IMMUNIZE AND PROTECT YOUR FAMILY

Immunization Newsletter

Pan American Health Organization

Volume XXIX, Number 5 ► October 2007

In this issue:

Haiti to Launch a Rubella and CRS Elimination Campaign on 5 November

In Haiti, rubella is a disease that is often not diagnosed or reported. The understanding of its burden in the country is limited. However, a study conducted by Golden et al. in 2002, estimated the number of congenital rubella syndrome (CRS) cases to be between 163 and 440 per year, based on rubella seroprevalence in pregnant women (1). CRS is one of the adverse consequences of rubella infection during pregnancy. The three major birth defects associated with CRS are hearing impairment, congenital heart disease, and cataract.

In 2006, eleven rubella cases were reported between April and May in children aged 2-16 years (median age 7 years) from the Nord-Est and Sud Departments, suggesting widespread rubella virus circulation (Table 1). As part of the case investigation, samples were taken from the 18 pregnant women who had been in close contact with the rubella-infected children. Among these women, IgG results were positive for 17 (94%) and IgM results were negative for all 18. One woman aged 20 years, who was in her third month of pregnancy, tested IgG- and IgM-negative and remained negative two months later.

In 2006, CRS surveillance was established in a University Hospital (Hôpital Universitaire d'État d'Haïti/HUEH) in 2006. That year, HUEH reported 15 suspect CRS cases in children aged 6 days to 1 month. None of these cases were laboratory-confirmed.

In Brenda Hospital (Sud Department), on average 29 surgeries for congenital cataract are performed each year (Table 2). Unfortunately, most children consult late due to their parents' lack of resources. Of the 116 children operated between 2003 and 30 November 2006, 95% were examined after their first birthday, when it is more difficult to diagnose CRS with certainty (viral isolation or IgM-positive). In all children, the diagnostic at their first consultation was congenital cataract.

"Ann al' vaksynen por dechuoke ribeyòl ak polyo!" said Dr. Robert Auguste, Minister of Health and Population (Let's vaccinate to eliminate rubella and polio!). On 5 November, Haiti will launch the most ambitious vaccination campaign in the country's history and administer measles-rubella vaccine to children and young adults aged 1-19 years and oral polio vaccine to children <5 years throughout the territory. In the words of Prime Minister Jacques Edouard Alexis, "The national vaccination campaign will be an opportunity to show our people the colors of solidarity, love, and life." And Gabriel Bien-Aimé, Minister of Education, to add: "This is an effort led by the whole Haitian State, not just two ministries, to bring health and well-being into our schools.

Vaccination Week in the Americas: Fifth Anniversary

Background

This year the annual Vaccination Week in the Americas (VWA) celebrated its 5th anniversary. It was officially launched on 21 April on the trilateral border shared by Argentina, Brazil, and Paraguay. Other launching events occurred throughout the Region, often with the participation of high-ranking government officials. In total, 45 countries and territories in the Americas took part in a variety of VWA activities this year.

Objectives of the VWA

Over the last five years, VWA has been expanded as more governments have shown their political commitment toward maintaining vaccination as a Regional public good. Today, VWA has become a key initiative to maintain the achievements of the Expanded Program on Immunization, address the unfinished agenda, and serve as a platform for the introduction of new and underutilized vaccines. Activities planned during VWA place special emphasis on the identification of vulnerable populations and located in remote areas, urban slum areas, along borders, low coverage municipalities, and indigenous communities.

While countries choose their own specific plans of action for the week based on national public health priorities, the following are the overall

See VACCINATION WEEK page 2

Table 1. Confirmed Rubella Cases by Selected Municipalities, Haiti, 2006

Epidemiological Week	Department	Municipality	Cases	Laboratory Testing
11	Nord-Est	Mombin Crochu	6	IgM +
17	Sud	Cayes	3	IgM +
22	Nord-Est	Ouanaminthe	2	IgM +

Table 2. Distribution of Non-traumatic Cataract Cases Operated on at Brenda Hospital, by Age Group, Haiti, 2003 - November 2006

Year	Age Group				
	<1 Year	1-4 Years	5-10 Years	10-17 Years	Age Unknown
2003	2	13	8	9	0
2004	1	6	11	11	7
2005	1	6	10	9	0
2006	2	2	11	7	0
Total	6	27	40	36	7

Based on the data reported, and Haiti's commitment to meet the Regional goal of rubella and CRS elimination by 2010, the country has decided to conduct a mass vaccination campaign using measles-rubella vaccine, targeting the population aged 1-19 years, estimated at 4.7 million and representing over half of the country's total population. This campaign will also serve as an opportunity to provide oral polio vaccine (OPV) to children aged <5 years, vitamin A supplementation to children aged 1-4 years, antiparasitics (albendazole) in schools, and Td vaccine to women of childbearing age in large cities. After the campaign, MMR (measles-mumps-rubella) vaccine will replace measles vaccine in the national immunization schedule, and will be given annually to all children aged 1 year.

In May 2007, a pilot campaign in five rural communes along a border area with the Dominican Republic and one urban commune in Port-au-Prince was conducted in preparation for the mass vaccination campaign. Over 99,000 persons were vaccinated. At the end of the pilot campaign, rapid coverage monitoring was conducted to verify campaign coverage at 99%. This pilot campaign generated important lessons to improve existing vaccination strategies and to better prepare the country for the upcoming national campaign. ■

Authors: Dr. Benoît Ntezayabo, Immunization Unit (IM)/PAHO, Haiti; Dr. François Lacapère, IM/PAHO, Haiti; Dr. Carlos Castillo-Solórzano, IM/PAHO, Washington, D.C.

(1) Golden N, Kempker R, Khator P, Summerlee R, Fournier A. Congenital rubella syndrome in Haiti (Short communication). Rev Panam Salud Pública. 2002;12(4):269-73.

VACCINATION WEEK from page 1

objectives guiding VWA:

- Promoting equity and access to immunization;
- Supporting the transition from child to family immunization;
- Maintaining immunization on the political agenda;
- Keeping the Region free of polio and indigenous measles;
- Supporting the implementation of plans to eliminate rubella and congenital rubella syndrome (CRS);
- Supporting the introduction of new or underutilized vaccines;
- Strengthening epidemiological surveillance; and
- Promoting cross-border coordination.

Methods

To meet the goals of VWA, strategies have been devised to connect with the widest possible segment of the Region's population and communicate VWA's messages. These include information dissemination and mass communication efforts, as well as vaccination of populations who might otherwise be missed by the available health services. The following are examples of noteworthy tactics:

- Micro-planning adjusted to population dynamics, allowing for the vaccination of vulnerable, high-risk, or transient populations and identification of sites and days with a higher concentration of people.
- Intersectoral coordination within the health sector (national system and local committees) and with other areas of the government, such as the education sector for the vaccination of schoolchildren or the Armed Forces for the vaccination of military personnel.
- Involvement of the private sector for vaccination activities among tourism workers.
- Social mobilization to elicit the participation of local authorities, community leaders, opinion-makers, and the civil society.
- Training of health workers, brigade members, health promoters, and community health workers, who are directly responsible for conducting vaccination and prevention activities.

Planning

PAHO assists countries in the organization of the WVA, beginning with the distribution of planning workbooks several months prior to the vaccination week, and in the mobilization of resources, particularly for priority countries (Bolivia, Guyana, Haiti, Honduras, and Nicaragua). In addition, PAHO assists with the implementation of a mass media campaign, the procurement of inputs through its Revolving Fund, and the evaluation of vaccination activities. PAHO also engages in interagency coordination activities and advocacy to secure the participation of other institutions in the week's events. Last April, PAHO sent fifteen regional consultants to the different countries to assist in the organization and implementation of VWA.

Selected Achievements

The participation of countries and/or territories has increased during the five years that the VWA has been in existence. In 2003, 19 countries participated, compared to 45 countries in 2007. In total, more than 195 million people have been vaccinated during VWA initiatives (Figure 1). Cross-border coordination and inter-agency cooperation has been strengthened due to VWA, and countries have taken advantage of the week to integrate vaccination with other public health activities, such as vitamin A supplementation and antiparasite drug administration.

In 2007 alone, a total of 47,694,804 individuals were vaccinated. The antigens most frequently administered were influenza and yellow fever, (18,724,234 and 9,306,090 doses, respectively). Additionally, more than 8 million polio doses, 7.6 million MR (measles-rubella) doses, and more than 2 million Td doses were administered. Other specific accomplishments from 2007 include:

1. Working Towards the Unfinished Agenda:

- Brazil and Paraguay vaccinated indigenous communities: 138,369 and 15,321 people, respectively, against influenza, yellow fever,

tetanus, hepatitis B, pneumococcus, and chickenpox.

- Bolivia, Ecuador, and Peru conducted yellow fever prevention campaigns vaccinating a combined total of 9,264,305 individuals.
- Eleven countries vaccinated against seasonal influenza, targeting groups such as those aged >65 years, the chronically ill, pregnant women, and health workers.
- Guatemala vaccinated more than 7 million individuals against measles and rubella as part their rubella and CRS elimination plan. Haiti implemented a pilot campaign and vaccinated 99,526 individuals against these diseases.
- Paraguay, Nicaragua, and the Dominican Republic worked towards tetanus elimination by vaccinating at-risk groups such as women of childbearing age (WCBAs), indigenous groups, and border populations.

2. Protecting the Achievements:

- Cuba administered a polio vaccine booster to 363,057 children aged >3 years; Mexico vaccinated close to 6 million children aged <5 years; Haiti, Honduras, and the Dominican Republic vaccinated 27,776, 875,560 and 97,008 individuals, respectively, against polio.
- Many countries worked to identify and vaccinate children whose vaccination schedules were incomplete.

3. Meeting Future Challenges:

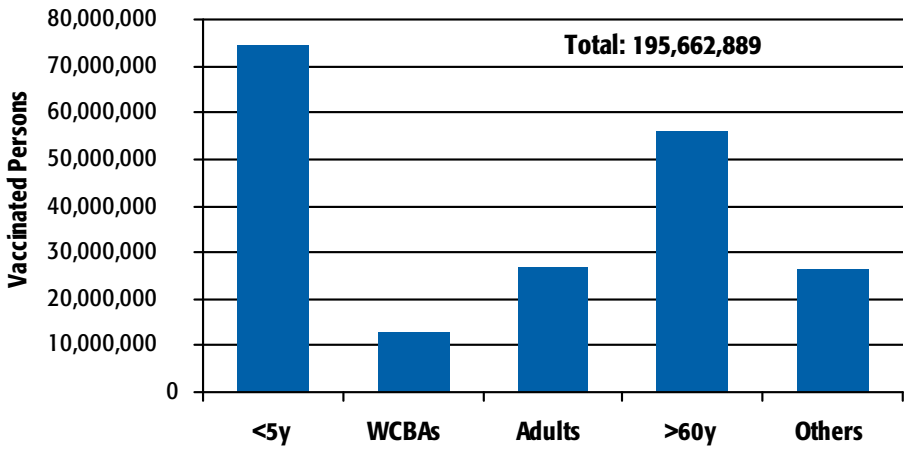
- Panama introduced the hepatitis A vaccine and immunized 5,590 children aged <2 years with a first dose and a booster.
- Venezuela reintroduced the rotavirus vaccine, administering it to 47,217 children aged 2-3 months, achieving 96.4% of its established target.

4. Mass Communication:

As in previous years, PAHO designed communication materials to send clear and uniform vaccination messages. The images of celebrated soccer figure Ronaldinho Gaúcho, cricket player Rodney Walsh, and, for the first time, popular characters from *Sesame Street*, were used in public service announcements for television and radio, in addition to stickers and posters.

Countries also designed more local strategies that would elicit a positive response to vaccination (call to action). Canada, the English-speaking Caribbean countries, the Netherlands Antilles, Uruguay, and the United States planned and implemented separate awareness campaigns regarding the importance of vaccination. These campaigns targeted parents, health workers, decision-makers, and opinion-makers.

Figure 1. VWA Results by Population Group, 2003-2007



Source: Country reports to Immunization Unit, PAHO.

5. Integrated Health Activities:

In 2007, the Dominican Republic, Haiti, Honduras, Mexico, Nicaragua, and Panama, were able to couple the activities of VWA with other important primary health care activities. These included the administration of vitamin A, antiparasitic drugs, oral rehydration solutions, iron, and folic acid.

Lessons Learned

Some of the many lessons learned through planning and implementing VWA include:

- The VWA planning process needs to begin many months before the initiative in order to assure its success.
- Countries need to create a budget line for VWA activities in their national budget to ensure sufficient funding is available.
- National and local level launchings provide critical political commitment for VWA and national immunization programs, in addition to promoting Pan Americanism.
- VWA fosters strong inter-agency cooperation in two main areas: obtaining financial and human resources support and developing information materials necessary for the campaign.
- VWA should be viewed as an annual opportunity to renew countries' commitment to their national immunization programs.

Conclusion

VWA is a model that can be used in other Regions, like the European Region. From 16-20 April 2007, WHO's European Region held its own Immunization Week (EIW), with the participation of 25 countries. Europe's initiative focuses solely on mass communication concerning the importance of vaccination, with particular efforts made to reach vulnerable populations. In 2008, EIW will coincide with WVA to unite the two initiatives.

In light of EIW's tremendous growth, the exciting prospect of a future Global Vaccination Week exists. Keeping this in mind, VWA must continue to be an initiative that, at its core, prioritizes and protects vulnerable and high-risk populations from vaccine-preventable diseases. In addition VWA must work to sustain the achievements obtained over the last five years, namely maintaining vaccination on the political agenda, cross-border coordination, inter-agency cooperation, integrating health activities, and improving family health. ■

Summary of EPI Evaluation in Honduras

The Pan American Health Organization (PAHO) coordinates with Member States to evaluate their national immunization programs through an international multidisciplinary process. The evaluation serves as a tool for monitoring program advances and assessing the technical capacity to face new challenges. The evaluation of the national immunization program of Honduras was conducted from 20-31 August 2007.

The specific objectives of the evaluation were to assess the immunization program's capacity to maintain its achievements; respond to the challenges of disease control, elimination, and eradication; move from child to family immunization; introduce new vaccines in a sustainable manner; and adapt to the decentralization process the country is currently facing.

Background

The Expanded Program on Immunization (EPI) in Honduras was created in 1979 and, from the start, has been a national political priority. It is backed by documents such as the country's constitution, health regulations, and vaccine legislation. The vaccine legislation guarantees the financial sustainability of the EPI since it ensures that adequate funds are earmarked for the purchase of vaccines, syringes, and safety boxes. The funds are considered as fixed expenses by the Ministry of Finance and, since 2005, 100% of the funding required for vaccine and supply purchase comes from the national budget. The scope of the vaccine legislation is being widened to include the concept of vaccination being a right and a public good, and to maintan vaccination as a free, public service.

In 1999, the National Advisory Committee on Immunization (CCNI per its Spanish acronym) was created. It is composed of members of scientific societies, professional associations, and universities who meet four to six times a year. They issue recommendations on the immunization schedule and provide technical support. The CCNI also plays an important role for program advocacy.

The immunization schedule currently includes vaccines against poliomyelitis, measles, rubella, mumps, seasonal influenza (older adults), severe forms of tuberculosis (BCG vaccine), diphtheria, pertussis, tetanus, Hib meningitis and invasive diseases, and hepatitis B (for newborns, infants, and risk groups). The EPI is considering the introduction of new vaccines, such as conjugate pneumococcus and rotavirus. To that end, the program has conducted disease burden studies and cost-effectiveness studies. It has analyzed the economic impact of such introduction to ensure that program sustainability is maintained.

In general, coverage rates for all vaccines have been >90% since 1998. However, coverage rates are declining at national level since 2003 (Figure 1).

Methodology

Evaluators used the PAHO methodology for the multidisciplinary evaluation of the EPI. This methodology consists in a qualitative and quantitative evaluation conducted through interviews with key individuals at political, managerial, and operational levels to review the development of the EPI components. In addition, and at the country's request, the team assessed the EPI information system component by using the Data Quality Self-assessment (DQS) methodology (1). This assessment evaluated the system's quality, data accuracy, and timeliness and completeness of reporting.

The evaluation team was composed of staff from the Ministry of Health and eight international evaluators. Twelve of the 18 Departments of Honduras (65% of the country's total population) were selected, including the metropolitan regions of Distrito Central and San Pedro Sula. Interviews were conducted at political (32), managerial (34), and operational (98) levels, and with 22 agencies and 174 users. The DQS team visited 21 health units, 5 Departments, the national EPI, and the national statistics team.

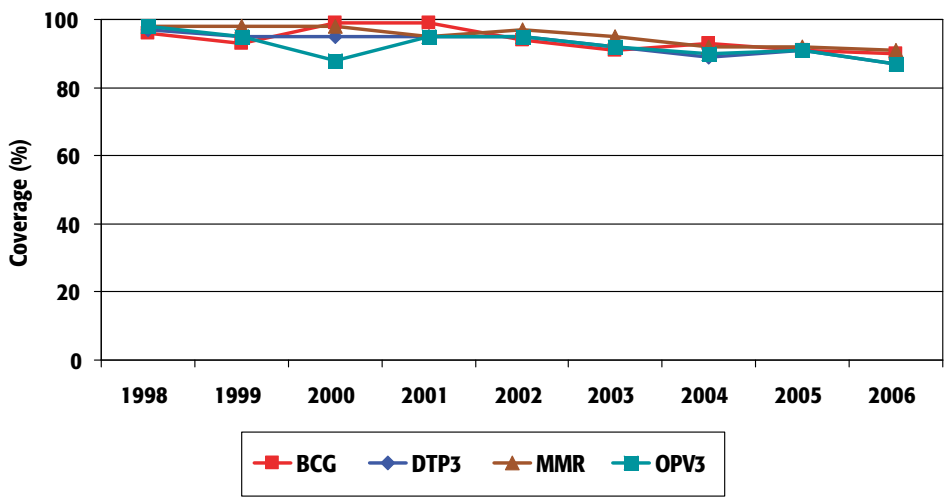
Main Findings and Challenges

The key findings and challenges are described below.

1. Findings:

- The country contributes 100% of the resources needed for vaccines, immunization supplies, and cold chain.
- The EPI has acknowledged the importance of new vaccine introduction and maintaining achievements.
- The EPI benefits from high credibility at all levels regarding its efficiency and transparence.
- The EPI has excellent mechanisms in place for administrative and scientific support.
- A multiyear strategic plan guides the work of the EPI.
- Decision-making is based on systematic evaluations.
- At operational level, monthly meetings are held to monitor management performance.
- At local and regional levels, coordination with other programs, institutions, and the community is satisfactory. In border areas, vaccination activities and epidemiological surveillance are coordinated between countries.
- As the Immunization Safety Plan is being implemented, monitoring and supervision are performed systematically and appropriate follow-up of events supposedly attributable to vaccines or immunization (ESAVIs) is conducted.

Figure 1. Vaccination Coverage for BCG, DTP3, MMR, and OPV3, Honduras, 1998-2006



Source: Report through EPI Tables and PAHO-WHO/UNICEF Joint Reporting Forms (JRF), Immunization Unit, PAHO.

- The cold chain network is working well throughout the country.
- The information system is well organized, with adequate data flow. Reporting is complete and timely, allowing real-time monitoring of immunization coverage per month, municipality, and health unit.
- Data accuracy between reporting levels is high: 96% of Pentavalent 1 doses and 97% of Pentavalent 3 doses reported at central level could be verified in the daily registries of the health units visited.
- Mandatory notification, investigation, and response apply to all vaccine-preventable diseases.
- The country complies with international surveillance indicators for Acute Flaccid Paralysis (AFP) and measles/rubella.
- Since 2006 a national weekly bulletin for the surveillance of AFP, measles/rubella, and congenital rubella syndrome is published.

2. Challenges:

- Ensuring coverage ≥95% in all the country's municipalities.
- Conducting the study on EPI population denominators.
- Ensuring financing to strengthen program sustainability.
- Incorporating support to routine immunization into the maternal and child health communication strategy.
- Guaranteeing transportation means to comply with all program activities.
- Conducting systematic active search of vaccine-preventable disease cases in institutions according to the existing national EPI norms.

Recommendations

Along with its report, the evaluation team drafted a comprehensive five-year plan of action to help with implementing its recommendations. A summary of the main recommendations follows.

- Expediting the approval of a broader legislation on vaccination.
- Ensuring the EPI indicators are used as markers for the health sector reform.
- Considering the EPI as a platform to extend coverage for other interventions.
- Ensuring the appropriate human resources at local level to comply with program objectives.
- Guaranteeing the availability of human and financial resources to respond to emergencies.
- Providing local levels with the communication tools and software required to transmit information.
- Encouraging the exchange of experience with other countries of the Region and promoting the publication of results from studies related to the EPI.
- Urging political authorities to convey the priority held by the EPI when resources are allocated in order to guarantee the sustainability of achievements and the capacity to face new challenges. ■

(1) Pan American Health Organization. Immunization Data Quality Self-assessment: The Costa Rica Experience. *Immunization Newsletter* 2006;28(1).

Partnership with the Global Alliance for Vaccines and Immunization

The Ministry of Health of Honduras and the EPI have received funding from GAVI during 2004-2006. The funds, in the amount of US $456,500, were used to implement the 2003-2005 National Injection Safety Plan. As a result, the EPI achieved significant progress for the safe elimination and destruction of syringes used in vaccination services.

Since 2006, GAVI has supported new projects: Immunization Services Support (ISS), Health Systems Strengthening (HSS), and New and Underused Vaccine Support (NVS). Honduras presented a proposal for ISS for the 2007-2011 period, and obtained financing (US $300,940). A plan for the disbursement of funds at operational level in the country's health regions is being developed.

The Ministry of Health is also preparing to present GAVI with proposals for HSS and NVS. Health authorities recognize the value of GAVI financing and how the provision of funds will help with increasing the quality of health services delivery.

GAVI is a collaborative effort of governments, international agencies, industry, research institutes, civil society, and venture philanthropy aimed at saving children's' lives through widespread use of vaccines. To date, GAVI has provided support in partnership with PAHO technical cooperation to six eligible countries in Latin America and the Caribbean – Bolivia, Cuba, Guyana, Haiti, Honduras, and Nicaragua. For more information, please go to www.gavialliance.org.

Geographic Information Systems for Immunization Programs

Two workshops on the use of Geographic Information Systems (GIS) for immunization programs have been conducted jointly by PAHO's Immunization Unit (IM) and the Health Analysis and Statistics Unit (HA). The first workshop was conducted in Santo Domingo, Dominican Republic, from 8-9 June 2007. Participants included representatives from Costa Rica, Cuba, the Dominican Republic, El Salvador, Guatemala, Haiti, Honduras, Panama, Mexico, and Nicaragua. The second workshop was held in Quito, Ecuador, from 8-9 August 2007. Participants included representatives from Bolivia, Chile, Colombia, Paraguay, Peru, Uruguay, and Venezuela. A demonstration will be conducted for Caribbean countries in Tobago in November 2007.

The objectives of the workshops were to present general GIS concepts and their usefulness for managing immunization programs, and introduce PAHO's initiative for the use of GIS in public health. The GIS software used in the workshops was SIGEpi, a free geographic information system developed by PAHO's Health Analysis and Statistics Unit for spatial epidemiological research.

Workshop participants were trained in advanced GIS techniques allowing them to use immunization and vaccine-preventable disease data to create new variables and thematic maps, and to conduct an analysis to identify critical areas where immunization and surveillance activities need to be strengthened. They also received a copy of the book *Geographic Information Systems in Health* developed by the HA Unit.

The workshops were divided in three sessions:

Theoretical session: To present the workshop objectives and basic GIS concepts.

Demonstration session: To introduce the SIGEpi software through an exercise identifying countries with different proportions of municipalities achieving DTP3 coverage levels ≥95%, using mapping and basic descriptive statistical techniques.

Practical session: To allow participants a hands-on experience using SIGEpi to analyze immunization data geospatially.

During the practical session, participants used data from their own country to create thematic maps (see maps at right).

Participants' reactions to the workshops were very favorable. For many of them it was their first exposure to GIS concepts. These workshops allowed countries having surveillance and coverage data by municipality to be adjusted to the SALB codes. The Second Administrative Level Boundaries (SALB) project and dataset are part of the UN geographic database and were developed by the United Nations Geographic Information Working Group. ■

Note: For more information about SIGEpi please contact the Health Analysis and Statistics Unit at: HA@paho.org.

What are Geographical Information Systems?

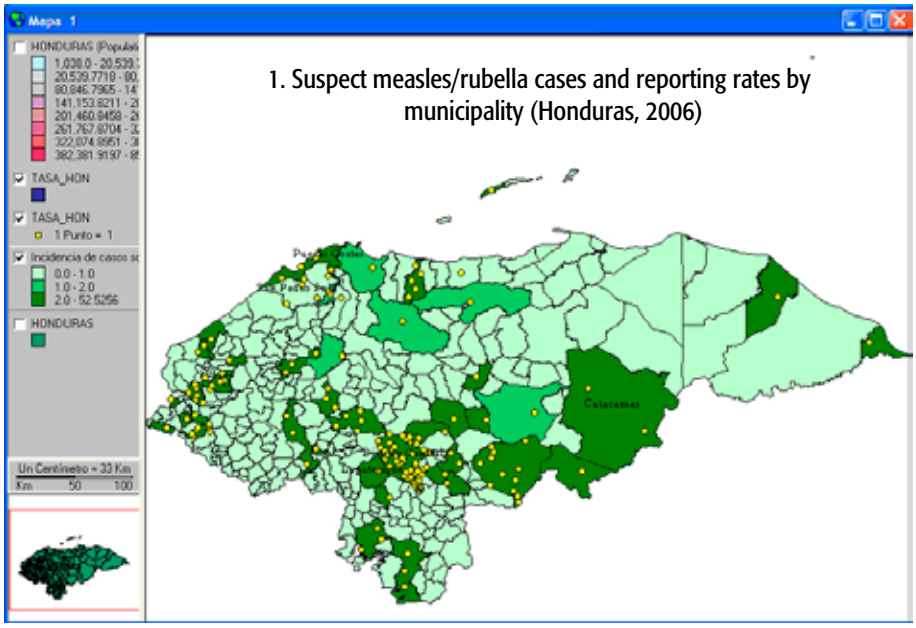
GIS have been defined as "*...Computer technology made up of equipment (hardware), programs (software), and data used in order to capture, edit, represent, and most importantly analyze geographic information.*" (Lewis and Fletcher, 1991). GIS add a geographic analysis dimension to information technology by providing an interface between the data and a map. GIS provide a useful tool to quickly and effectively present information to decision-makers.

The following are the three main integrated components of GIS:

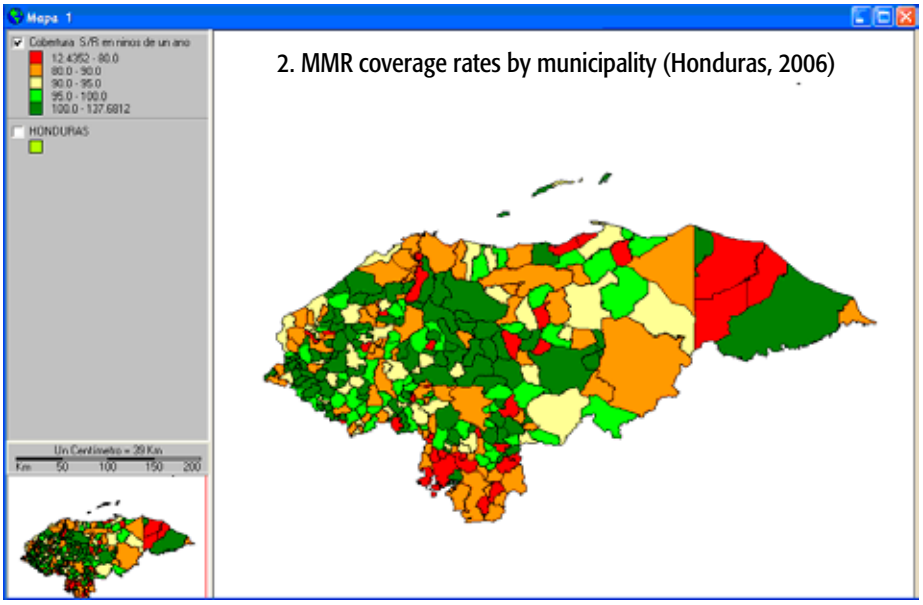
1. System: Computer technology and support infrastructure;
2. Information: Knowledge and data; and
3. Geographic: Location and spatial relationships.

Uses of GIS in public health include the following:

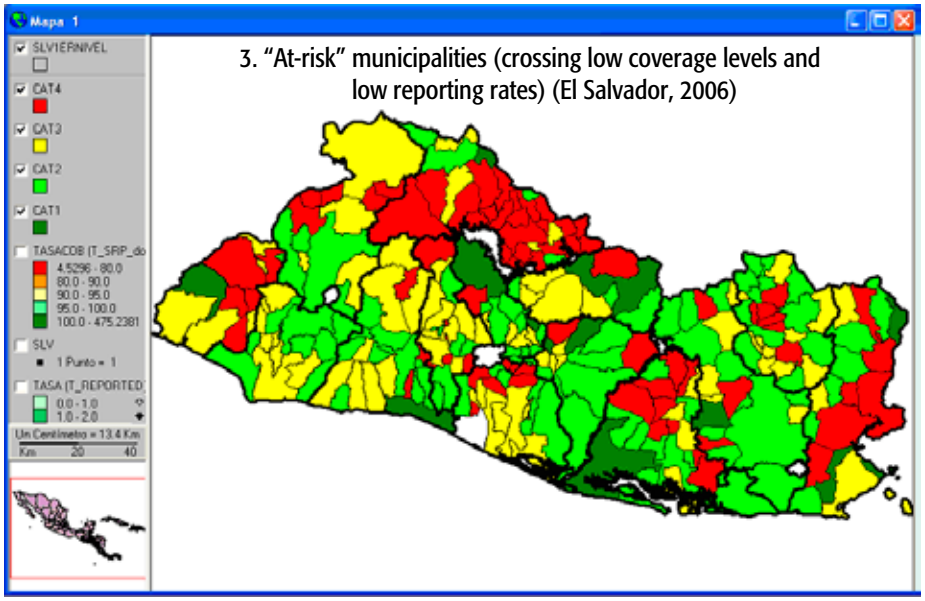
- Determining the geographic distribution of diseases;
- Analyzing spatial and temporal trends;
- Mapping at-risk populations;
- Stratifying risk factors;
- Assessing resource allocation;
- Planning and targeting interventions; and
- Monitoring diseases and interventions.



1. Suspect measles/rubella cases and reporting rates by municipality (Honduras, 2006)



2. MMR coverage rates by municipality (Honduras, 2006)



3. "At-risk" municipalities (crossing low coverage levels and low reporting rates) (El Salvador, 2006)

Measles/Rubella/CRS: Final Classification, 2006

Country	Total Measles/ Rubella Suspect Cases Notified	Confirmed Measles			Confirmed Rubella			Congenital Rubella Syndrome (CRS) Cases	
		Clinical	Laboratory	Total	Clinical	Laboratory	Total	Suspect	Confirmed
Anguilla	0	0	0	0	0	0	0	0	0
Antigua & Barbuda	0	0	0	0	0	0	0	0	0
Argentina	415	0	0	0	299	0	299	23	0
Aruba	…	…	…	…	…	…	…	…	…
Bahamas	4	0	0	0	0	0	0	0	0
Barbados	7	0	0	0	0	0	0	0	0
Belize	28	0	0	0	0	0	0	0	0
Bermuda	…	0	0	0	…	…	…	…	0
Bolivia	207	0	0	0	0	2	2	0	0
Brazil	20115	0	57	57 [b]	309	1337	1646	119	2
Canada	…	0	13	13	…	7	7 [b]	…	…
Cayman Islands	1	0	0	0	0	0	0	0	0
Chile	340	0	0	0	0	0	0	240	0
Colombia	2158	0	0	0	2	4	6	224	0
Costa Rica	…	…	…	…	…	…	…	0	0
Cuba	1019	0	0	0	0	0	0	0	0
Dominica	2	0	0	0	0	0	0	0	0
Dominican Republic	276	0	0	0	0	21	21	…	…
Ecuador	416	0	0	0	0	0	0	0	0
El Salvador	158	0	0	0	0	2	2	78	0
French Guiana	70	0	0	0	…	…	…	…	…
Grenada	3	0	0	0	0	0	0	0	0
Guadeloupe	…	…	…	0	…	…	…	…	…
Guatemala	581	0	0	0	0	11	11	0	0
Guyana	14	0	0	0	0	0	0	1	0
Haiti	81	0	0	0	0	11	11	20	0
Honduras	152	0	0	0	0	0	0	14	0
Jamaica	130	0	0	0	0	0	0	0	0
Martinique	…	…	…	0	…	…	…	…	…
Mexico	4504	0	23	23 [b]	0	74	74	0	0
Montserrat	0	0	0	0	0	0	0	0	0
Netherlands Antilles	…	…	…	…	…	…	…	…	…
Nicaragua	194	0	0	0	0	0	0	0	0
Panama	219	0	0	0	0	0	0	0	0
Paraguay	596	0	0	0	0	0	0	1	0
Peru	2422	0	0	0	33	694	727	508	12 [c]
Puerto Rico	…	…	…	0	…	…	…	…	…
St. Kitts & Nevis	0	0	0	0	0	0	0	0	0
St. Lucia	1	0	0	0	0	0	0	0	0
St. Vincent & Grenadines	0	0	0	0	0	0	0	0	0
Suriname	2	0	0	0	0	0	0	0	0
Trinidad & Tobago	13	0	0	0	0	0	0	0	0
Turks & Caicos	1	0	0	0	0	0	0	0	0
United States	…	0	45	45 [b]	…	4	4 [b]	…	0
Uruguay	11	0	0	0	0	0	0	0	0
Venezuela	2459	8 [a]	91	99 [b]	0	188	188	…	…
Virgin Islands (UK)	2	0	0	0	0	0	0	0	0
Virgin Islands (US)	…	…	…	…	…	…	…	…	…
TOTAL	36601	8	229	237	643	2355	2998	1228	14

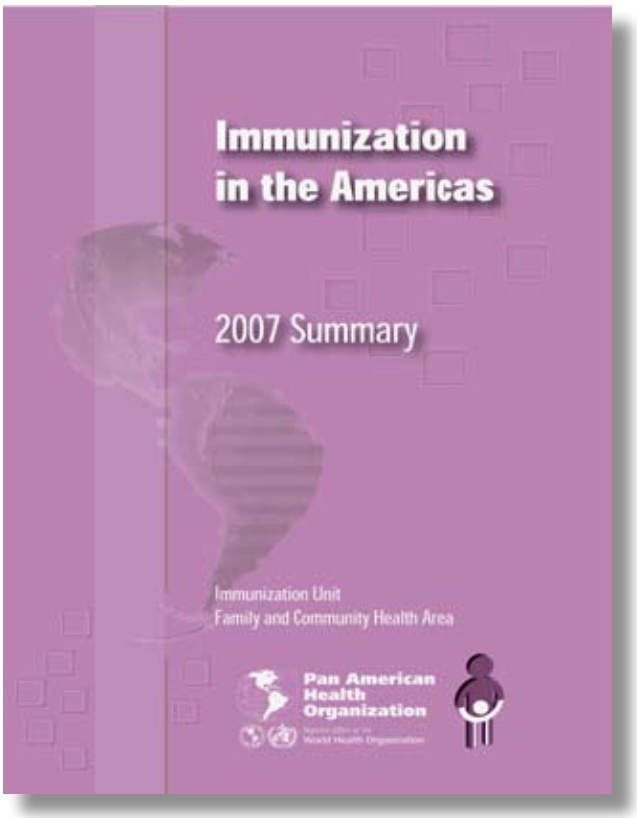
… No information provided

(a) detected through active search; (b) imported/related to an importation; (c) 2 congenital rubella infection cases.

Source: MESS and country reports through the PAHO-WHO/UNICEF Joint Reporting Form (JRF), 2007

Updated: 7 December 2007

Immunization in the Americas: 2007 Summary Now Available



The *Immunization in the Americas* brochure is published every year by the Immunization Unit. Its objective is to highlight the key data on vaccine-preventable disease surveillance and the provision of immunization services by the countries of the Americas. The publication serves as a benchmark for monitoring the progress of national immunization programs. It is available in English, Spanish, and French.

Since last published in 2006, the progress toward achieving rubella and congenital rubella syndrome elimination has been remarkable. All countries of the Region are now including rubella-containing vaccine in their immunization schedules. Over 116 million people have received the vaccine in mass vaccination campaigns targeting adolescents and adults.

However, much more needs to be done. One out of every three children in Latin America and the Caribbean lives in districts with poor immunization coverage levels. The unfinished agenda is to increase those coverage levels above 95%.

Strong national immunization programs, supported by PAHO's Regional program, will be paramount in breaking down the barriers to health that lead to inequities. Poor coverage and lack of access to new life-saving vaccines are likely to be the greatest challenges we face if we are to succeed in achieving the Millennium Development Goals (MDGs).

Copies of the brochure can be obtained by sending a request to fch-im@paho.org. The electronic versions corresponding to the last three years are available on the Immunization Unit web page at www.paho.org/immunization. ■

The *Immunization Newsletter* is published every two months, in English, Spanish, and French by the Immunization Unit of the Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization (WHO). The purpose of the *Immunization Newsletter* is to facilitate the exchange of ideas and information concerning immunization programs in the Region, in order to promote greater knowledge of the problems faced and possible solutions to those problems.

References to commercial products and the publication of signed articles in this Newsletter do not constitute endorsement by PAHO/WHO, nor do they necessarily represent the policy of the Organization.

ISSN 1814-6244
Volume XXIX, Number 5 • October 2007

Editor: Jon Andrus
Associate Editors: Béatrice Carpano and Carolina Danovaro

Pan American Health Organization
Regional Office of the World Health Organization

Immunization Unit
525 Twenty-third Street, N.W.
Washington, D.C. 20037 U.S.A.
http://www.paho.org/immunization