

munication, and giving technical support to the joint development of health and welfare indicators that will make it possible to monitor and assess the impact of the actions taken.

In summary, the Healthy Municipios strategy in Latin America is helping to promote new social pacts in the search for solutions to problems affecting health and well-being; to strengthen the principles of solidarity; and, above all, to find a means of achieving equity. Through this movement, the health sector is bolstering

its leadership capability by putting health on the political agenda. In the process, the organization of services is being improved and the formulation and implementation of healthy public policies is being advanced. The political, financial, and technical challenges are great, but if they can be met, the Healthy Municipios movement will contribute to building a culture of health through the promotion of healthy lifestyles and to strengthening democratic processes and fostering good citizenship.



## PAHO Measles Reference Laboratory Network

### BACKGROUND

In September 1994, during the XXIV Pan American Sanitary Conference, the Ministers of Health of the Americas unanimously endorsed the goal of measles elimination in the Region by the year 2000. The strategy adopted to eliminate measles includes the achievement and maintenance of high vaccination coverage in the population 9 months to 14 years of age, careful fever and rash illness surveillance, and the laboratory testing of sera obtained from fever and rash illness cases that meet the clinical case definition for measles.

Recognizing the importance of the laboratory confirmation of suspected measles cases, and following the example set during the polio eradication effort, the

Pan American Health Organization decided to establish a Region-wide measles reference laboratory network. PAHO has requested that the Measles Virus Laboratory of the U.S. Centers for Disease Control and Prevention (CDC) and 10 other national measles laboratories in Latin America and the Caribbean serve in the regional network.

### WORKSHOP FOR NETWORK PARTICIPANTS

From 22 to 26 May 1995, a measles diagnostic workshop was held at the CDC in Atlanta, Georgia, U.S.A. The overall purpose of the workshop was to update representatives of the reference laboratories on the current status of procedures for the laboratory confirmation of suspected measles and to establish the structure and procedures for the PAHO measles laboratory network. The specific terms of reference for the workshop were as follows:

---

*Source:* Pan American Health Organization, Special Program for Vaccines and Immunization. PAHO measles reference laboratory network: final report. Atlanta, Georgia, 22–26 May 1995. 13 pp.

- to develop laboratory protocols for confirmation of measles diagnoses via serologic testing for IgM antibody;
- to review procedures used for the capture IgM immunoassay;
- to discuss procedures for transferring reagents for the capture IgM assay between the CDC reference laboratory and the reference laboratories in Latin America and the Caribbean;
- to plan the format and content of training courses in measles diagnostics;
- to develop procedures for transfer of specimens between laboratories, for quality assurance and quality control of measles diagnostic testing, and for collection of information and its flow between laboratories and Ministries of Health;
- to encourage the transfer of technology, including procedures such as viral isolation and genotypic determination, between the CDC reference laboratory and the reference laboratories in Latin America and the Caribbean.

During the workshop the participants were provided with updated information on capture IgM immunoassay, which is currently considered the "gold standard" for the serologic confirmation of measles diagnosis. They also were briefed on progress in the development of a rapid measles diagnostic test; measles virus isolation from urinary tract, throat, and nasal passage cells; genotypic analysis of measles virus isolates for determination of likely geographic sources of measles virus; and polymerase chain reaction for detecting measles virus RNA. The latter technique can be used as a complement to serologic tests to confirm a diagnosis of measles. The participants reviewed and practiced laboratory procedures for serologic confirmation of measles.

## Principal Conclusions

The structure of the measles laboratory network was established and is shown in Table 1. Each member serves as a national reference laboratory, and some of them support national laboratories in other countries as well.

Ongoing communication between reference laboratories is very important. The preferred method of communication will be electronic mail. Therefore, all laboratories will need to have Internet access,

**Table 1.** Structure of the PAHO measles reference laboratory network.

Laboratory (location)	Reference laboratory for:
Centers for Disease Control and Prevention (U.S.A.)	U.S.A.
Laboratory Center for Disease Control (Canada)*	Canada
Instituto Pedro Kourí (Cuba)	Cuba
	Dominican Republic
	Haiti
Caribbean Epidemiology Center (Trinidad and Tobago)	English-speaking Caribbean
	Belize
	Suriname
Instituto Nacional de Diagnóstico y Referencia Epidemiológicos (Mexico)	Mexico
Centro Conmemorativo Gorgas (Panama)	Central America
Instituto Nacional de Higiene (Venezuela)	Venezuela
Instituto Nacional de Salud (Colombia)	Colombia
	Ecuador
Instituto Oswaldo Cruz (Brazil)	Brazil
Instituto Adolfo Lutz (Brazil)	Brazil
Laboratorio de Diagnóstico e Investigación (Argentina)	Argentina
	Paraguay
	Uruguay
Instituto de Salud Pública de Chile (Chile)	Chile
	Bolivia
	Peru

\*Not represented at the meeting, but future participation in the network is expected.

and it was recommended that PAHO assist them in acquiring it.

It was agreed that serum specimens should be tested only from cases meeting the clinical case definition for measles ("probable" case). During an outbreak, efforts should be made to obtain urine and/or nasopharyngeal aspirate specimens for viral isolation and, if a probable case is serologically confirmed as measles, these samples should be sent to the reference laboratory and to CDC for isolation of the virus.

The minimal identifying information that must accompany each specimen to the laboratory was specified. If part of this information is not provided, the laboratory may, at its discretion, reject the specimen.

CDC will supply sufficient reagents to all reference laboratories for use of the IgM capture test, which is to be considered the "gold standard" in all these laboratories. All specimens will be tested using this technique as well as the reference laboratories' current protocols, and data will be collected and analyzed to compare the results within the next 9–12 months.

National laboratories will send all positive and indeterminate serum samples to one of the reference laboratories for confirmation. A random sample of 5%–10% of negative specimens should also be sent.

Reference laboratories may on occasion send difficult sera to CDC for confirmation, upon obtaining prior authorization to ship specimens.

## FUTURE ACTIVITIES

A Spanish translation of the measles laboratory manual is being prepared, with different portions being translated by several of the workshop participants. The completed manual will be distributed to network members.

It was agreed that the responsible person from each reference laboratory should schedule working visits to collaborating national laboratories to evaluate current measles testing procedures, make recommendations on measles testing, and inform these laboratories of the procedures established for the PAHO measles laboratory network. In addition, personnel from reference laboratories should attend the periodic measles surveillance meetings.

A follow-up evaluation meeting of the PAHO measles laboratory network will be scheduled for early to mid-1996. Issues to be discussed include the sensitivity/specificity of IgM tests, internal quality control, and external performance evaluation.

