EPI Newsletter

Expanded Program on Immunization in the Americas

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Polio Surveillance in the Americas: First 8 Weeks of 1986

A well organized surveillance and reporting system is crucial to the success of the polio eradication goal. Active case finding and prompt case reporting are required in order to monitor progress towards the goal of eradicating indigenous wild poliovirus transmission in the Americas by 1990.

To track polio activity at the Regional level, PAHO Member Countries have been requested to send telexes each Monday to EPI/PAHO indicating the number of cases of poliomyelitis reported the previous epidemiological week, together with the number of cases reported for the same period during the previous year. All coun-

TABLE 1. Reported cases of poliomyelitis for weeks 1-8, 1986 and cumulative number of cases in 1986 and 1985 Region of the Americas (provisional data).

Country	Cumulative 86	Cumulative 85	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Argentina	—	—	—	—	—	—	—	—	—	—
Bolivia	—	—	—	—	—	—	—	—	—	—
Brazil	37	9	—	—	5	4	7	4	1	16
Canada	—	—	—	—	—	—	—	—	—	—
Chile	—	—	—	—	—	—	—	—	—	—
Colombia	8	1	—	2	1	—	—	1	1	3
Costa Rica	—	—	—	—	—	—	—	—	—	—
Cuba	—	—	—	—	—	—	—	—	—	—
Dom. Rep.	—	—	—	—	—	—	—	—	—	—
Ecuador	—	—	—	—	—	—	—	—	—	—
El Salvador	—	—	—	—	—	—	—	—	—	—
Fr. Guiana	—	—	—	—	—	—	—	—	—	—
Guatemala	11	—	1	2	1	2	3	1	1	—
Haiti	3	12	—	2	—	1	—	—	—	—
Honduras	1	—	—	—	—	—	—	—	1	—
Mexico	23	27	—	—	2	3	1	5	10	2
Nicaragua	—	—	—	—	—	—	—	—	—	—
Panama	—	—	—	—	—	—	—	—	—	—
Paraguay	—	—	—	—	—	—	—	—	—	—
Peru	2	2	—	—	1	—	—	—	1	—
Uruguay	—	—	—	—	—	—	—	—	—	—
United States	—	1	—	—	—	—	—	—	—	—
Venezuela	—	—	—	—	—	—	—	—	—	—
CAREC*	—	—	—	—	—	—	—	—	—	—
TOTAL	85	52	1	6	10	10	11	11	15	21

**Includes all countries which report to the Caribbean Epidemiology Center (countries and territories of the English-speaking Caribbean, as well as Guadeloupe and Suriname).*
— No cases

In this issue:

tries are asked to telex this information each week, even in the absence of cases. Most countries of the English-speaking Caribbean report to the Caribbean Epidemiology Center (CAREC) which in turn sends a weekly telex to PAHO.

PAHO compiles the reports and sends a weekly telex to each country advising the cumulative number of cases reported, by country, through the most recent reporting period.

During the first eight weeks of 1986, all but one country have reported regularly to PAHO. A total of 85 cases was reported for the period, compared with 52 cases for the first eight weeks in 1985 (Table 1). The increase in the number of reported cases is seen mostly in three countries—Brazil, Colombia and Guatemala—and may already be a reflection of intensified disease surveillance.

Effective surveillance will require that health workers at all levels understand the importance of promptly detecting and reporting all cases of acute onset of paralysis in children less than 15 years of age. Such a system will allow early investigation to confirm or rule out the diagnosis of paralytic poliomyelitis.

Prompt receipt of national data will in turn allow the Regional EPI office to respond rapidly to country requests for assistance in case investigation and the implementation of control measures.

EPI Technical Advisory Group Holds Second Meeting

The Pan American Health Organization's Technical Advisory Group (TAG) on EPI in the Americas held its second meeting in Mexico City on 15-17 January 1986. The group was formed shortly after PAHO's Director announced in May 1985 the hemispheric goal to eradicate indigenous transmission of wild poliovirus in the Americas by 1990.

At its first meeting in Washington, DC in July 1985 the group revised and approved a Plan of Action for poliomyelitis eradication in the Americas (see *EPI Newsletter* VII-4). A major recommendation of that meeting was that laboratory and surveillance issues should be addressed in detail at the next meeting.

The second TAG meeting was inaugurated by the Secretary of Health of Mexico, Dr. Guillermo Soberón Acevedo, and PAHO's Country Representative, Dr. Pablo Isaza. The meeting was chaired by Dr. D.A. Henderson, and Drs. José Manuel Borgoño and Alan Hinman served as rapporteurs.

Conclusions and Recommendations

The major conclusions and recommendations of the meeting are listed below.

1. The TAG notes with pleasure that a considerable number of activities have been carried out since its first meeting. The support which has already been given by PAHO and by individual countries and some agencies is most encouraging. The program is at a crucial stage and promises rapid development, but *early receipt of support from all collaborating agencies is vital to sustain and augment the momentum.*

2. The coverage level originally described as the level which would indicate that a polio-free country was at low risk of reestablishment of transmission (*80 percent* coverage in children less than one-year old) should be clarified to indicate that this *minimum coverage should be achieved in each geopolitical unit* (e.g., country, municipality).

3. Case definitions should be clarified as follows:
   - a **SUSPECTED** case should be defined as any acute onset of paralysis in a person less than 15 years of age as well as any paralytic illness in a person of any age in which polio is suspected as a likely cause.
   - a **PROBABLE** case is any acute onset of flaccid paralysis without another proven cause. *The presence or absence of sensory loss should not be considered* since it is so difficult to ascertain in infants and young children.
   - a **CONFIRMED** case is a probable case with:
     a) laboratory confirmation OR
     b) epidemiological linkage to another probable or confirmed case OR
     c) residual paralysis 60 days after onset OR
     d) death following clinically compatible illness.

4. *Guillain-Barré Syndrome (GBS)* poses a particular problem in that the diagnosis seems to be made incorrectly in many settings. *Any case of paralysis in an individual less than 15 years of age should be considered polio until proven otherwise.* All cases of GBS (of whatever age) should have appropriate laboratory investigation to establish that the illness is not polio.

5. *Containment.* The geographical extent of containment activities should be determined by the local epidemiological situation but in general should extend widely around the case. The age group of those vaccinated in containment activities should also be determined based on the epidemiological situation. This may sometimes result in vaccination of individuals older than 5 years in containment efforts.

6. *Improved case-finding.* Improvements in surveillance are urgently required in all countries. The important role of the laboratory as a source of information should be stressed. Laboratories should report immediately to the EPI manager any specimens submitted for viral studies in which polio or paralysis is indicated on the laboratory request. The role of schools as well as hospitals and health care providers in providing information about possible polio cases must be emphasized.

7. *Case investigation.* From this time on, each country in the Region should investigate promptly every suspected case of polio reported and obtain appropriate laboratory specimens. Each country should train a limited number of individuals (to be based at state, regional or national levels depending on size of population) to investigate all reported suspected cases and to evaluate and categorize all probable or confirmed cases. Additionally, it is important to establish a system at the national level for keeping track of suspected cases and their ultimate classification and disposition.

8. *Laboratory support.* Establishing and maintaining competent and reliable laboratory support is both difficult and costly. Moreover, for a laboratory to maintain expertise, a monthly average of approximately 50 specimens for enterovirus isolation is needed. Fortunately, only a limited number of laboratories (probably 5 to 8) is needed to support the polio eradication effort. The laboratories which will serve this function should be identified and operational before the end of 1986. Proficiency testing and other means of quality control will be essential on an ongoing basis. Centralized provision of standardized reagents (and possibly supplies and equipment) is necessary to assure comparability and quality of results. Particular attention should be paid to the proper obtaining, handling, and submission of specimens.

9. *Training needs.* To assist in training necessary staff at national, state, and local levels it is imperative that manuals be developed as quickly as possible. At least two manuals are needed: a comprehensive laboratory manual and a manual on surveillance and control. It is expected that both manuals will be available before the end of 1986.

10. *Immediate needs for further investigation:*
   a) development and evaluation of the most appropriate means of surveillance.
   b) development of techniques to determine the appropriate extent of containment activities, both in terms of the geographical extent of the activities and in terms of the age groups of the target population to be immunized.
   c) programmatic importance of polio in persons more than 15-years old.
   d) development of methods to ascertain the absence of wild poliovirus in countries without reported cases.
   e) role of non-polio enteroviruses in causing paralytic illness.
   f) magnitude of potential misdiagnosis of polio cases as cases of GBS.
   g) development of methods to detect cases which ordinarily would not come to the attention of the health sector.
   h) frequency of occurrence of vaccine-associated cases of paralysis.
   i) development of techniques to achieve satisfactory coverage in all segments of the target population during intensified activities.

11. *Mexico.* The TAG noted with satisfaction the increased commitment demonstrated by the National Polio Immunization Days inaugurated in 1986 (which TAG members had the opportunity to observe) and the efforts to improve surveillance. These are clearly major undertakings which should have a substantial impact on the occurrence of disease in Mexico. It is quite possible that the improved surveillance may detect a large enough number of previously unreported cases that there may seem to be a paradoxical increase in cases, even in the face of improved immunization levels. The TAG looks forward to future reports of activities in Mexico and to the inclusion of other antigens and individual immunization records in the program.

Mexico's first National Polio Immunization Day was widely publicized with posters such as the one above.

12. Experience in *Brazil* and other countries has clearly demonstrated that National Immunization Days are feasible and effective ways of improving vaccine coverage and having a dramatic effect on disease incidence, particularly polio. With appropriate planning and continuing support from the federal level, these efforts can be sustained over several years. National Immunization Days are particularly appropriate for achieving rapid results with polio and are clearly a major tool to be used in eradicating the disease from the hemisphere. In addition, National Immunization Days can have important impact beyond immunization in the way they mobilize social resources, generate increased political support, and focus public attention on preventive health activities. Although addition of measles and DTP vaccines to the National Immunization Days raises additional operational problems, most of these can be resolved and considerable additional benefits can be achieved. Under all circumstances, development of reliable surveillance mechanisms is essential to demonstrate the impact of immunization programs.

Other Presentations

In addition to detailed presentations on surveillance and laboratory issues, representatives from Mexico presented an overview of their surveillance system, laboratory support, the organization of operations in their forthcoming National Immunization Days for polio, and a summary of the national program for DTP and measles immunization. A summary was presented of pertinent issues from the Brazilian experience with National Immunization Days. There was also a review of major items covered at the recent meeting of the EPI Global Advisory Group. Finally, a presentation was made concerning studies of the Ezeject disposable syringe.

Next Meeting

The next TAG meeting is tentatively scheduled to be held in Brasilia during September 1986. Topics suggested for that meeting include a review of the laboratory and surveillance and control manuals currently under preparation, discussion of major outstanding research issues, a review of further experience with intensified surveillance activities, the process for certification of eradication, and a review of the hemispheric experience with vaccine-associated polio.

Source: Pan American Health Organization. Final Report of the Second Meeting of the EPI Technical Advisory Group on Polio Eradication in the Americas, Mexico City, 15-17 January 1986 (Doc. EPI/86.001 Rev. 1).

Global Advisory Group Conclusions and Recommendations

The eighth meeting of the Expanded Program on Immunization (EPI) Global Advisory Group took place from 4 to 8 November 1985 at the WHO Regional Office for Europe in Copenhagen. The Group made a special review of the program in Europe, the host Region, and reviewed global progress based on the reports from all Regions. The conclusions and recommendations formulated for the global program are summarized below.

Global program

The Global Advisory Group recommends that, in furtherance of the Five-Point Action Program endorsed by the world Health Assembly in 1983, three general and four specifc actions be taken by national immunization programs with the support of WHO, to accelerate EPI progress. These recommendations reflect optimism that the 1990 goal of reducing morbidity and mortality by providing immunizations for all children of the world can be achieved, but also acknowledge that many fundamental problems of national program management remain to be resolved.

As programs achieve greater levels of immunization coverage, it becomes increasingly important for targets to be set for reductions in morbidity and mortality.

General actions

1. *Promote the achievement of the 1990 immunization goal at national and international levels through collaboration among ministries, organizations and individuals in both the public and private sectors.* Mobilize social action which creates effective consumer demand and which provides the sustained resources and incentives to assure that this demand is met rapidly and effectively.

2. *Adopt a mix of complementary strategies for program acceleration.* In countries where coverage is unsatisfactory or disease transmission persists, use intensi-

fied approaches to strengthen existing services and bring about rapid and sustained increases in immunization coverage. Such approaches (including national immunization days) should use all EPI antigens whenever possible and should also consider provision of tetanus toxoid to women of childbearing age.

3. *Ensure that rapid increases in coverage can be sustained through mechanisms which strengthen the delivery of other primary health care interventions.* Accelerated efforts often represent extraordinary efforts. A major challenge will be to ensure that the progress made is maintained and that all immunization activities serve to strengthen the development of primary health care.

Specific actions

1. *Provide immunization at every contact point.* Immunization should be offered by all curative and preventive health services, even to children suffering from malnutrition or minor illness. Health workers should review the immunization needs of mother and child and provide the right immunizations at the right time. Excessive contraindications should be removed.[1]

2. *Reduce dropout rates between first and last immunizations.* The measures recommended are to:

a) determine the dropout rate through systematic review of health facility records or surveys;
b) identify reasons for non-participation and adopt measures to solve problems. Actions may include:
   - strengthening the participation of communities in immunization programs, including the public, private and voluntary sectors, and schools;
   - providing immunization services at more convenient times and places and increasing the use of regularly scheduled "outreach" clinics;
   - better informing parents of the need to return for further immunizations and of the times and places for doing so; and
   - better indentifying children who are eligible for immunization and actively seeking out those who are missed.

3. *Improve immunization services to the disadvantaged in urban areas.* Half the population of the world is expected to live in large urban areas by the year 2000. Despite the relative abundance of health facilities and health personnel in urban as compared with rural areas, immunization coverage in the disadvantaged populations surrounding major cities is typically poor. Nonetheless, accessible services can be provided with few financial or logistical problems.

4. *Increase priority for the control of measles, poliomyelitis and neonatal tetanus.*

a) *Measles* causes the highest worldwide mortality among the EPI target diseases. In some areas, however, coverage with measles vaccine is lower than with DPT or polio vaccine. Children in the age group at highest risk for measles often have limited access to health facilities and health facilities themselves can be major sources of measles transmission. All sick and well children attending health facilities should be screened for measles vaccine eligibility and immunized on the spot if indicated. Efforts should be made to assure that measles vaccine is available on a daily basis at all health facilities seeing eligible children. A vial of vaccine should be opened even if only a single child presents himself.

b) The crippling effects of *poliomyelitis* are known and feared in most communities where this disease persists. Administration of OPV as early as birth may assist in accelerating the reduction of the incidence of this disease. Regional targets for elimination of poliomyelitis by 1990 have been set in the European and American Regions.

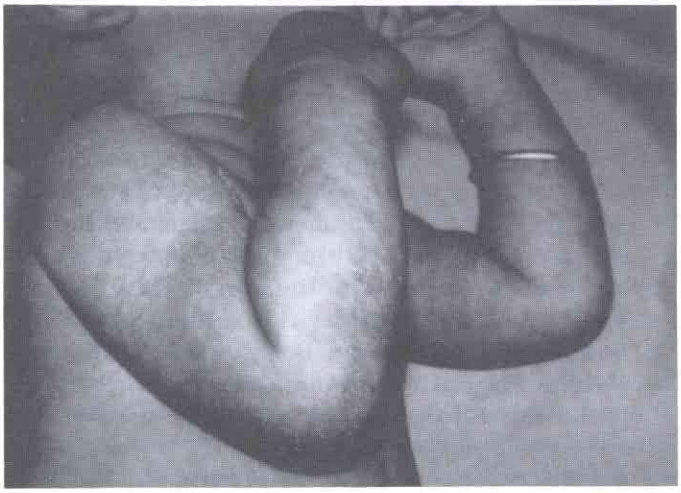
c) Very little progress has yet been achieved in the control of *neonatal tetanus*, which remains a neglected disease although it causes almost a million death a year. Cases can be prevented both by ensuring clean delivery and postnatal care and by maternal immunization. Each case testifies to multiple failures in maternal and child health care. This disease has disappeared from industrialized countries and should no longer be tolerated anywhere in the world.

Continued efforts are also required to:

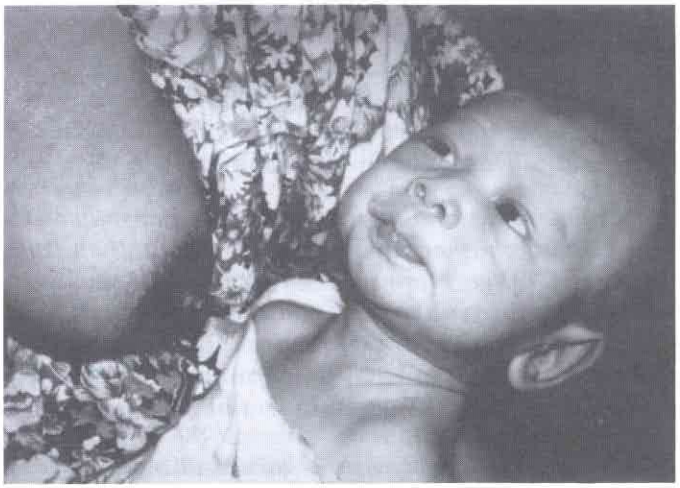
d) *Strengthen disease surveillance and outbreak control.* In cases where routine surveillance systems are not adequate for program management, sentinel surveillance should be vigorously pursued. Outbreak investigations should be increasingly promoted as the EPI target diseases are brought under control.

e) *Ensure quality of vaccine production, management, and administration.* All vaccines used should meet WHO requirements; cold chain systems should be strengthened; and efforts must be made to ensure that each person to be immunized receives a vaccine properly administered (using a sterile needle and a sterile syringe, if an injectable product).

[1] See *EPI Newsletters* V-6 and VI-1.



Measles causes the highest worldwide mortality among the EPI target diseases. Efforts should be made to assure that measles vaccine is available on a daily basis at all health facilities seeing eligible children.



Very little progress has yet been achieved in the control of neonatal tetanus, which remains a neglected disease although it causes almost a million death a year. Cases can be prevented both by ensuring clean delivery and postnatal care and by maternal immunization.

Collaboration with UNICEF

WHO and UNICEF have actively collaborated in support of the EPI since the early days of the program. The acceleration of national efforts heightens the importance of this collaboration, particularly at national level. It may be further facilitated by the provision of policy guidance from global and regional levels (as exemplified by the Planning Principles for Accelerated Immunization Activities),[2] by WHO and UNICEF collaborative agreements at regional level (as has been done in the African, American and Eastern Mediterranean Regions), and by country agreements jointly signed by governments, WHO, UNICEF and other major partners in the immunization effort.

Collaboration with nongovernmental organizations (NGOs)

In the light of the current accelerated immunization activities, involvement of NGOs is of special importance. The following is recommended:

1. NGOs have a vital role to play in EPI. That role needs to be clearly defined within each country program. This will ensure optimum use of each agency's strength while avoiding duplication of effort.

2. National action plans should be drawn up with agreement between all parties concerned as to their individual responsibilities within the program. Coordinating committees of all concerned agencies should be established.

3. Appropriate recognition of the involvement of NGOs is essential to their fund-raising and social mobilization efforts.

Training strategies

Significant numbers of health workers in all of the WHO Regions have received EPI training in courses organized on an inter-country or national basis, using adaptations of EPI prototype materials. The priority for future strategies must be to concentrate on the dissemination of these materials, in appropriate form and content, to the following categories of health workers:

- staff at the health services delivery level;
- students being trained in national health training institutions, including those in medical facilities;
- practitioners outside the public health system.

For peripheral staff and volunteer workers national training requirements must be assessed and training materials adapted or designed to meet specific local needs, both for routine immunization services and for special accelerated immunization efforts.

Immunization training in schools for health personnel needs to be improved. Teaching content can be improved by assuring that teaching aids are available which provide current information on immunization schedules, vaccine administration, vaccine indications and contraindications, and requirements for vaccine storage and transport. Teaching methods can be improved by stressing practice rather than lectures. National immunization programs should develop

[2] See *EPI Newsletter* VII-5.

Reported Cases of EPI Diseases

Number of reported cases of measles, poliomyelitis, tetanus, diphtheria and whooping cough, from 1 January 1986 to date of last report, and for same epidemiological period in 1985, by country

Subregion and Country	Report for week ending	Measles		Polio-myelitis§		Tetanus				Diphtheria		Whooping Cough	
						Non-neonatal		Neonatal					
		1986	1985	1986	1985	1986	1985	1986	1985	1986	1985	1986	1985
NORTHERN AMERICA													
Canada	15 Mar.	5,367	647	—	—	1**	...**	...	...	—	1	588	316
United States	22 Mar.	878	339	—	1	7**	11**	...	...	—	—	455	291
CARIBBEAN													
Antigua & Barbuda	25 Jan.	—	—	—	—	—	—	—	—	—	—	—	—
Bahamas	22 Feb.	3	1	—	—	—	2	—	—	—	—	—	1
Barbados	25 Jan.	—	—	—	—	—	—	—	—	—	—	—	—
Cuba	*	...	...	—	—	...	...	...	...	...	...	...	...
Dominica	22 Feb.	8	...	—	...	—	...	—	...	—	...	—	...
Dominican Republic	*	...	...	—	—	...	...	...	...	...	...	...	...
Grenada	22 Mar.	—	4	—	—	—	—	—	—	—	—	5	—
Haiti	*	...	...	6	17	...	...	...	...	...	...	...	...
Jamaica	25 Jan.	6	...	—	—	—	...	—	...	—	...	—	...
St. Kitts-Nevis	25 Jan.	2	12	—	—	—	—	—	—	—	—	—	—
Saint Lucia	25 Jan.	—	—	—	—	—	—	—	—	—	—	—	—
St. Vincent and the Grenadines	*	...	...	—	—	...	...	...	...	...	...	...	...
Trinidad & Tobago	25 Jan.	238	111	—	—	—	1	—	—	—	—	2	—
CONTINENTAL MID AMERICA													
Belize	22 Mar.	2	4	—	—	...	1	...	...	...	...	5	13
Costa Rica	*	...	...	—	—	...	...	...	...	...	...	...	...
El Salvador	*	...	...	—	—	...	...	...	...	...	...	...	...
Guatemala	25 Jan.	44	...	19	—	3	...	1	...	...	...	19	...
Honduras	22 Feb.	55	1,385	1	2	2	2	4	1	—	—	19	31
Mexico	*	...	...	47	49	...	...	...	...	...	...	...	...
Nicaragua	*	...	...	—	—	...	...	...	...	...	...	...	...
Panama	*	...	...	—	—	...	...	...	...	...	...	...	...
TROPICAL SOUTH AMERICA													
Bolivia	*	...	...	—	—	...	...	...	...	...	...	...	...
Brazil	*	...	...	131	30	...	...	...	...	...	...	...	...
Colombia	*	...	...	29	1	...	...	...	...	...	...	...	...
Ecuador	*	...	...	—	—	...	...	...	...	...	...	...	...
Guyana	*	...	...	—	—	...	...	...	...	...	...	...	...
Paraguay	25 Jan.	14	7	—	3	6	—	3	2	—	1	5	34
Peru	22 Feb.	7	...	2	18	—	...	3	...	1	...	14	...
Suriname	*	...	...	—	—	...	...	...	...	...	...	...	...
Venezuela	*	...	...	—	1	...	...	...	...	...	...	...	...
TEMPERATE SOUTH AMERICA													
Argentina	*	...	...	—	—	...	...	...	...	...	...	...	...
Chile	25 Jan.	1,262	552	—	—	2**	3**	...	...	13	6	—	272
Uruguay	*	...	...	—	—	...	...	...	...	...	...	...	...

* No 1986 reports received.

** Tetanus data not reported separately for neonatal and non-neonatal cases. Total tetanus data is reported in non-neonatal column.

§ Data for polio is through week 15 (ending 12 April).

— No Cases

... Data not available

active collaboration with medical schools, schools of nursing, and pediatric and nursing associations.

Continuing education should also be promoted for practitioners who are not in the public health system to obtain support for EPI in the private medical sector.

Operational research

Technologies are available to achieve the 1990 disease reduction and coverage targets. Their effective implementation will, however, require the adaptation of these technologies to the epidemiological, logistical, cultural, and economic realities at the country level.

Examples of operational problems requiring research include:

- occurrence of disease in immunized children;
- vaccine efficacy (with special attention to age-specific efficacy for measles vaccine in individual countries);
- identification of non-covered populations, barriers to coverage, and approaches to facilitate immunization;
- identification and solution of problems (equipment, training, supervision) to ensure the delivery of every injection with a sterile needle and sterile syringe;
- approaches to improve mobilization of political and commmunity commitment;
- optimum approaches to training/retraining;
- cost-effective methods of vaccine delivery.

Administration of vaccines

The discovery of LAV/HTLV-III virus as the cause of acquired immune deficiency syndrome (AIDS), coupled with the increasing recognition that retroviruses are circulating in many countries, has raised the question whether unsterile immunization techniques might contribute to LAV/HTLV-III transmission. Thus far, there has been no demonstrated transmission of LAV/HTLV-III as a result of immunization. Since the possibility exists that unsterile needles and unsterile syringes can transmit not only LAV/HTLV-III, but other infectious agents including hepatitis viruses, immunization programs have the obligation to ensure that a sterile needle and a sterile syringe are used with each injection.

Research and development efforts which facilitate sterile injection practices are an urgent need and deserve strong support.

Acute respiratory infections (ARI)

The EPI and the ARI program share common objectives with other components of primary health care. These common objectives provide incentives for collaboration between the programs. The present EPI collaboration with other primary health care components should be extended to the ARI program as it evolves toward full-fledged implementation.

Source: WHO *Weekly Epidem Rec* 3:13-16, 1986.

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