EPI Newsletter

Expanded Program on Immunization in the Americas

Volume XV, Number 4 **IMMUNIZE AND PROTECT YOUR CHILDREN** August 1993

No Polio in the Americas for Two Years

On August 23, 1991, a child in Junín, Peru, was paralyzed with poliomyelitis. Two years have elapsed since then and no other cases of culture-confirmed paralytic poliomyelitis caused by indigenous wild poliovirus have been reported in the Western Hemisphere. It is hoped that the boy from Junín will be the last casualty in the war against indigenous wild poliovirus in the Americas.

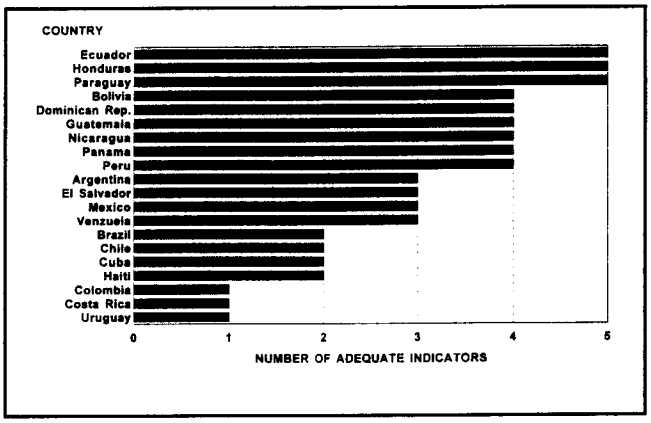
Despite the success attained in the last two years, questions remain regarding the quality and aggressiveness of surveillance for acute flaccid paralysis and wild poliovirus in some areas. In the absence of reports of culture-confirmed paralytic poliomyelitis, the challenge now is to demonstrate that no asymptomatic transmission is occurring.

In 1991, 33 cases of AFP compatible with poliomyelitis were reported region-wide, of which 11 (roughly 30%) had risk factors for confirmed poliomyelitis: age <6 years and fever at paralysis onset. In 1992, 26 poliomyelitis-compatible cases were reported, of which 7, or 27%, had these risk factors. The distribution of compatible cases with risk factors is cause for concern given that it corresponds to the distribution of the most recent previous outbreaks of poliomyelitis (see EPI Newsletter Vol. XV, No. 2, April 1993). For the first trimester of 1993, only seven polio-compatible cases have been reported. Although the number of compatible cases diminishes each year, their presence indicates a failure of the surveillance system to identify, report, and investigate aggressively all cases of AFP.

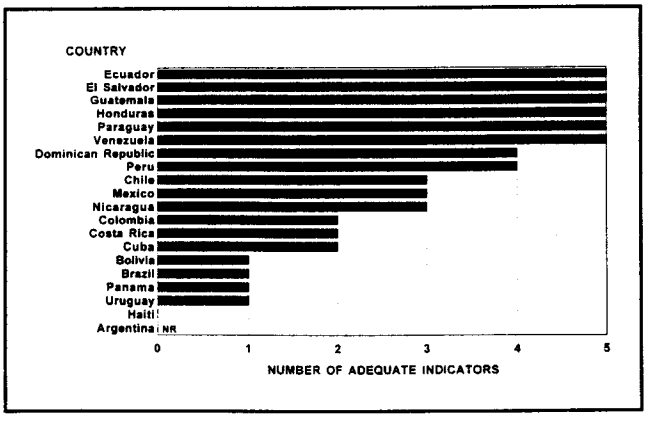
Analysis of performance indicators shows that surveillance of AFP continues to improve each year for some countries (see accompanying figures). However, other countries appear to have regressed or to have remained at low levels. To assess the significance of that improvement, the indicators were analyzed by comparing data from the 95 weeks following the last case of confirmed polio to data from the 95 weeks preceding the case. Compared to the 3930 cases of AFP reported before the last case of polio, the 3636 cases of AFP reported afterwards were more likely to have been investigated within 48 hours (88% vs. 81%,

Number of Surveillance Indicators Meeting Certification Criteria , by Country, Latin America

Week 52, 1992



Week 26, 1993



In this issue:

$p<0.0001$), to have had two adequate stools collected within 2 weeks of paralysis onset (83% vs. 77%, $p<0.0001$), and to have had stools from at least 5 contacts taken (54% vs. 10%, $p<0.0001$).

These findings are particularly encouraging in light of the fact that it is difficult to motivate people to maintain surveillance during a prolonged certification era when no cases of poliomyelitis are being reported. The risk that wild polioviruses may be imported from other parts of the world became a reality this year, however, when wild poliovirus transmission was detected among members of a closed religious community in Canada.

Immunization coverage with three doses of oral poliovirus vaccine by the age of 12 months has increased worldwide. According to WHO EPI figures, the number of cases decreased by 56% between 1988 and 1991. Nonetheless, thousands of cases of paralytic poliomyelitis are still reported yearly; 14,176 were reported in 1991.

Over the same 1988-1991 period, the number of countries reporting cases dropped from a total of 88 to 70, or 45% and 34% of the total number of countries reporting (196 and 208, respectively). The Southeast Asian Region accounted for 46%, the African Region reported 19% of the total global cases, the Western Pacific Region 18%, the Eastern Mediterranean Region reported 14%, and the European Region reported 2% (68% of which were in republics of the former USSR).

WHO's Global Poliomyelitis Eradication Plan of Action calls for specific measures to attain global elimination of wild poliovirus transmission by the year 2000, including: AFP surveillance in all countries, supplementary vaccination activities, and the establishment of a laboratory network in all WHO regions by 1995.

Until global eradication has been achieved, the American Region must maintain its guard and continue to improve surveillance, particularly with the collection of stools from contacts.

Surveillance Indicators Meeting Certification Criteria, by Country, Latin America, Week 26, 1993

Country	Negative Notification	AFP Rate	Investigation <48 Hours	2 Samples	5 Contacts
Argentina	NR				
Bolivia		✓			
Brazil			✓		
Chile	✓	✓	✓		
Colombia		✓	✓		
Costa Rica			✓	✓	
Cuba	✓		✓		
Dominican Republic		✓	✓	✓	✓
El Salvador	✓	✓	✓	✓	✓
Ecuador	✓	✓	✓	✓	✓
Guatemala	✓	✓	✓	✓	✓
Haiti					
Honduras	✓	✓	✓	✓	✓
Mexico	✓	✓			✓
Nicaragua	✓	✓	✓		
Panama	✓				
Paraguay	✓	✓	✓	✓	✓
Peru		✓	✓	✓	✓
Uruguay					✓
Venezuela	✓	✓	✓	✓	✓

✓ Criterion met NR - No data received

Importations: Lessons Learned from Dutch Outbreak

Beginning in September 1992 and lasting until February 1993 an outbreak of paralytic poliomyelitis (N=67) occurred in The Netherlands among closed religious communities whose members refuse immunization services. No paralytic cases have been reported outside these communities. PAHO issued alerts to all the health ministries of the Americas regarding the possibility that wild polioviruses might be imported to the Western Hemisphere, and published information to the same effect in the December 1992 and subsequent issues of the EPI Newsletter. PAHO advised that aggressive surveillance be undertaken in communities at risk with connections to the Dutch groups. Rotary International also sent letters informing the Chairmen of all national PolioPlus programs about the situation.

Having already experienced a polio outbreak caused by wild poliovirus imported from The Netherlands in 1978, the Canadian government took aggressive action and conducted a stool survey in January of this year in a community in Alberta that was also involved in the 1978 outbreak. Wild poliovirus was isolated in 21% of the samples (see EPI Newsletter Vol. XV, No. 3, June 1993). Genome analysis found the virus to be the same wild poliovirus that caused the outbreak in The Netherlands. A history of travel of community members from The Netherlands to the commu-

nity in Alberta was obtained. No paralytic cases have been reported in Canada.

The strategy to deal with such importations relies most heavily on the surveillance of AFP and wild poliovirus that is in place throughout the region. Additional strategies, such as facsimile communications between governments, publications, and collaboration with other organizations, both public and private, may motivate health ministries to carry out more aggressive activities, such as stool surveys, that could detect importations of wild poliovirus before paralytic cases occur.

Several other countries, among them Belize, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Peru, and the United States have responded to the Canadian experience by identifying communities at risk, attempting to immunize as many unvaccinated persons as possible, and conducting stool surveys to identify and contain any wild poliovirus that is found before it maims susceptible children.

Measles Elimination in Central America

Representatives of the Central American countries that have undertaken the elimination of the indigenous transmission of measles met in Honduras from 5 to 6 July to review progress to date.

Meeting participants assessed the outcome of the campaign to vaccinate 95% of children under 15 years of age by 30 June 1993, discussed the status of the epidemiologic surveillance system to detect rash and fever illnesses, and explored ways to strengthen laboratory serology techniques to diagnose measles, rubella, and dengue.

The accompanying chart shows the preliminary coverage data presented at the meeting by national representatives. A future issue of the EPI Newsletter will provide an extensive analysis of the campaign.

Measles Vaccine Coverage of Children <15 Years Old, Target and Actual Rates, Central America, by Country, July 1993*

Country	Target (%) 30 June 1993	Actual* Coverage (%)
Costa Rica	95	61
Guatemala	95	70
Honduras	95	95
Nicaragua	95	95
Panama	95	74
El Salvador	95	60

* Preliminary data

U.S. Shifts Immunization Policy

The 27th annual National Immunization Conference held in Washington, D.C. from 14 to 18 June, and attended by nearly 1000 health professionals,ushered in a major shift in U.S. immunization policy.

Until recently, the complete schedule of immunization against poliomyelitis, diphtheria, whooping cough, measles, mumps, and rubella was required by the time a child entered school or a daycare center. Vaccination coverage at that age now averages 95% nationwide. The highest risk of contracting and spreading these diseases, however, occurs in younger children, especially those who are under two years old.

Depending on the sample used to make the estimate, immunization coverage among two-year olds in the U.S. is currently around 50%, according to the most recent survey conducted by the Centers for Disease Control and Prevention. According to the same survey, in some inner-city areas coverage levels are as low as 10%.

Several reasons have been cited for low vaccination coverage among two-year olds, including: lack of awareness among parents that complete immunization is desirable by the age of two, not six; lack of access to vaccination services because of limited clinic hours; missed opportunities to immunize children when they visit pediatricians, clinics, or hospitals for other reasons; the cost of vaccines and/or physician fees; and lack of interest or commitment on the part of some private physicians, who do not wish to be held responsible for possible adverse reactions to the vaccines and are reluctant to fill out additional forms.

The U.S. Public Health Service had set the year 2000 as its target date to get 90% of all children vaccinated by the age of two. The current goal is to expedite that process considerably. President Bill Clinton sent the Comprehensive Child Immunization Act of 1993 to Congress on 1 April 1993—within weeks of assuming the presidency.

Shortly thereafter, the Centers for Disease Control and Prevention created the National Immunization Program (NIP) which has dedicated the better part of its work to planning the CDC's role in implementing the President's Initiative.

If approved, the President's new legislation would authorize the Secretary of Health and Human Services to purchase and provide childhood vaccines in bulk to meet nation-wide immunization needs; institute an aggressive outreach campaign at the national, state, and regional levels; establish a tracking system based on immunization registries; maintain the National Vaccine Injury Compensation Program; and continue vaccine infrastructure enhancements to increase service delivery and access.

The President has also requested increased Federal funding for immunization activities in fiscal year 1994. This proposed legislation marks the beginning of a new era in the Federal Government's commitment to the health of the nation's children.

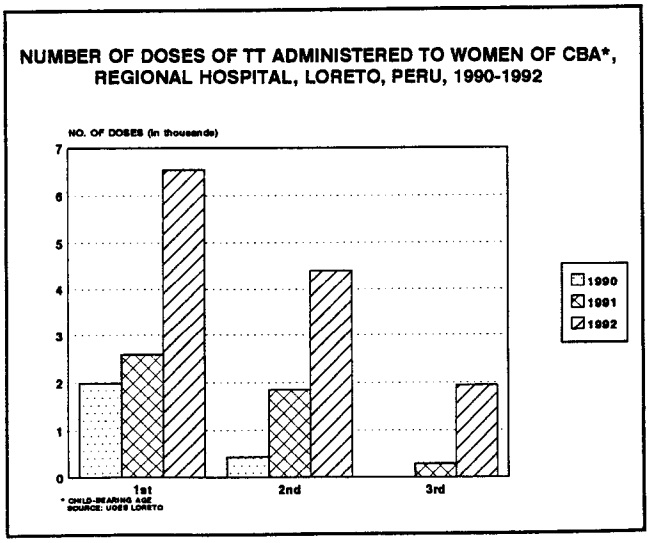
Missed Opportunities: Closing the Gap in Peru

In the first quarter of 1992, EPI staff in Peru tested an approach to reducing the number of missed opportunities to vaccinate children under the age of 1 year and women of childbearing age. The aim was to increase coverage without imposing a significant resource or personnel burden on the health system. Two hospitals were chosen in the Loreto Region, which had been identified as a risk area: the Regional Hospital and the Iquitos Support Hospital.

Meetings were held with clinical and support staff, and promotion material such as posters, stickers and pamphlets were distributed. The following report summarizes what the hospitals have done:

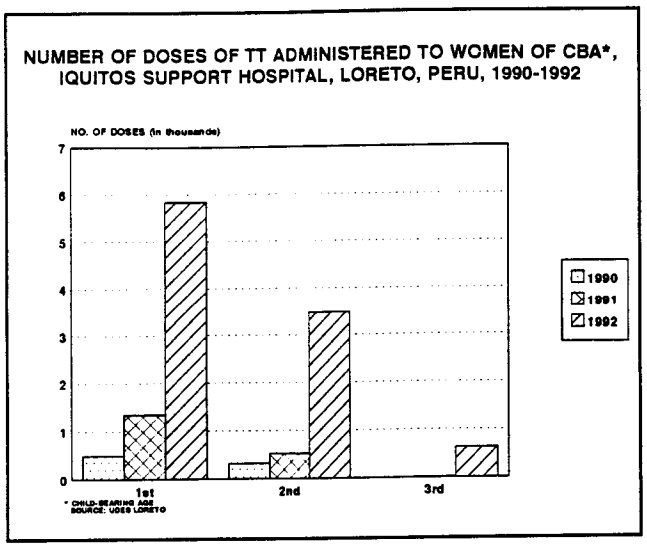
All children seen at the selected hospitals are given a Child Growth and Development Card and women of childbearing age are given a Tetanus Toxoid Card, on which vaccinations are recorded. The hospitals encourage patients to bring their cards with them when they attend for whatever reason. Birth certificates issued by the hospitals for deliveries that take place in the home are signed by the hospital immunization programs.

Routine vaccination services are set up in waiting rooms, triage areas, out-patient clinics, admitting offices and entrances to the hospitals. Their hours were extended to provide service during afternoons, Sundays, and holidays.



Weekly meetings are held to follow up on scheduled activities, to count the number of children that are vaccinated and make any adjustments to the program that may be called for to improve coverage.

As a result of the Iquitos Support Hospital's effort, 19,746 doses of vaccine were administered to children under the age of one year between January and October of 1992. During the same period, 7,564 doses of tetanus toxoid were given to women of childbearing age.



The Regional Hospital, meanwhile, administered 15,679 doses to children under 1 year of age, and 9,602 doses of TT to women of childbearing age. As can be seen in the accompanying graphs, this represents a mayor increase in coverage over previous years. Immunization with OPV (birth dose, and OPV 1, 2, and 3) in 1992, the year in which interventions to reduce missed opportunities began, was markedly greater than the same coverage in 1990 and 1991.

Overall, the 1992 initiative to reduce missed opportunities increased the Iquitos Support Hospital's institutional vaccination coverage by 16% as compared to 1991. The Regional Hospital's coverage increased by 52%.

The success of these first trials demonstrates what can be achieved when outmoded practices are set aside, among them:

- inflexible hours,
- unnecessary contraindications, and
- the false economies implied in refusing to open vaccine vials unless there are enough patients to prevent wasting a few doses.

As a result of these changes, the community is gradually coming to view the hospitals as places where preventive services are delivered.

Source: EPI, Ministry of Health, Peru; R. Cardoso, EPI/PAHO.

Open Vaccine Vials: Use in Latin America

Recommendations regarding the use of opened vials of EPI vaccines have been published in previous issues of the EPI Newsletter. The latest update (see Handling of Opened Vials of Vaccine, Vol. XIV, Number 4, August, 1992) recommended that except for viral vaccines, which should be discarded at the end of the working day, toxoids such as DPT, DT, tD, and TT, and Hepatitis B vaccines may be kept over a period of five days if they are stored constantly at the proper temperatures and sterile procedures are observed when handling the open vials.

To follow up the revised norms for the use of opened vials of vaccine, EPI conducted a survey in all Latin American countries. The purpose of the survey was to verify what, if any, changes countries have introduced in their policies regarding open vials. Table 1 presents the result of the survey. Responses from Brazil and Cuba are still pending.

The table shows that of the countries that responded adequately, all but one will observe the norms for BCG vaccine. All responding countries will include the recommended norms on the use of opened vials of measles vaccine. Five countries allow usage times (ranging from 6 to 30 days) for open DPT and TT vaccine vials that are longer than the five days established by PAHO/EPI. For OPV—the least stable of the EPI vaccines—four countries have decided to use opened vials beyond the eight-hour limit recommended by PAHO/EPI. The time they allow ranges from 24 hours to 7 days.

Editorial Note:

The countries that have decided to extend the usage time of opened vials of vaccines beyond those recommended by PAHO will have to take special measures to ensure that supervision is in place to document that health workers discard the remaining doses at the stated times, and to monitor adverse events, as an untoward number of adverse reactions and vaccine failures may occur. PAHO will work with the countries that have long usage policies to institute and/or maintain quality monitoring to ensure that the opened vials are not contaminated.

Multi-dose Vials of Vaccine
Length of Use Before Discarding Opened Vial, in Hours (H) and Days (D)

Country	BCG	Measles	DPT	T.T.	DT/Td	OPV	HEP-B	Y.F.	HIB
Argentina	8 H	8 H	5 D	5 D	5 D	8 H	8 H	8 H	--
Bolivia	8 H	8 H	5 D	5 D	5 D	8 H	--	8 H	8 H
Brazil	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Chile	8 H	8 H	5 D	5 D	5 D	8 H	--	--	--
Colombia	8 H	8 H	7 D	14-30 D*	14 D	8 D	--	--	--
Costa Rica	8 H	8 H	5 D	5 D	5 D	8 H	5 D	--	8 H
Cuba	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Dominican Republic	8 H	8 H	5 D	5 D	--	8 H	--	--	--
Ecuador	6 H	8 H	30 D	30 D	30 D	8 H	--	--	--
El Salvador	8 H	8 H	6 D	6 D	--	8 H	--	--	--
Guatemala	8 H	8 H	5 D	N.A.	5 D	5 D	--	--	--
Haiti	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	--	--	--
Honduras	8 H	8 H	5 D	5 D	5 D	8 H	--	--	--
Mexico	8 H	8 H	2 D	2 D	2 D	8 H	--	--	--
Nicaragua	8 H	8 H	5 D	5 D	--	8 H	--	--	--
Panama	8 H	8 H	5 D	5 D	5 D	8 H	--	--	--
Paraguay	8 H	8 H	5 D	5 D	5 D	2-3 D	--	--	--
Peru	6 H	6 H	3 D	5 D	3 D	6 H	3 D	--	--
Uruguay	7 D	+	7 D	7 D	7 D	7 D	--	--	--
Venezuela	6 H	8 H	7 D	7 D	--	8-24 H+	--	2 H	--

* Stored up to four weeks if ambient temperatures are less than 25° C.
-- No norm established, as vaccine is part of normal EPI.
N.A. Data not available.
\+ If OPV vial is handled 10 times or more within 8 hours after opening, vial should be discarded; it otherwise can be kept up to 24 hours.
++ Multidose vials are used.

English-Speaking Caribbean Rubella Policy

A survey was conducted in 1992 to determine the status of rubella immunization in the English-speaking Caribbean and obtain an impression of its impact on rubella and congenital rubella syndrome. Questionnaires were sent to each of the 19 EPI National Program Managers, all of whom responded. The following report outlines the results of the survey and ensuing recommendations.

Policy

Ten of the 19 countries stated that they did have an agreed national policy on rubella immunization. Seventeen of them were using some form of rubella vaccine. Four countries were using MMR vaccine administered to children aged one to two years and four others were also using some other vaccine containing rubella, the extent of which was difficult to establish.

Recommendation: All countries should establish an agreed national rubella immunization policy.

Strategy

The ideal rubella strategy aims to interrupt virus transmission among young children and to ensure that any adult women who might be exposed to rubella are already immune.

The second objective involves either screening adult women and immunizing susceptibles, or routine immunization of women of child-bearing age. Both options can be linked to pregnancy (prenatal screening, post-partum immunization). Additionally, rubella vaccine can be given to all girls at puberty. Bermuda and BVI had the best developed rubella policies, involving routine immunization with two doses of rubella vaccine, prenatal screening for rubella susceptibility, and post-partum immunization. A similar program had almost been achieved in Saint Lucia; although rubella serology was not available, immunization was provided according to previous history. In some circumstances, rubella immunization is cheaper than screening and immunizing a woman who is already immune does not involve any risk.

Recommendation: National policies should aim to interrupt rubella transmission and to ensure that women of child-bearing age are immune to rubella.

The Extent of Rubella Infection During Pregnancy

Only nine of the 19 replies considered that women were aware of the risks of rubella infection during pregnancy. In only one country was it routine for a pregnant woman with a rash to be tested properly for rubella infection, although such testing may be carried out in eight other countries. It would not be undertaken in 10 countries. Barbados was able to identify 19 laboratory-confirmed rubella infections during pregnancy and two rubella-associated terminations in the 1986-1991 period. Over the same period, there were 24 known cases of congenital rubella syndrome reported from 12 countries.

Recommendation: Health education should be directed toward alerting women to the importance of rashes during pregnancy and mechanisms should be set in place so that any pregnant women with rashes can be appropriately investigated.

The Extent of Rubella in the English-Speaking Caribbean

Rubella is a notifiable disease in 15 of the 19 countries. Between 1986 and 1991, 2,321 cases were reported by 12 countries. The number of cases per country ranged from 2 to 1,162 cases. Seven countries did not report any cases of rubella. Of all the cases reported, 307 were confirmed by laboratory testing. There can be little doubt that rubella continues to circulate in the English-speaking Caribbean and it is likely that there is considerable under-reporting.

Recommendation: Present strategies need to be examined to investigate why transmission has not been interrupted when MMR vaccine coverage has been high. Rubella may be circulating among older individuals and age-stratified serology might well be helpful. Efforts should be made to identify any age-specific susceptible cohorts toward whom rubella immunization may need to be targeted.

Conclusions

Rubella is still present in much of the Caribbean.

There are and will continue to be outbreaks until susceptible groups are identified and immunized.

There are cases of congenital rubella syndrome. The lifetime costs of children that suffer multiple handicaps as a result far exceed the costs of preventing congenital rubella syndrome.

Surveillance of rubella and its effects is not strong and could be improved.

Although many countries are pursuing a policy to interrupt rubella transmission among young children, they have not made efforts to protect all susceptible adult women.

Women did not appear to be sufficiently aware of the risks of rubella during pregnancy, nor was there adequate investigation of cases of pregnant women with rashes.

Source: Dr. D. M. Salisbury MB BS FRCP, Principal Medical Officer, Department of Health, London, UK

Reported Cases of Selected Diseases

Number of reported cases of measles, poliomyelitis, tetanus, diphtheria, and whooping cough, from 1 January 1993 to date of last report, and the same epidemiological period in 1992, by country.

Subregion and country	Date of last Report	Measles				Poliomyelitis		Tetanus				Diphtheria		Whooping Cough	
		Reported		Confirmed				Non Neonatal		Neonatal					
		1993	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993	1992	1993	1992
LATIN AMERICA															
Andean Region															
Bolivia	5 Jun.	...	1 469	...	...	0	0	...	...	...	...	...	...	...	...
Colombia	5 Jun.	...	...	...	...	0	0	...	13	...	18	...	1	...	199
Ecuador	3 Apr.	1 166	813	...	...	0	0	27	16	...	6	0	1	64	111
Peru	15 May	741	...	...	...	0	0	0	...	0	...	...	...	2	...
Venezuela	24 Apr.	6 951	3 921	...	...	0	0	...	19	5	7	0	0	146	115
Southern Cone															
Argentina	...	...	...	...	...	0	0	...	...	...	...	...	...	...	...
Chile	20 Feb.	...	198	...	...	0	0	...	2	...	0	...	2	...	21
Paraguay	1 May	333	76	...	...	0	0	7	7	9	3	1	1	93	32
Uruguay	15 May	5	159	...	...	0	0	1	2	0	0	0	0	12	24
Brazil	10 Jul.	...	3 767	...	...	0	0	...	417	...	81	...	126	...	1 464
Central America															
Belize	12 Jun.	...	0	0	...	0	0	...	1	...	0	...	0	...	0
Costa Rica	19 Jun.	122	952	126	...	0	0	...	...	...	...	...	...	...	9
El Salvador	19 Jun.	49	266	25	...	0	0	...	7	...	15	...	0	...	14
Guatemala	19 Jun.	115	26	12	...	0	0	3	6	7	1	...	0	9	76
Honduras	19 Jun.	76	6	11	...	0	0	9	8	0	7	0	0	38	52
Nicaragua	19 Jun.	234	271	248	...	0	0	1	5	2	2	0	0	24	27
Panama	19 Jun.	247	325	226	...	0	0	0	0	1	1	0	0	8	2
Mexico	19 Jun.	151	24	17	227	0	0	60	88	20	66	0	0	69	55
Latin Caribbean															
Cuba	6 Mar.	0	...	...	...	0	0	0	...	0	...	0	...	0	...
Dominican Republic	...	...	...	...	...	0	0	...	18	...	...	...	...	...	31
Haiti	...	...	...	...	...	0	0	...	...	...	...	...	...	...	...
CARIBBEAN															
Antigua & Barbuda	10 Jul	...	0	0	0	0	0	...	0	...	0	...	0	...	0
Bahamas	3 Jul.	...	0	0	0	0	0	0	0	0	0	0	0	0	0
Barbados	12 Jun.	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Cayman Islands	3 Jul.	...	0	0	0	0	0	...	0	...	0	...	...	...	0
Dominica	3 Jul.	...	0	0	0	0	0	...	0	...	0	...	...	...	...
Grenada	3 Jul.	...	0	0	0	0	0	...	0	...	0	...	...	...	0
Guyana	3 Jul.	...	0	0	0	0	0	...	0	...	0	...	...	...	0
Jamaica	3 Jul.	...	12	0	0	0	0	...	3	...	0	...	0	...	0
St. Kitts/Nevis	3 Jul.	...	0	0	0	0	0	...	0	...	0	...	0	...	0
Saint Lucia	3 Jul.	...	9	0	0	0	0	...	0	...	0	...	0	...	0
St. Vincent	3 Jul.	...	0	0	0	0	0	...	...	...	...	...	...	...	...
Suriname	3 Jul.	...	0	0	0	0	0	...	0	...	0	...	0	...	0
Trinidad & Tobago	5 Jun.	42	59	0	0	0	0	5	5	0	0	0	0	2	0
NORTH AMERICA															
Canada	1 May	95	792	...	...	0	0	2	3	0	0	1	3	1 238	598
United States	29 May	65	195	100	992	0	0	...	4	0	0	...	1	1 020	550

... Data not available.

Organizing a Refrigerator
Remember!

- The internal organization of a refrigerator's contents is important to ensure that it is cold and maintains the temperature stability that vaccines require.

- Check daily to make sure that the refrigerator is organized as follows:

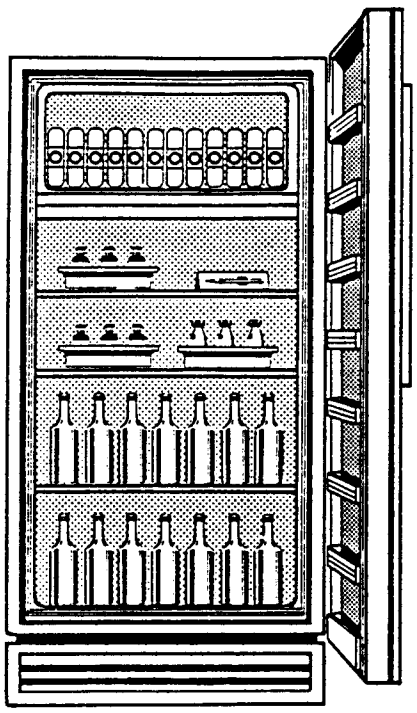
Ice Packs

- They will freeze more quickly if they are placed vertically.

- Use the number of packs that will freeze readily within 24 hours.

Vaccines

- Make sure they are properly organized and classified, and place them in trays.



Thermometer

- Place it in a space used for vaccine storage.

- Keep it in the refrigerator at all times.

Water Containers

There should be a fixed number of containers filled with water.

- The number of water containers depends on the refrigerator's size and capacity.

Ice packs and water containers make it possible to reestablish the temperature more quickly after the door is opened. They also stabilize the temperature for longer periods of time if there is a brownout or power failure.

Drawing: Victor Gómez

The *EPI Newsletter* is published every two months, in Spanish and English by the Expanded Program on Immunization (EPI) of the Pan American Health Organization (PAHO), Regional Office for the Americas of the World Health Organization (WHO). Its purpose 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 their possible solutions.

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