EPI Newsletter

Expanded Program on Immunization in the Americas

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Improved Surveillance for Polio and Measles in Haiti

Background

Separate epidemics of measles and poliomyelitis have occurred in Haiti during 2000 and 2001. At the end of 2001, major vaccination efforts have reduced the incidence of cases to below the detection level of routine surveillance. The last laboratory-confirmed measles case had rash onset on 26 September 2001, in Carrefour. The national measles immunization campaign (which was also the second national polio campaign) ended November 2001. No additional cases have been found since. For polio, the last laboratory-confirmed case of paralytic poliomyelitis polio caused by a Sabin-1 derived virus was reported July 12, 2001, in Thomazeau, prior to a scheduled vaccination campaign that administered the first additional dose of polio vaccine. The last case of measles was reported by the routine surveillance system. This case was eligible for payment of a reward of U.S. $100 established by PAHO for the reporting of laboratory-confirmed measles cases.

Haiti's EPI Director, Dr. Patrick Delorme (left), presents a US $100 reward to Ms. Marie Yolette Leandre, a nurse at the Food for the Poor Hospital in recognition of her notification of the first suspected measles case with rash onset September 26, 2001, following a measles campaign. The case was subsequently confirmed by laboratory. No new cases have been confirmed since.

Currently, surveillance must be improved in four areas to confirm that these viruses and the diseases they can cause are absent from the country:

- increase coverage of all health facilities for ***routine reporting*** of notifiable diseases;
- establish an ***enhanced surveillance*** system comprising of selected health institutions that will file weekly reports when no cases are detected;
- continue systematic ***active case searches*** throughout the country;
- continue routine ***environmental surveys*** for poliovirus in the metropolitan area and where the most recent cases were detected.

Activities

Routine reporting of notifiable diseases in Haiti is being enhanced by the development of a new information and procedures manual that has been produced by Haiti's Ministry of Health with support from PAHO. This manual will be distributed to workers in all health facilities in the country. The 16 notifiable diseases and conditions in Haiti include polio and measles, as well as other conditions such as neonatal tetanus.

Workshops will be conducted throughout the country to train health care personnel in reporting requirements and procedures that are outlined in the new manual. The first workshops for health staff working at the departmental level was held in November 2001.

In addition to these changes, PAHO continues to sponsor a reward of U.S. $100 for the first reporting of cases of either polio and measles in any municipality.

In this issue:

Enhanced surveillance for cases of acute flaccid paralysis (AFP), measles and neonatal tetanus will be established beginning in January 2002. This program will establish a network of 50-100 health facilities nationwide that will send weekly reports by telephone, facsimile, or messenger to the Ministry and PAHO. Most importantly, even in the absence of cases, the health facilities will report weekly (negative reporting).

Neonatal tetanus will be also included in the surveillance system because it is a high-priority disease, and will therefore be used as an indicator of the performance of the surveillance system. Furthermore, PAHO will assist the Ministry of Health in 2002, in strengthening vaccination efforts of women of childbearing age to prevent the occurrence of neonatal tetanus cases. The surveillance system will therefore be able to track the success of this campaign, as well as those for polio and measles.

Active case searches for cases of AFP, measles, and neonatal tetanus will continue to be conducted throughout the country. All major and mid-level health facilities in each department (approximately 100 facilities) will be visited regularly, and all suspected cases will be investigated immediately.

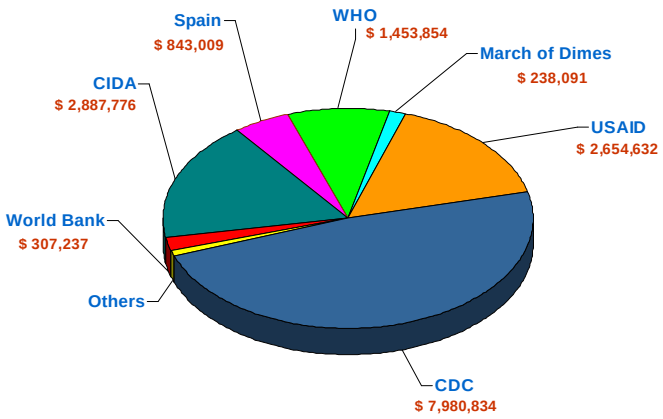
Additionally, each visit will serve as an opportunity to train local health staff on both the importance and method of reporting disease, and to inquire about the functioning of the cold chain and the availability of vaccines.

Environmental sampling will be continued within the metropolitan area of Port au Prince, and in other areas where suspected AFP cases have been identified. Eight sampling points have been established in Port au Prince, two of which have been positive in the past for the derived Sabin-1 virus. Sampling will be conducted every 4 months from these points. Additional samples will be obtained in other zones with confirmed cases of polio attributed to derived Sabin-1 virus, as well as in zones with unconfirmed cases, but for whom it was not possible to obtain stool specimens.

Editorial Note: The steps outlined by Haiti should confirm the absence of both diseases in the country. Along with enhancing routine immunization and conducting ongoing surveys to find pockets of unvaccinated children, these efforts should ensure that Haiti remains free from polio and measles!

Partnerships for Immunization

Source of External Funds, PAHO's Division of Vaccines and Immunization, Region of the Americas, 2000-2001



There is now consensus of the importance of health to ensure sustainable economic growth and poverty reduction, and of the need to ensure access to essential health services such as immunization, particularly to the very poor. As a priority health intervention, the establishment and strengthening of institutions that support the delivery of effective immunization and surveillance programs of vaccine-preventable diseases have, thus, become key issues in the dialogue between countries and the international community.

With this note PAHO's Division of Vaccines and Immunization would like to acknowledge the support of all partners that have contributed to realizing the goals of national immunization programs throughout the Americas during the years of 2000-2001. Thanks to this sustained support, national immunization programs have achieved remarkable achievements, notably the reduction of measles cases to 509 cases in 2001 in the entire Region! During 2001, endemic transmission was reported only in three countries, the Dominican Republic, Haiti and Venezuela. Dominican Republic's last confirmed case occurred in June 2001 and Haiti's last case was reported in September. Since August, 2001, 101 measles cases have been reported in Venezuela following an importation from Europe, an outbreak that is still ongoing. Since September, 2001, Venezuela is the only country with known endemic transmission in the Region of the Americas.

Supervisory tools have been developed to improve the accountability of vaccination coverage and routine surveillance at the local level. The tools have now become instruments of routine supervision in several countries, and aim to give greater authority and responsibility to the local level in the management of immunization programs. During the past years, efforts were focused on standardizing these supervisory tools for monitoring vaccination coverage, investigating measles outbreaks, and validating routine surveillance.

The Americas remains a pioneer in generating valuable knowledge and experience of disease eradication strategies of vaccine-preventable diseases that are benefiting global immunization initiatives. During the 2000-2001 period, PAHO was joined by the Centers for Disease Control and Prevention, the United States Agency for International Development, the Canadian International Development Agency, the March of Dimes Foundation, the World Health Organization, the World Bank, and the government of Spain. These partnerships are critical for the Americas to sustain the gains in the fight against vaccine-preventable diseases.

Measles Case Classification II

Frequent Dilemmas in the Field: Management of IgM-positive suspected cases not felt to be true measles

In the October 2001 edition of the *EPI Newsletter*, a discussion was published centering on the interpretation of a positive IgM test result in the setting of reduced disease transmission. As stated in that publication, **for the purposes of measles eradication, all suspected cases that are found IgM-positive should be considered laboratory-confirmed cases until proven otherwise.** The article also mentioned that one could test samples for anti-measles IgG antibodies to determine whether a positive IgM represented a false-positive laboratory result. The number of serum samples that are true false-positives should be very few. However, the process to rule-out suspected false-positive IgM cases requires a standardized methodology to assure proper and consistent classification of cases throughout the region. Furthermore, criteria were presented for classifying an IgM-positive suspected case as having a vaccine-associated rash illness. Here, we continue the discussion on the management of a suspected measles case that is IgM-positive when national authorities are not convinced that it is a true measles infection.

Epidemiologists in the program must be prepared to confront suspected measles cases, without a history of recent vaccination, that are IgM-positive by ELISA when national managers do not believe the case to be measles. This may occur when authorities believe the case is not clinically compatible with measles or, they may consider the laboratory test result to be a cross-reaction, e.g., to a dengue or parvovirus infection. Two questions arise: 1) can the case under discussion be given final classification based on clinical data, i.e., be classified as a discarded case?, and 2) are there additional laboratory testing procedures that can be performed to rule out a false-positive laboratory result?

(a) What is the utility of clinical surveillance data in discarding a suspected measles case?

For the purposes of the regional measles eradication program, a suspected case, regardless of their IgM test status, should not be discarded based solely on clinical data, or, more specifically, because of the *lack* of a clinical presentation considered typical of measles. Measles is generally described as an infection producing fever, rash and respiratory symptoms such as cough, conjunctivitis and coryza. Even so, the lack of these symptoms should not lead one to discount the possibility of an acute measles infection. A mild infection may produce a clinical picture atypical of classical measles. As shown in Table 1, using national data from the regional MESS database for suspected measles cases with onset of rash in year 2000, laboratory-confirmed measles cases (n=1,039) were more likely than IgM-negative discarded cases (n=11,485) to meet 8 different clinical case definitions, i.e., combinations of clinical symptoms, based on surveillance data. Even so, and importantly, an important proportion of laboratory-confirmed measles cases *failed* to fulfill the clinical case definitions. For example, while laboratory-confirmed measles cases were over 4 times more likely than discarded cases to have a history of cough, conjunctivitis and coryza, 48% of measles cases did not present with a history of the three symptoms, at least at the time when evaluated by a program staff person. Thus, a program manager should not disregard a laboratory result because of the *lack* of clinical compatibility.

Even so, when presented with a IgM-positive suspected case that is not believed to be measles, one could intensify a search for an alternative diagnosis, e.g., presence of a vesicular rash implicating a varicella infection. Failure to conclusively establish an alternative diagnosis by laboratory confirmation implies that the case must be confirmed as measles. In addition, the reverse is true, if one considers a case to be clinically compatible with measles but is IgM-negative, one should attempt to determine if the sample was taken appropriately, if there are other cases in the area, etc.

(b) What laboratory testing procedures can be performed to confirm that an IgM-positive test result represents an acute measles infection?

When confronted with an IgM-positive result that the country feels could be a false-positive and when an exhaustive case investigation fails to identify other cases, including the index case, one can consider further testing at a reference laboratory for IgG anti-measles antibody titer levels (Figure 1).

IgG titer levels should be determined in two properly spaced and timed blood specimen in a test that actually measures measles IgG titer levels, e.g., HI, or PRN. To be considered properly spaced specimens, the first specimen should be collected within 7 days of rash onset and the second specimen should be obtained 3 to 4 weeks post rash onset, i.e., 2 to 3 weeks post sample #1.

As seen in Figure 1, if sera from the first sample is found to have IgG antibodies and if the second sample has no change in IgG titer levels as compared to sample #1, it would not be considered a measles case and could be discarded. The IgM-positive test result would be considered a false-positive. However, if the second sample shows a four-fold rise in IgG antibody titer levels as compared to sample #1, it should be considered an acute measles infection and confirmed. If the second sample shows an increase in IgG titer levels but less than a four-fold rise from the first sample, it would not be possible to determine if it were or were not an acute infection. In this situation, the case should be confirmed based on the positive-IgM test result.

If the first sample is negative for IgG antibodies and if the second sample is also negative for IgG antibodies, it would not be considered a measles case and could be discarded. If, however, the second sample is IgG (+) for measles, it would be confirmed as acute measles infection.

The other situation occurs when there is no further sera from sample #1 for IgG antibody testing. In this case a second sample would still need to be collected. If negative for IgG, the case could be discarded. If, however, the second

sample is IgG positive, one could not confirm nor discard the case based on the IgG titers. It would not be possible to determine if the positive-IgG represented an acute or past infection. In this setting, the case must be confirmed based on the IgM test result. Regardless of the scenario or testing sequence results, when in doubt, the case should be confirmed based on the positive-IgM test result.

Editorial Note: All suspected measles cases with an IgM-positive test result must be considered measles unless proven otherwise. Importantly, control actions must be initiated immediately and must not be postponed while waiting for confirmation either by further testing for IgG antibodies, repeat of IgM testing, etc. The extreme contagiousness of measles implies that control actions must be implemented immediately. Waiting to confirm the IgM test result could potentially have disastrous results leading to wide-spread viral transmission. In addition, the potential for false-positive IgM test results highlights the need to obtain specimens for viral isolation. Too few cases in the region have specimens collected for viral isolation. Isolation of measles virus confirms the diagnosis. All countries in the Region need to greatly accelerate their efforts to ensure the collection of specimens for viral isolation. Additionally, a viral specimen can be evaluated for the presence of measles virus by PCR in a specialized network laboratory if culture attempts fail.

Although one must be cautious in using clinical data for final classification purposes, the clinical presentation can raise suspicions that a case may or may not be measles that can then lead to further actions to confirm or refute a laboratory finding. One must, however, be cautious in over-interpreting clinical surveillance data. Clinical surveillance data, as opposed to clinical studies, often reflects only one evaluation. The clinical presentation may change the day after the evaluation.

The schematic presented in Figure 1 for testing specimens for IgG, to be performed in the regional reference laboratory, does not imply that all IgM-positive specimens should be tested for IgG. On the contrary, this algorithm should **only** be performed on isolated, sporadic cases when there is clear suspicion that the IgM result may not be accurate, AND, when the case has already been classified as confirmed and has had appropriate control measures completed. It is crucial that national authorities understand that this testing scheme should be done well **after** final classification and control activities have been completed, including a thorough case investigation and active search in the community and in local health facilities to rule out other cases. The presence of other IgM(+) cases in a Municipality eliminates the need for IgG testing. Coverage must also be reviewed and confirmed to be at least 95% at the affected district or minicipality. Furthermore, to not overload regional resources and funds for IgM tests kits, prior to initiating the algorithm, national managers should discuss the case with PAHO-EPI staff to reach an agreement that such testing should be considered. At that time, PAHO/Washington should be consulted for coordinating the shipment of the specimens to the regional reference laboratory for the appropriate testing such as neutralization testing. It is important to point out that the use of IgG ELISA test kits in this situation is not appropriate since differential titrations between samples must be performed.

Finally, national program managers must understand that the presence of isolated, sporadic IgM-positive cases classified as confirmed measles cases does not represent a failure of the national eradication program. One must expect the occurrence of sporadic cases, e.g., an importation even when it is not possible to prove it is imported. The presence of a sporadic confirmed case that does not result in further disease transmission should be considered a program success. In fact, ultimately, it is the only measure of success.

Table 1.
Proportion of laboratory-confirmed measles cases and laboratory-discarded cases that fulfill 8 different clinical case definitions, PAHO regional measles database (MESS), 2000*.

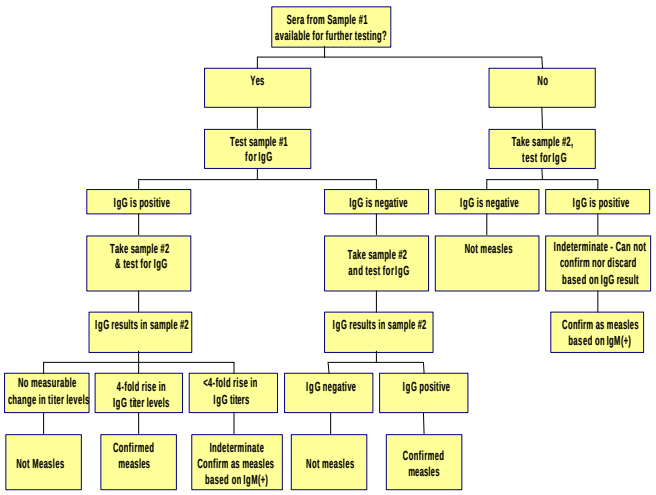
Case definition (CD)***	Measles cases** % meeting CD Yes	No	Non-measles cases** % meeting CD Yes	No	Risk Ratio (RR)	95% CI
CD #1	62.5	37.5	36.3	63.7	2.8	2.3,3.6
CD #2	63.3	36.7	25.0	75.0	4.9	3.9,6.2
CD #3	52.0	48.0	24.5	75.5	3.2	2.6,4.0
CD #4	51.6	48.4	18.7	81.3	4.4	3.5,5.5
CD #5	62.5	37.5	35.4	64.6	3.0	2.3,3.7
CD #6	63.3	36.7	24.3	75.7	5.1	4.0,6.4
CD #7	52.0	48.0	23.7	76.3	3.4	2.7,4.2
CD #8	51.6	48.4	18.3	81.7	4.5	3.6,5.7

* Data include national notifications of suspected measles cases during year 2000 via the MESS database. A total of 12,524 cases were included in the analysis; 1,039 were laboratory-confirmed measles cases. Cases classified as vaccine-related rash illnesses were excluded from the analysis. Cases without information for a given case definition were excluded from that analysis.

** Measles cases are laboratory-confirmed with a positive IgM, non-measles cases are laboratory-negative for IgM by ELISA.

***Clinical case definitions (CD) are as follows:
#1=cough and coryza, #2=cough and conjunctivitis,
#3=coryyza and conjunctivitis, #4=cough, coryza and conjunctivitis,
#5=cough, coryza and fever, #6=cough, conjunctivitis, fever,
#7=coryza, conjunctivitis, fever, #8=coryza, cough, conjunctivitis, fever

Figure 1.
Testing algorithm for suspected measles cases with IgM-positive test results when a false-positive is suspected.



The Use of Surveillance Data to Manage National Immunization Programs

The collection of surveillance data has many purposes. Not only can surveillance data provide useful information about disease transmission and trends, it can also assist program managers to identify programmatic areas in need of improvement. Here, we analyze one regional indicator and how it can be used to improve national measles eradication program performance.

An important indicator within the measles eradication program is the proportion of blood samples of suspected measles cases that arrive within 5 days to the laboratory for testing. In fact, this indicator is one that is published weekly in the PAHO *Measles Surveillance Bulletin* for close scrutiny. If suspected measles cases are to be given timely final classification, samples must arrive to the laboratory in a timely manner. Failure to arrive in the laboratory rapidly not only delays both the final classification and the implementation of potential control measures, but could also impact on the quality of the sample. Samples that sit in transit could potentially become lost or deteriorate in quality, depending on storage conditions. Ideally, poor or low indicators should prompt corrective measures to be taken. Unfortunately, this is not necessarily the case.

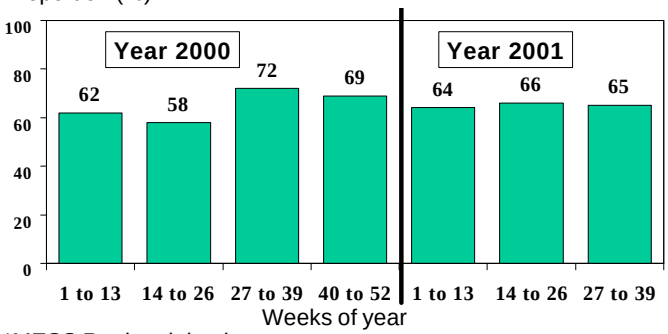
According to data in the regional Measles Eradication Surveillance System (MESS) database that was developed by PAHO, as of week 44, only 53% of samples in the Region arrived on time during year 2001, far below the goal of 80%. Furthermore, when evaluated by quarter, since January of 2000 there has been little, if any, improvement in the indicator. Thus, countries may be failing to take appropriate corrective measures to remedy this situation. As seen in Figure 1, between 60% to approximately 70% of samples have arrived on time, i.e., within 5 days of being drawn.

When evaluated by country, five countries in the Region, i.e., Costa Rica, Ecuador, El Salvador, Haiti, and Mexico, report that during the last 7 quarters approximately 80% of samples have arrived within 5 days. Only Honduras, Haiti, and Chile, have shown steady improvements over the last 7 quarters in the proportion of samples that arrived on time. However, data from 5 countries (i.e., Bolivia, Colombia, Guatemala, Nicaragua, and Paraguay) reveal little change in the indicator over the time period evaluated (Figure 2). Finally, 5 countries (i.e., Argentina, Dominican Republic, Panama, Peru, and Venezuela) show a decreasing trend in program performance during the evaluation period, Figure 3.

Editorial Note: Surveillance data that are collected during case investigations should be closely monitored and evaluated. Low indicators should prompt an analysis of the situation and the identification of corrective measures. This holds true in the case of sending laboratory specimens, program managers must use their data for decision making: Why are samples not arriving on time? Are there insufficient funds to pay for transport to the laboratory? If so, additional funds should be allocated in national Plans of Actions. Are epidemiology offices withholding shipment until a minimum number of specimens are collected? If so, more training and supervision must be conducted.

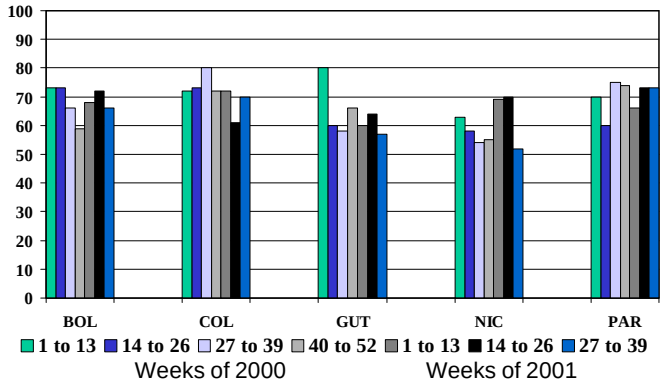
The proportion of samples that arrive within the recommended time frame is generally the indicator with the poorest national results. However, it is also one of the indicators that national managers could conceivable impact on in a relatively short time frame.

Figure 1.
Proportion of blood samples that arrive at laboratory ≤ 5 of days, by quarter, Americas, 2000-2001*



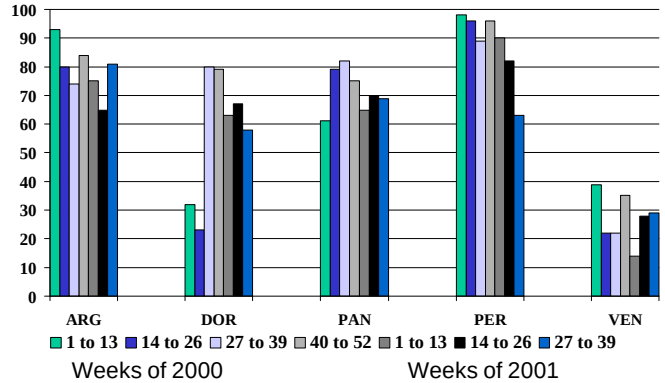
*MESS Regional database

Figure 2.
Proportion of samples that arrive at laboratory ≤ 5 of days, by quarter (in weeks), selected countries, 2000-2001*



*Regional MESS database

Figure 3.
Proportion of samples that arrive at laboratory ≤ 5 of days, by quarter (in weeks), selected countries, 2000-2001*



*Regional MESS database

FLASOG to participate in the implementation of strategies to control rubella and prevent CRS in the Americas

Evidence shown at several meetings of PAHO's Technical Advisory Group on Vaccine-Preventable Diseases (TAG) has indicated that in the Americas over 20,000 infants are born each year with congenital rubella syndrome (CRS). Accordingly, and given the availability of safe, affordable and efficient vaccines, TAG recommended the development and implementation of a regional initiative aimed at strengthening rubella control and CRS prevention.

On 23 August 2001, the President of the Latin American Federation of Obstetricians and Gynecologists (FLASOG) met with the presidents of each chapter in the countries of Latin America, to discuss the participation of the Region's Chapters of Obstetrics and Gynecology in the implementation of this initiative.

The initiative has two objectives:

- ensure that rubella immunization reduces the number of susceptible women of childbearing age.
- support countries in their efforts towards developing integrated systems for the surveillance of measles and rubella.
- develop a surveillance system for CRS.

To reduce the risk of rubella infection in women of childbearing age, Canada, Cuba, the United States, and Uruguay have used measles-mumps-rubella vaccine (MMR) for several years, and large cohorts of women of childbearing age are being protected. Brazil, Colombia, and Honduras have started immunization activities during the postpartum period, and Mexico has begun vaccinating risk groups.

In 1998, countries of the Caribbean community (CARICOM) announced an initiative calling for the elimination of rubella and the prevention of CRS in the countries of the English-speaking Caribbean. In September 1999, Chile implemented a mass rubella immunization campaign targeting women between the ages of 10-29 years and, in May 2001, Costa Rica completed a mass rubella campaign on a national level, targeting both men and women between 15-39 years of age. Finaly, Brazil carried out a rubella campaign in November 2001, aimed at women 15-19 years.

The Latin American Federation of Obstetrics and Gynecology agreed on the following recommendations:

- The Chapters of Obstetrics and Gynecology in each country must seek the political and financial commitment of their government in support of an accelerated rubella control program and CRS prevention.
- Reiterate the TAG recommendations for countries wishing to prevent and promptly control CRS, and for countries wishing to prevent and promptly control rubella and CRS.
- Lessons learned from similar campaigns launched in countries of the Region have demonstrated the importance of having an appropriate social communication strategy; the participation of scientific and medical societies; monitoring of post-vaccination events and immediate investigation during the campaign; and coordination with blood banks.
- FLASOG will play an active role in the implementation of strategies for the control of rubella and CRS prevention in each of the countries of the Region. National immunization programs will coordinate with the respective Chapters of Obstetrics and Gynecology in each country.
- Specialists in routine gynecological consultations must insure that all women of childbearing age are immunized with rubella, as well as with diphtheria and tetanus toxoid vaccines.
- Scientific evidence shows that immunization against rubella during pregnancy is safe, yet pregnant women are generally not vaccinated. This is to avoid the risk of the vaccine being implicated should there be an unrelated adverse outcome of the pregnancy. Furthermore, for women who were inadvertently vaccinated and subsequently found to be pregnant, interruption of pregnancy is not recommended. Also, it is not necessary to counsel women to avoid pregnancy following rubella vaccination because no known risk of adverse fetal outcome has been established.
- Countries that decide not to launch campaigns for the rapid control of rubella and CRS must direct their efforts toward decreasing the number of susceptible women of childbearing age. To this end, strategies such as vaccination during the postpartum period and immunization in family planning clinics, schools, and in the workplace are recommended.
- FLASOG members are called upon to actively participate in the strengthening of rubella and CRS surveillance, in order to detect virus circulation promptly. They should also report and follow-up with all pregnant women who have contracted rubella.
- The Perinatal Information System (SIP 2000) is an appropriate tool for the notification of CRS cases. It includes information regarding the immunization status of the mother, rubella diagnosis, either laboratory confirmed, or clinically during the mother's pregnancy or, if exposed to the disease, congenital malformations, hepatospenomegaly, and purpura.
- As part of surveillance, confirmation by laboratory is essential for rubella and CRS diagnosis.
- The subject of vaccination of women of childbearing age and during pregnancy must be introduced during national and international OB/GYN meetings.
- PAHO must update and widely disseminate all available information regarding immunization during pregnancy.
- The Chapters of Obstetrics and Gynecology must participate in the national immunization committees of their respective country.

Annual Summary of Polio and Measles Indicators

POLIO SURVEILLANCE INDICATORS FOR THE PERIOD BETWEEN WEEKS 01 TO 52, 2001

SITE	Total 2000		Last 52 weeks (2001/01-2001/52)				
	CASES	RATE	CASES	RATE	% INV. <48 hrs.	%1 Sample+	% Sites Reporting
Argentina	133	1.30	134	0.90	100	70	100
Bolivia	25	0.77	42	1.27	88	76	96
Brazil	529	1.01	585	1.12	93	61	94
Canada	59	1.01	NR	...	...	...	...
CAREC	14	0.63	13	0.46	85	54	97
Chile	94	2.20	81	1.35	86	90	94
Colombia	161	1.18	143	0.85	85	85	84
Costa Rica	22	1.59	16	0.99	94	63	...
Cuba	27	1.10	14	0.31	100	100	98
Dominican Republic	67	2.11	74	2.16	99	77	...
Ecuador	45	1.06	27	0.53	93	96	89
El Salvador	79	3.57	70	2.79	81	89	72
Guatemala	87	1.78	86	1.89	91	79	46
Haiti	15	0.59	27	0.90	85	48	...
Honduras	47	1.87	57	2.30	91	93	88
Mexico	386	1.16	347	0.87	94	77	83
Nicaragua	32	1.45	24	1.18	100	100	100
Panama	10	1.12	9	0.58	78	78	82
Paraguay	19	0.89	18	1.23	78	56	89
Peru	102	1.19	91	0.89	99	99	93
Uruguay	9	0.69	18	1.29	78	72	48
USA	NR	...	NR	...	...	...	...
Venezuela	114	1.39	100	1.06	97	97	93
Total♦	2076	1.21	1976	1.04	92	76	89

+ Taken within 14 days of onset of paralysis **NR or ... - Not reporting**
♦ Excluding Canada and USA

MEASLES SURVEILLANCE INDICATORS FOR THE PERIOD BETWEEN WEEKS 01 TO 52, 2001

Country	% Sites Reporting Weekly	% Cases Timely Home Visit	% Cases Adequate Sample	% Lab. Received <= 5 days	% Lab. Result <= 4 days	% Cases Discarded by Lab	Number of Active Municipalities
Argentina	100	27	97	78	85	98	0
Bolivia	96	98	99	70	78	99	0
Brazil	78	56	65	52	73	98	0
Canada	...	...	...	...	...	...	...
CAREC	99	99	62	15	89	75	0
Chile	95	77	97	73	92	100	0
Colombia	83	60	97	66	78	98	0
Costa Rica	...	100	0	...	...	6	0
Cuba	98	100	100	...	0	0	0
Dominican Republic	0	100	94	65	88	98	0
Ecuador	93	65	98	86	90	98	0
El Salvador	64	36	98	88	92	99	0
French Guiana	...	...	...	...	...	...	0
Guadeloupe	...	...	...	...	...	...	0
Guatemala	48	99	100	61	84	100	0
Haiti	...	4	96	84	72	73	0
Honduras	88	92	98	54	94	100	0
Martinique	...	...	...	...	...	...	0
Mexico	...	83	83	18	9	100	0
Nicaragua	100	81	97	64	79	100	0
Panama	82	54	94	70	77	99	0
Paraguay	87	84	95	72	95	100	0
Peru	93	95	97	72	85	97	0
Puerto Rico	...	...	...	...	...	...	0
Uruguay	44	30	85	90	75	100	0
USA	...	...	...	...	...	...	...
Venezuela	93	97	96	34	85	99	8
Total and Average	86	61	71	54	74	95	8

NR or ... - Not reporting

Source: PESS and MESS, PAHO

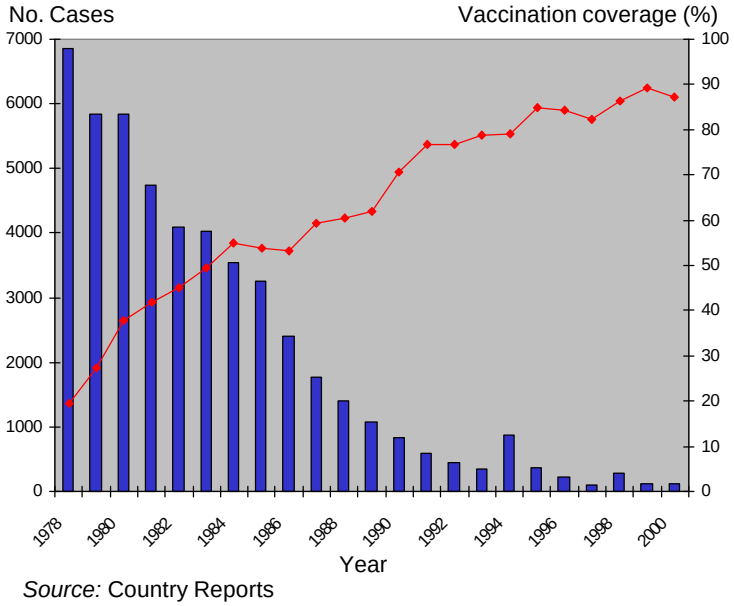
Diptheria incidence and coverage in the Americas, 1978-2000

The number of cases of diphtheria remains low with a significant downward trend since monitoring began in 1978. Vaccination coverage with the third dose of DPT in children under 1 year of age was 20% in 1978. Recommended vaccination coverage for DPT has been ≥ 95%.

As a result of the increment in vaccination coverage, the number of reported cases of diphtheria decreased from 6,857 cases in 1978, to 113 cases in 2000. However, failure to maintain high levels of DPT3 coverage could result in its reappearance, as has occurred in the Republics of the former Soviet Union when coverage levels declined. Recently, outbreaks have occurred in the Americas: in Ecuador between 1994 and 1995, a total of 724 cases were reported, and most recently in Colombia in 2000, 8 confirmed cases were reported.

During the outbreak in Colombia, the most affected age group was those under 20 years of age. Sixty two percent of the cases had an incomplete vaccination schedule. All 8 confirmed cases were from a low socio-economic status.

Figure1
Vaccination coverage with DPT3 among children <1 year of age & number of reported cases of diphtheria, by year
The Americas, 1978-2000



Source: Country Reports

In the October issue of the *EPI Newsletter*, the article, Measles Case Classification: Frequent Dilemmas in the Field, page 4, section a, line 10, beginning with "The lack of a significant rise in IgG titers ...," should have included the following:

The lack of IgG anti-measles antibodies in a second specimen tested by an ELISA assay or the lack of a significant, i.e., 4 fold, rise in IgG titers in a test that actually measures measles IgG titer levels, e.g., HI, PRN or an EIA assay comparing a series of serum dilutions, between two properly spaced specimens is sufficiently strong evidence to conclude that the positive-IgM result is a false-positive. To be considered properly spaced specimens, the first specimen should be collected within 7 days of rash onset and the second specimen should be obtained 3 to 4 weeks post rash onset.

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