of pathogens was not yet produced for the laboratory diagnosis of respiratory distress syndromic surveillance, a clinical definition of mild cases of HPS has not been accepted by all countries, and the dissemination of information to promote the detection of emerging diseases by physicians is still restricted.

## **PAHO**

### **Recommendations**

Facilitate the shipment of samples and panels of control sera between countries and Regional Reference Laboratory, INEI, Argentina; strengthen information dissemination among health care workers of syndromic algorithms, and determine where the samples should be sent to for confirmation.

### **Fulfillment**

Activities were not carried out.

## **Antimicrobial Resistance**

### **Countries**

#### **Recommendations**

Carry out surveillance of species isolated from the community and in hospital infections following quality assurance standards and analyze and disseminate periodically surveillance results

#### **Fulfillment**

With the exception of Uruguay, the other countries have a system of sentinel laboratories for antimicrobial resistance surveillance for enteric pathogens with quality assurance. Periodic performance evaluation of sentinel laboratories is done by the National Reference Center. In Argentina, Bolivia, Chile, and Paraguay, the system includes the monitoring of other species responsible for infection in the

community and hospitals (not all the species of all countries). (Refer to Document HCP/HCT/201/02 and <http://www.paho.org/spanish/hcp/hct/eer/amr-results-2000.htm>).

## **PAHO**

### **Recommendations**

Training of medical and laboratory staff must be strengthened, and country activities in surveillance of antimicrobial resistance must be discussed in the next network meeting.

### **Fulfillment**

Workshops on antimicrobial susceptibility testing and quality assurance were held in Bolivia. Instructional material in quality assurance was prepared. The agenda of this joint network meeting (Atlanta 2002) includes presentations on national systems for monitoring antimicrobial resistance.

### **Recommendations**

#### **General activities**

To countries Establish mechanisms for regular contact via internet among participating countries; develop national plans for the preparation of epidemiological emergencies; strengthen surveillance of leptospirosis, FBDs and etiological agents, including Shiga toxin producing E. Coli, and sudden death of unknown cause; and promote mechanisms for the incorporation of the surveillance results into the preparation of policies for prevention and control.

**To CDC** Continue supporting network activities in the surveillance of emerging infectious diseases; promote personnel training of national networks at CDC.

**To PAHO/WHO** Implement an electronic platform that integrates sub-regional and regional information on priority diseases, facilitating periodic dissemination of national reports; carry out periodic country evaluations of surveillance systems of emerging infectious diseases; implement periodic performance evaluation of National Reference Laboratories for serology testing of emerging infectious diseases; support training of national groups for the rapid response to outbreaks of emerging infectious diseases.

#### **Dengue and Yellow Fever**

**To Countries** Validation of rapid tests for the diagnosis of dengue; development of studies on insecticide resistance and effectiveness of alternative insecticides; formation of technical groups for sharing information on sustainable satisfactory experiences for dengue control, adaptable to each country's epidemiological situation and institutional condition; and conduct local vector studies on *A. aegypti* and *A. albopictus* with regard to yellow fever transmission.

**To PAHO/WHO** Provide support with reagents for the diagnosis of yellow fever to National Reference Laboratories; promote collaboration among National Reference Laboratories from participating countries.

#### **Influenza**

**To Countries** Prepare national contingency plans in the event of a pandemic; submit data to Flu-Net on weekly basis; isolate strains at the beginning, middle and end of influenza seasons and send them to WHO Collaborating Center.

**To CDC** Continue its support for the activities in the countries

**To PAHO/WHO** Study the possibility and opportunity to implement a revolving fund for the procurement of reagents and distribute them to the national reference centers.

## **Hantavirus and other viral diseases**

**To Countries** Carry out case-control studies to identify risk factors and conduct further studies on reservoirs and rodent population dynamics.

**To PAHO/WHO** Facilitate contact, communication, and shipment of samples between the Regional Reference Laboratory and the National Reference Laboratories from participating countries; promote the formation of national groups that carry out epidemiological situation analysis of Hantavirus Pulmonary Syndrome; and promote the training of laboratory personnel in the monitoring of the West Nile Virus.

## **Malaria**

**To Countries** Strengthen surveillance activities of sentinel sites for antimalarial drugs resistance; carry out inter-country activities focusing on border areas.

**To USAID** Continue financial support for the countries.

**To PAHO/WHO** At the next Amazon network meeting report on how study findings on antimalarial drug treatment influenced country policies; continue reviewing the protocol to conduct efficacy studies on antimalarial drugs for P.vivax and support the strengthening of national networks; promote the preparation of the two and three year work plans of the five year project.

## **Antimicrobial Resistance (including M. tuberculosis)**

**To Countries** Promote the routine reporting of surveillance results obtained from sentinel laboratories that work with quality assurance; expand the Sentinel Laboratory network of each participating country; disseminate surveillance results of antimicrobial resistance in coordination with Scientific Societies and apply these results to local level; and incorporate the private health sector in the surveillance and encourage multi-sector participation in surveillance activities.

**To PAHO/WHO** Include Uruguay in the surveillance network; support the countries for the promoting rational use of antibiotics by means of adapting the Generic Clinical Guide and Formulary to local levels; conduct periodic performance evaluations of the National Reference Laboratories by shipment of a panel of bacteria for its identification and antimicrobial susceptibility testing.

## **Syndromic Surveillance**

**To countries** Increase study pilot areas with laboratory support that are carried out in the countries.

**To PAHO/WHO** Disseminate results of the syndromic surveillance pilot studies.