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REPUBLIC OF GUATEMALA
ASSESSMENT OF THE 1986 NATIONAL VACCINATION DAYS
Guatemala, October 1986

"ALL TOGETHER FOR THE CHILDREN'S HEALTH"

Ministry of Public Health

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ASSESSMENT OF THE 1986 NATIONAL
VACCINATION DAYS IN GUATEMALA
EXECUTIVE SUMMARY

The present report is an assessment of the national vaccination days (NVDs) in Guatemala which took place in 1986. It is based on the information gathered from various official documents, on specific studies carried out during the NVDs and also on the quantitative analysis of the data gathered at the computer room of the Direccion General de Salud.

The decision to carry out NVDs in Guatemala was made at the beginning of February, 1986. The first round of NVDs was carried out on May 17 and 18. The 1986 NVDs were officially opened by the President of the Republic and by the Minister of Health on April 4. With less than six weeks before the first round, the information and promotion process was started. The second round was carried out on July 5 and 6, and the third one on August 16 and 17.

A Central Technical Committee as well as a general coordinating and four support subcommittees were established to carry out the NVDs. Furthermore, support committees at the central level, as well as in some health areas, were established. These were integrated by high-ranking ministerial and governmental representatives, and departmental governors. Each health area made its own program, according to the central level standards. It is important to emphasize that structures parallel to the organization of the health system were not created during the organization and execution of the drives.

During the three-month preparatory phase, it was possible to: obtain several million doses of vaccines, 5.3 million syringes, 14,000 thermos, 10,000 cold packs, 12,000 thermos bottles and other materials; assess and improve the cold chain in the whole country; train approximately 32,000 people who participated in the vaccination teams; inform and motivate all parents who had small children (where the language barrier did not constitute an obstacle). During these three months, 6,300 vaccination teams were formed and some additional vaccination centers were established.

In the first round, 1,017,000 children were vaccinated; in the second 910,000 and in the third 790,000. Children vaccinated in a few departments by special remedial vaccination actions during the month of September are included in the latter figure, because the third round was compromised due to the strike by the health staff. At the end of the three rounds, 585,262 children under five years had received three doses of the oral polio vaccine (42.3 percent), 470,708 had received three doses of the DPT vaccine (34 percent) and 485,818 (35 percent) had received one dose of measles vaccine, out of a total population of 1,385,000 children under five years. The health areas with the lowest coverage are the two that constitute the city of Guatemala. A relationship between the number of children attended at centers and the coverage figure was observed: the more children assigned to vaccination centers, the less the turnout. The scheduling of an average of 220 children per center seems adequate for future actions.

Up until October 25, 61 suspected cases of poliomyelitis had been notified in 1986. Of those, 28 cases were confirmed. On July 7, the last case of polio was reported, which is to say, Guatemala has been free

of poliomyelitis for nearly four months, thus reducing the chances of an epidemic. This can be explained by the widespread diffusion of the vaccine virus due to poor sanitary conditions in the country. Eight Departments have reported no polio cases in the last three years. The results of the evaluation of the potency of the vaccine in the first round led to the assurance that good quality vaccines were applied during the three rounds and the cold chain worked satisfactorily.

Various limitations and obstacles were observed during the NVDs. It is estimated that the most serious were the health staff strike during the third round, the date changes on the second and third rounds, the disintegration of the promotion and communication team, the change in strategy of the promotional component after the first round and the rainstorms in some areas of the country during the second and third rounds.

Among the main achievements, besides the high number of vaccinated children, were the favorable and enthusiastic atmosphere on the part of the staff, the massive participation of volunteers, the credibility of the government's undertaking accorded by the majority of the population and the demonstration that the teamwork concept could be fully reached. The whole of Guatemala mobilized itself for a noble cause, particularly during the first round. The NVDs helped to accelerate improvement of cold storage and the training of most of the health staff which also helped to improve the routine vaccination services offered by the national Expanded Programme on Immunization (EPI).

After a thorough analysis of the coverage achieved, the prevalence of vaccine-prevented diseases, as well as the possibility of applying these new accelerated vaccination strategies, it is recommended to carry out NVDs for children under three years in 1987, using the three vaccines, (DPT, measles and oral polio). It is also recommended to strengthen the regular EPI by offering vaccinations in all the centers and health clinics where the conditions to preserve vaccines could be met and to provide refrigerators where needed. The acceleration of the "channeling" strategy is not incompatible with NVDs. National and local holidays, the rainy season and other variables that could affect the success of future NVDs must be taken into consideration. The functioning of department-level NVDs run the risk of following the same evolution that the vaccination crusades had in the past. It is recommended to follow the routine EPI program in areas of high incidence of neonatal tetanus, and also to apply the tetanus toxoid to women of child-bearing age and even to the whole population.

The Central American Ad Hoc Technical Committee for Child Survival is recommending NVDs in all the countries at the same time. The strategy of NVDs could be utilized for other health undertakings of great impact, that would reach the whole population such as oral rehydration salts.

Obstacles

1. Difficulty in the decision to approve the strategy of NVDS, due in part to the misinterpretation of the concept of "campaigns" (very discredited in Guatemala), and of the modern interpretation of the term "jornadas".
2. Difficulty in reconciling the criteria for selecting specific accelerated strategies to increase vaccination coverages. Neither national nor cooperating agency counterparts could reach a definitive decision, which in turn, delayed the political decision.
3. Lack of coordination and integration among the subcommittees and among the technical personnel of the various agencies involved. Not all members of the different subcommittees participated in the periodic meetings of the central technical committee. Verbal instructions were received, at times incongruous with whatever had been planned, and involving new operations and delays in implementations. The technical personnel of the agencies involved in the NVDS did not participate in the meetings of the central technical committee.
4. The participation of the National Support Committee was very decentralized, which precluded measurement of the participation of the different governmental and non-governmental institutions.
5. Delay in the orientation and training of the personnel responsible for the direction of the NVDS at the health area level. This training was conducted at the beginning of April, six weeks before the first round even though these personnel were responsible for reproducing the training at the operational level as well as for detailed planning at the health level. Many staff members at the health level area were initially against the NVDS because of the same misinterpretation and discredit involving the previous national vaccination crusades. This created a climate of distrust and skepticism unfavorable to the process.
6. New personnel was assigned to supervise different components of the NVDS, but they did not include the specialized staff integrating the different subcommittees. Particularly, the logistics, cold chain, transport, and training groups did not participate in supervision at the operational level.
7. In the majority of health areas there was a shortage of vaccines and syringes at the end of the first day of vaccination. This was due to an erroneous interpretation of the vaccination norms, the vaccination of many children older than five and to other operational problems. Responding to this problem required great efforts on the part of the logistics and transport group, as it was necessary to send vaccines and other items to the majority of the health areas the afternoon and evening of the first vaccination day.
8. Change of dates in the second and third rounds. These changes produced confusion in the population and in the programming for health personnel. The changed dates were not publicized appropriately or on a daily basis for the benefit of all the population. Also, some health areas substituted new dates,

9. Some zones of the country suffered heavy rains during the second and third rounds. This had an important limiting effect, especially in the rural zones where access is most difficult.
10. A work stoppage by the formal health personnel, which began 24 hours before the first day of the third round. This situation led to a total or partial suspension of vaccinations in all areas.
11. In the evaluation following after the first round of NVDs, not all recommendations originated by the planning group were taken into consideration by those in charge of implementation. Some of the recommendations were, however, partially adopted in the reprogramming of subsequent rounds. The supervision, evaluation, and information group had limited communication with the other subcommittees.
12. Training of the health personnel and volunteers was not standardized, resulting in the distortion of vital normative information by the time it was received by the vaccination teams. For example, there was confusion on whether to administer polio vaccine to newborns and to children previously vaccinated. Many children older than five were vaccinated. The auxiliary cold boxes were not always properly used.
13. Promotional strategies for the 2nd and 3rd rounds were modified; assessments of the efficacy of promotion efforts (by means of public opinion polls) was not performed; and the promotion subcommittee disintegrated at the end of the first round. Certainly, local promotional efforts had great significance, but to be most effective, they must be strongly supported by the mass media. The promotional activities initially programmed were only partially carried out during the 2nd and 3rd rounds.
14. Insufficient vaccine storage capacity at the central levels specifically there were not enough cold rooms. It was therefore necessary to store biologicals in different cold rooms in private institutions, in INCAP and in the General Hospital. The lack of an adequate central cold room and facilities to store other materials and equipment also caused difficulties in their control and distribution.

Principal achievement

1. A favorable and enthusiastic climate was created among the health personnel while carrying out the NVDs. The NVDs may serve as an example for other health actions that can be extended to the majority of the population.
2. A positive and enthusiastic attitude was generated among the general public as regards the activities carried out by the health personnel and the commitment of the government. The enormous volunteer participation and the massive spontaneous assistance of the population in the vaccination sites were positive signs of the credibility of the Ministry of Health. This should not be lost.

3. Political support at the highest level was obtained for a concerted effort in favor of Guatemalan children. In inaugurating the first round, President Cerezo acknowledged the NVDs were the most important health action during the first 126 days of his government.
4. Effective coordination was achieved among the different internal and intersectoral units of the Ministry of Health. This coordination was evident at the different levels, from the political, central technical levels, down to the health areas and operational levels.
5. In general, there was an efficient and timely consolidation of the resources necessary for the execution of the NVDs, indicating the great interest shown by both national and external sources.
6. The supply of high potency vaccines to the population was assured, due to the organization and provision of cold chain equipment and other supplies. Around 32,000 people were trained in cold chain management in a period of two months.
7. Throughout the NVDs certain technical deficiencies were identified at the different levels of the health care system. This made evident the need to prepare and disseminate national immunization norms.
8. Community participation was essential to the execution of the NVDs. Of 32,000 persons that made up the vaccination teams, 25,000 were volunteers. In addition, volunteer personnel served as home visitors in about two-thirds of the vaccination sites.
9. Many different private voluntary agencies participated actively in the NVDs. The following should be mentioned; Rotary Clubs, Lions Clubs, Boy Scouts, churches, schools, and many other local organizations and non-governmental volunteers.

XV. CONCLUSIONS AND RECOMMENDATIONS

1. The national vaccination days were an unprecedented success in the history of vaccinations in Guatemala. About one million children were vaccinated in the first drive, 900,000 in the second, and 800,000 in the third. Around 600,000 children under 5 received third doses of polio vaccine, and around half a million received third doses of DPT and one dose of measles, out of a target population of 1,385,000 children.
2. The last case of poliomyelitis occurred in the first week of July. The highly focalized distribution of the disease in Guatemala, combined with the enormous dissemination of the attenuated vaccine virus, (nearly 2 million doses of polio vaccine were applied in the three rounds) may explain the interrupted polio epidemic curve; it may be due to competition between the vaccine virus and the wild viruses which cause paralysis. Everyone that participated in one way or another in this achievement can feel particularly satisfied for having helped to stop the poliomyelitis epidemic in the country.
3. The national vaccination days made possible the full evaluation of the concept of teamwork. The mobilization of more than 32,000 people organized into more than 6,000 vaccination teams and their support personnel, as well as the participation of the one million children and their parents that turned up at the vaccination sites, constituted a truly national response in favor of the children. The Departments with a high concentrations of indigenous population groups reached equal or superior levels when compared with those with lower concentrations.
4. Despite the short lead time to prepare for the NVDs, the obstacles which affected the organization, training, logistics and supplies were still overcome. The obstacles we have identified therefore did not constitute insurmountable barriers to reaching the objective. The most serious obstacle was the work stoppage by a great number of the formal health personnel in the third round, which was resolved to a great extent by the extensive use of volunteer personnel.
5. With nearly nationwide coverage, the NVDs also made possible the testing of coordinating mechanisms within the Ministry of Health for the achievement of specific objectives. Putting these mechanisms into practice and coordinating the Ministry's actions with those of other institutions, as well as making extensive the use of volunteer support, could also be useful for carrying out other large scale actions for the benefit of all the population.

6. The NVDs made possible improvements of the cold chain at all levels and the training of most of the health personnel in the handling of biologicals and vaccine administration. This achievement will give added continuity to the regular immunization services, allowing vaccinations to be offered continuously in all health centers and posts. This was not the case prior to the NVDs.

7. The NVDs were designed to complement the regular EPI already established in the health areas with or without channeling strategy. They help to increase coverage quickly, at levels which assure the control of vaccine-preventable diseases.

RECOMMENDATIONS

1. Continue the regular EPI program in all health establishments that have adequate conditions for the maintenance of vaccines, and provide a refrigerator to those centers that don't yet have one.

2. Print and circulate throughout the country the recently revised norms on vaccination practices and maintenance of biologicals.

3. Given the achievements of the 1986 NVDs and the polio situation in Guatemala it is recommended to carry out NVDs in 1987, for children in the 0-3 age group, administering DPT, polio, and measles vaccines. The extension of the regular EPI program to all areas of the country, with or without channeling, is not incompatible with NVDs. Those children already completely vaccinated or who have been vaccinated within the preceeding month, will not be vaccinated again during future NVDs.

4. In areas with high incidence of tetanus neonatorum or where a large percentage of births occur in the home, the addition of tetanus toxoid vaccination for reproductive age women is justified in future NVDs.

5. It is imperative that each round of the NVDs be carried out in all of the country during the two days set for them. Effective promotion and social mobilization can only be achieved if the event is national in character. In the past, the vaccination crusades, initiated with much success at the national level, lost support and impact when executed independently in different Departments. The Central American Ad Hoc Technical Committee of Child Survival of which Guatemala is a member, is recommending NVDs on the same date for all Central American countries.

6. Programming must take very much into account the seasonability of the EPI target diseases, the rainy season and the local and national holidays, so

that there will be no interference with the effort. One of the most important sources of confusion (which led to a loss of credibility among the population) was the last-minute changes of dates. In the future, this must be avoided at all costs.

7. Advantage should be taken of all the lessons learned with these NVDs particularly regarding organization and social mobilization, so they can be applied to other short-term health interventions which aim to reach all of the population. The distribution and explanation of how to correctly use oral dehydration salts packets is an example of such interventions.

TABLE 7

Children Under One Year of Age Vaccinated, by Type and Dose of Vaccine;

1982 - 1986, Guatemala, October, 1986

VACUNAS	1,982		1,983		1,984		1,985		1,986 ⁽¹⁾	
	No.	%	No.	%	No.	%	No.	%	No.	%
Polio 1	230,285	72.0	217,810	67.0	226,731	63.0	149,498	44.0	307,705	89.0
Polio 2	141,159	45.0	139,993	43.0	156,612	47.0	70,856	21.0	195,251	57.0
Polio 3					13,883	4.0	31,722	9.0	112,063	33.0
DPT 1	236,639	75.0	218,114	67.0	230,160	70.0	148,362	43.0	234,930	68.0
DPT 2	142,932	45.0	140,529	43.0	159,606	48.0	71,224	21.0	183,080	53.0
DPT 3					13,307	4.0	31,652	9.0	112,659	33.0
Saraspion	38,200	12.0	29,451	9.0	80,942	24.0	79,266	23.0	158,950	46.0
POBLACION	315,370		324,357		333,655		343,300		344,524	

Source: division of Surveillance and Disease Control,
Social Security Administration

(1) Includes DPT and measles vaccines administered during the NVDs
and by the routine vaccination services.

TABLE 8

**Vaccines Administered Through Routine Vaccination Services,
Guatemala, January - June, 1986**

	<u>< 1 año</u>	<u>1 - 4 años</u>
<u>DPT</u>		
1a.	24.288	9.374
2a.	13.358	10.449
3a.	7.794	14.428
<u>POLIO</u>		
1a.	24.099	9.344
2a.	13.219	10.256
3a.	8.239	14.154
<u>SARAMPION</u>		
	12.365	12.571

TABLE 9

Coverage of Routine Vaccination Services and NVDs, by Vaccine and Age Groups, Guatemala, 1986

Grupos de Edades	Población (meta)	Coberturas prog. regular		Jornadas	
		Enero-Junio 86 Número (%)		Número (%)	
- 1 año	344.524				
Polio (3a. dosis)		8.230 (2.0)		112.062 (32.5)	
DPT (3a. dosis)		7.794 (2.3)		106.795 (31.0)	
Sarampión		12.365 (3.6)		144.596 (42.0)	
1 - 4 años	1.040.452				
Polio (3a. dosis)		14.154 (1.0)		473.199 (45.5)	
DPT (3a. dosis)		14.428 (1.4)		363.913 (35.0)	
Sarampión		12.571 (1.2)		341.222 (32.8)	
< de 5 años	1.384.975				
Polio (3a. dosis)		22.393 (2.0)		485.262 (42.2)	
DPT (3a. dosis)		22.223 (1.6)		470.708 (34.0)	
Sarampión		24.936 (1.8)		485.818 (35.0)	

Figure 5

Number of Confirmed Cases of Poliomyelitis, Guatemala, 1985-1986

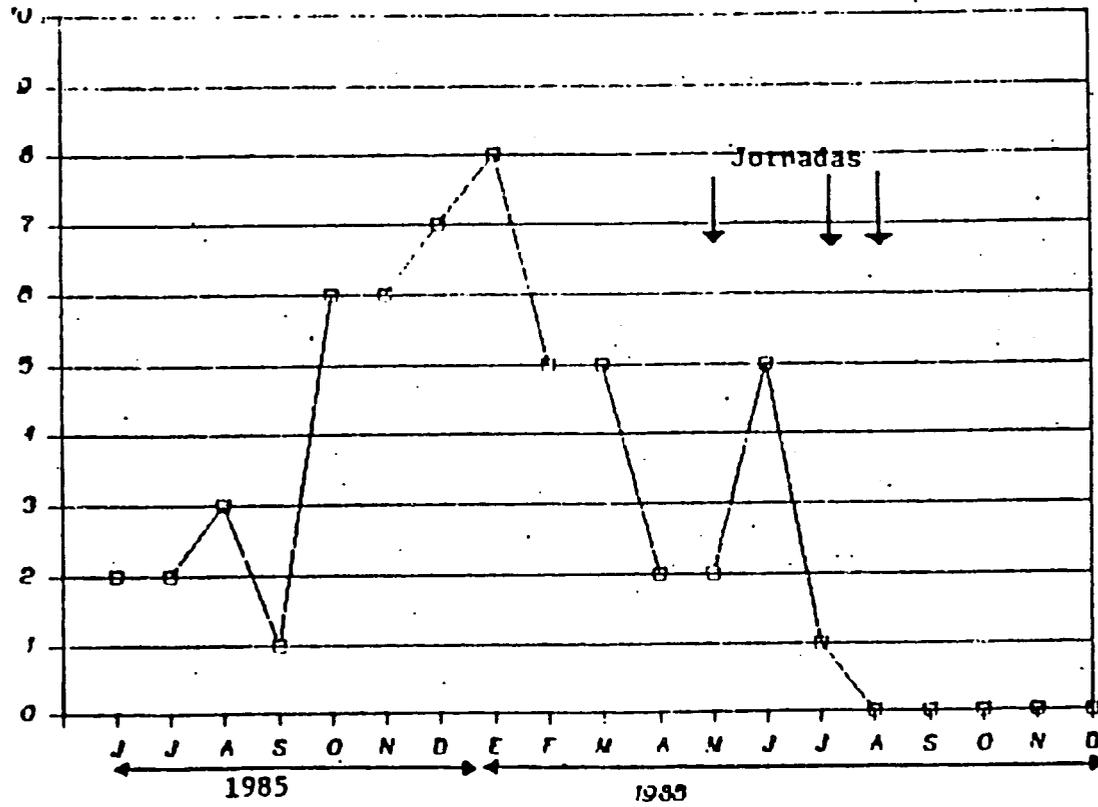
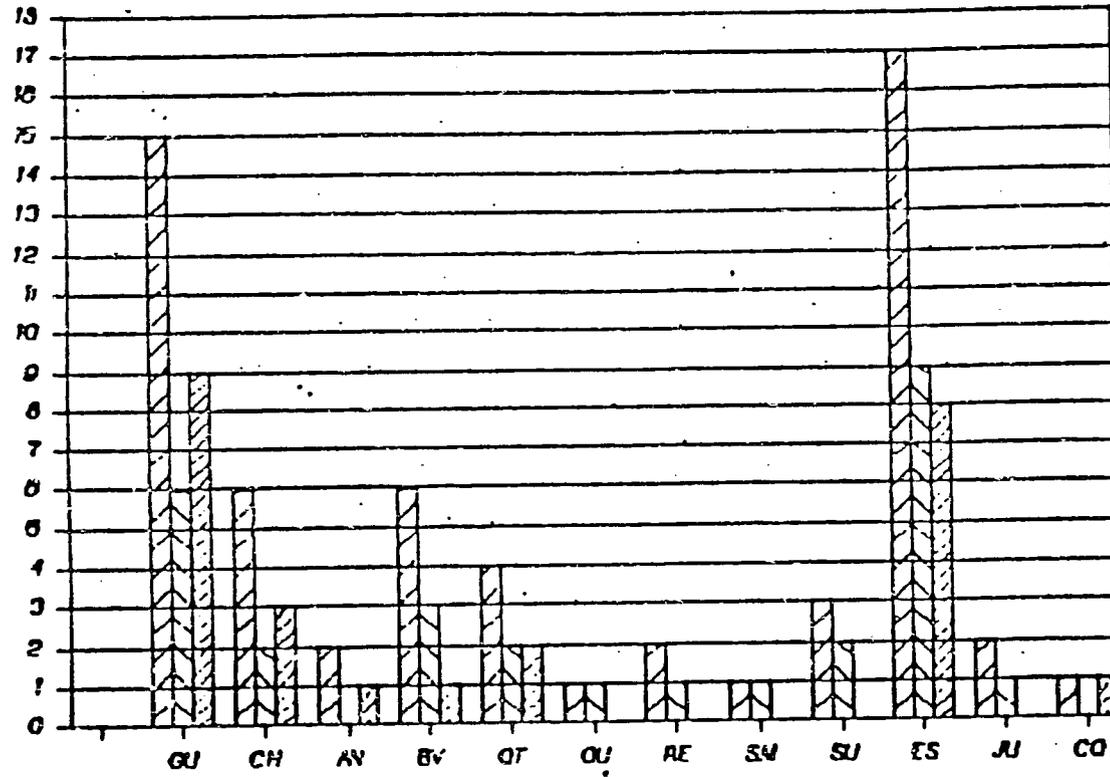


Figure 6

Number of cases of poliomyelitis, by classification, Guatemala,
January 17 - October, 1986



THE ROTARY FOUNDATION
OF
ROTARY INTERNATIONAL

1600 RIDGE AVENUE



EVANSTON, ILL. 60201, U.S.A. 1986
8 March 1986

Tel: 312/328-0100 • Cable: Interrotary • Telex: 724-465

To: See Distribution
From: Michael McQuestion, Supervisor PolioPlus
Subject: Feedback on Rotarian Involvement in Guatemala's PolioPlus Project

Attached please find a copy of a multi-agency evaluation of Guatemala's 1986 National Vaccination Days (NVDs). This was one of our first opportunities to carefully program and document local Rotarian involvement in NVDs. The main organizations which collaborated with the Guatemalan Ministry of Health in carrying out the NVDs also helped prepare this evaluation. They included:

- *Pan American Health Organization (PAHO)
- *UNICEF
- *US Agency for International Development (USAID)
- *The Nutrition Institute for Central America and Panama (INCAP)
- *Rotary International

A PolioPlus grant of US\$378,600, awarded to Guatemala in 1984, is meeting the country's polio vaccine needs through 1989 and providing some funds for social mobilization. Guatemala's 13 Rotary Clubs, however, considerably augmented Rotary's support to the country's Expanded Program on Immunization (EPI) through their direct involvement in the 1986 NVDs. They catalyzed additional local funding for social mobilization and minor cold chain items, printed 1,000 banners and 10,000 posters, mobilized Boy Scouts and other volunteers, provided transportation and meals and helped provide "quality control" information to local health officials by visiting and analyzing over 1,000 vaccination posts during the three NVDs (pp36-37).

This was the first time Guatemala undertook NVDs. Polio, DPT and measles vaccines were given simultaneously. The evaluation discusses both the achievements and key problems which emerged during the experience. The important outcomes were:

- *an estimated 40% of the country's children below five years of age received 3 doses of polio vaccine, compared to less than 10% prior to the NVDs;
- *many unvaccinated children were reached for the first time; about 90% of those below one now vaccinated against polio received their first doses during the NVDs;

*the Ministry of Health and all EPI donor agencies coordinated their actions to an unprecedented degree;

*virtually all sectors of Guatemalan society became more aware of the need for, or actually became involved in vaccinating the nation's children;

Among the key problems identified were:

*19/24 health areas attained at least 80% of polio vaccine coverage (children 0-4 years of age) the first round of NVDs but none sustained that high level the second and third rounds; a change in dates, heavy rains and a last-minute strike by the country's health workers confused or prevented the public from coming to vaccination posts, leading to lower coverage the second and third rounds.

*popular demand for vaccination could have been greater: Promotional (social mobilization) efforts were not sufficient and the technical group in charge of this vital component of NVDs disintegrated;

*careful local programming, training and supervision of health workers - all vital functions on the supply side - were sporadic or not carried out on the operational levels.

Despite these problems, the NVDs were on balance successful, not only because of the unprecedented numbers of children who were vaccinated but also because the experience revealed promising new, community-based approaches to accelerating the national EPI. The next round of NVDs may include tetanus toxoid (for reproductive-age women), making for an even more robust multiantigen intervention. The Guatemalan Ministry of Health intends to duplicate the NVDs in 1987 and has already asked the local Rotarians to continue their support. As stated in the evaluation, NVDs alone cannot ensure all the children of a country will be vaccinated at the earliest opportunity. Ultimately, vaccination must be continuously available, and parents must ensure their children are vaccinated. Each of Guatemala's 13 Rotary Clubs is continuing to find ways to achieve this objective, by continuing to support EPI on the local level.

Distribution: All (42) PolioPlus Project Contact Persons
PAHO/WHO, UNICEF, Other Collaborating Agency Counterparts
PolioPlus Program Advisers, Consultant

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