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## *EXPANDED PROGRAMME ON IMMUNIZATION*

Report on the 11th meeting of the  
European Advisory Group

Paris, France  
4-6 March 1996

## TARGET 5

### REDUCING COMMUNICABLE DISEASE

*By the year 2000, there should be no indigenous cases of poliomyelitis, diphtheria, neonatal tetanus, measles, mumps and congenital rubella in the Region and there should be a sustained and continuing reduction in the incidence and adverse consequences of other communicable diseases, notably HIV infection.*

### ABSTRACT

The 11<sup>th</sup> meeting of the European Advisory Group (EAG) was held in Paris from 4 to 6 March 1996. The EAG reviewed its role, function and membership and identified the following priorities:

- to review the progress and define the constraints of immunization programmes;
- to recommend approaches for strategies and modifications based on new scientific and practical findings;
- to advise the Regional Office and the Interagency Immunization Coordinating Committee (IICC) on priority areas for action and on matters of special importance for submission to the Regional Committee.

The EAG also examined opportunities for its recommendations to be made available widely.

The EAG felt that, in its future work, there was a need to prioritize with an in-depth review of progress to date on polio eradication and measles elimination, and the EAG needed to prepare statements on developing topics, such as Hib vaccine, varicella vaccine, pertussis vaccine, side effects and contraindications, and booster strategies.

Unlike progress in most of the other WHO regions, coverage appears to have reached a plateau. In some countries, excellent progress continues to be made and it is already apparent that Operation MECACAR has had a significant impact on poliomyelitis. Nevertheless, in a number of countries, surveillance remains weak, and in others, recommended vaccines (especially rubella and mumps) are not available.

The EAG reviewed the operational targets that had been recommended in 1993, based on outcome goals, coverage, surveillance and outbreak responses. Whilst in a number of countries there had been successes in line with the target requirements, in many others there had not been sufficient progress. There remained optimism that the polio eradication targets would be reached, and appreciation that the neonatal tetanus targets could be reached by the year 2000, but there was concern that the overall regional situation was less encouraging. If the strategies for control of the diphtheria epidemic are fully implemented, then diphtheria elimination is attainable. The EAG considered that the targets, though demanding, remained technically correct and served a useful purpose.

The diphtheria epidemic appeared to be slowing with fewer cases than predicted. Where supplies of vaccine were adequate implementation of immunization mass campaigns was proceeding. Studies had confirmed the previous recommendations that a single booster dose is sufficient for adults, apart from those in the age band 30-50 years, for whom three doses may be needed. The previous case definition for pertussis should be modified to conform with that recently proposed by EPI/HQ for duration of cough - 14 not 30 days. Progress towards polio elimination was reviewed and the Plan of Action endorsed.

### Keywords

IMMUNIZATION  
COMMUNICABLE DISEASE CONTROL - methods  
PERTUSSIS  
DIPHTHERIA  
POLIOMYELITIS  
EUROPE  
NIS  
USA  
FRANCE

## INTRODUCTION

The 11th meeting of the European Advisory Group (EAG) on the Expanded Programme on Immunization (EPI) was held at the International Children's Centre (CIE), Paris, France, on 4-6 March 1996. Dr Norman Begg chaired the meeting, Dr Nicole Guerin served as Co-Chairperson, Dr D.M. Salisbury acted as Rapporteur and Dr Colette Roure as Secretary. Dr Nicole Guerin and Dr Roland Sutter attended as observers. Dr A. Tursz, Scientific Director of the International Children's Centre, welcomed the participants.

### Scope and purpose

- To review the EAG's terms of reference and to elaborate a medium-term programme of work.
- To review the achievability of the current targets in the countries of the European Region.
- To review progress on polio eradication and discuss the new case definition of poliomyelitis.
- To review the new reporting forms for diphtheria.
- To review the case definition of pertussis along the lines of the WHO standard case definition.
- Presentation and discussion on the venue of an expert meeting on measles elimination strategies and of a meeting on the control of Hepatitis B in the NIS.

## ROLE AND FUNCTION OF THE EUROPEAN ADVISORY GROUP

The Group reviewed its terms of reference, prepared in 1992 along the lines of those for similar expert advisory groups in other regions. EAG recommendations were primarily directed at the WHO Regional Office for Europe (WHO/EURO) and the International Immunization Coordinating Committee (IICC) but they needed to be shared and were therefore submitted to communicable diseases (CD) counterparts and national programme managers. The EAG report should be submitted to the Regional Director.

The key activities of the EAG are:

- to review the progress and define the constraints of immunization programmes;
- to recommend approaches for strategies and modifications based on new scientific and practical findings;
- to advise the Regional Office on priority areas for action and on matters of special importance for submission to the Regional Committee;
- to function as the technical advisory body for the IICC.

The main routes of dissemination of information are to health ministers, national programme managers and CD counterparts, through publications in the *Weekly epidemiological record*, the *EURO/CD news* and through associations of relevant health professionals such as paediatricians (EPHA, CESP, ESPID) and public health.

Membership of the EAG should broadly represent relevant expertise in immunization (paediatrics, public health, epidemiology, programme management). So far, however, vaccine technology expertise had not been available. It would be helpful to have closer liaison with professional associations, especially of paediatricians and of general practitioners, and that the

European Vaccine Manufacturers' Association should be asked to nominate a representative to attend a forthcoming EAG meeting on technical rather than commercial grounds, without any undertaking for future meetings. Representatives of IICC should be given the possibility of participating in EAG meetings as observers.

### **Plan of work**

The EAG felt that, where its future work was concerned, there were two separate requirements. First, there was a need to prioritize, with an in-depth review of progress to date on polio eradication and diphtheria and measles elimination. Secondly, the Group needed to prepare statements on developing topics, such as Hib vaccine, varicella vaccine, pertussis vaccine, side effects and contraindications, and booster strategies, in order to support people working in the field. The work plan for future EAG meetings is in Annex 1; the first meeting, to be held late in 1996, will include an in-depth analysis on measles and polio.

### **REGIONAL REVIEW AND OPERATIONAL TARGETS**

Unlike progress in most of the other WHO regions, coverage for vaccine-preventable diseases appears to have reached a plateau. In some countries excellent progress continues to be made against certain vaccine-preventable diseases. It is already apparent that Operation MECACAR has had a significant impact on poliomyelitis. Nevertheless, in a number of countries surveillance remains weak, and in others the vaccines (rubella and mumps) needed to achieve the regional goals are not available.

The Meeting reviewed the operational targets that had been recommended in 1993 based on outcome goals, coverage, surveillance and outbreak responses. Though ambitious and demanding, the targets remained technically correct and served a useful purpose. Unfortunately since they were set in 1993 a number of major problems had affected the Region which hindered their implementation. Whilst in a number of countries there had been successes in line with the target requirements, in many others there had not been sufficient progress. Participants were hopeful that the polio eradication targets would be reached and considered that the neonatal tetanus targets could be reached by 2000, but were concerned that the overall regional situation was less encouraging for attainment of the other targets. Diphtheria could be eliminated if the strategies for control of the epidemic were fully implemented.

### **Diphtheria**

Contrary to previous predictions, it appears as if the diphtheria epidemic in the newly independent states (NIS) increased relatively little in 1995 compared to 1994. The doubling of cases seen since 1990 appears to have halted. This appears to have been brought about because the expected autumn/winter upsurge did not occur in Azerbaijan, Latvia, Lithuania, Republic of Moldova and in the Russian Federation, although there were considerable increases in 1995 in other NIS. Given that the epidemic started in the Russian Federation, this first indication of significant progress is encouraging.

All NIS have received international support, and where the supplies of vaccine were adequate mass campaigns were implemented. Surveillance continues to improve with better reporting from countries to WHO of cases, carriers and details of toxigenic and non-toxigenic strains.

The reporting forms were discussed and it was agreed that the quarterly reporting form should be shortened. Reporting on immunization status should be deleted. There was uncertainty regarding the need for distribution by gender. This will be further discussed by evaluating analyses made in some NIS.

Studies in Kiev and Odessa have investigated the boosting responses to one, two or three immunizations using Russian vaccines with 5 Lf per dose and European vaccine with 2 Lf per dose. In the Ukraine study, where a cut-off for a positive response of more than 0.1 IU/ml was used, 89% of recipients had a boosting response. The poorest responses were seen in the group aged 40-49 years, while excellent responses were seen in the younger and oldest age groups. Previous military service did not appear to influence the outcome, nor did gender. Similar results were seen from the Odessa study, with the group aged 40-49 years having the lowest responses. Whilst further analyses are still being completed, it is clear that the boosting response to either dose appeared excellent and one dose was sufficient for everyone other than the group aged 30-50 years, for whom three doses were beneficial. This evidence reinforces the previous recommendations of the EAG that a single booster dose is sufficient for adults apart from those in the age band 30-50 years, for whom two or three doses may be needed.

#### **Pertussis**

The gradual increase in the incidence of pertussis in the USA since 1981 may have peaked in 1994. Most reported cases were in children under one year, in whom there is the highest case fatality. More than 60% of children under 6 months of age were hospitalized and the commonest complication was pneumonia. There were 5 to 10 known deaths per annum but it is thought that only 3-10% of cases and one third of deaths were reported. Underreporting of hospitalization was of the order of two thirds. On this basis, pertussis is the most common vaccine-preventable disease in children aged under 5 years in the USA. Despite the predominance of cases in young children, it is considered likely that transmission is maintained through subclinical or mild infection in teenagers and adults, compounded by the use of low efficacy vaccine (as demonstrated from international studies). It should be stressed that the low potency vaccine used in the USA is not used in Europe, where far higher vaccine efficacy has been recorded from routinely available whole cell vaccines. A similar position is being detected in France and confirmed as larger studies are undertaken. Here, a resurgence of pertussis has been seen in young children since 1991, with most cases occurring in children under one year, and a significant association with cases in teenagers or adults in contact with the index cases. Studies in France using routinely available European whole cell vaccine showed high efficacy (more than 90%) and long duration of protection.

The Meeting reviewed the previously recommended case-definition, the definition used in studies in France, and the one recently proposed by EPI/HQ. It was agreed that the EURO case definition should be changed in line with the EPI/HQ case definition for duration of cough (14 rather than 30 days). Nationally reported statistics should include those cases confirmed on clinical criteria and those confirmed on laboratory evidence.

## Poliomyelitis

The previously endorsed work plan for poliomyelitis eradication had featured four priority work areas.

1. *Improvement in surveillance.* Acute flaccid paralysis (AFP) surveillance is now undertaken in 24 countries (formerly 11); the laboratory network has improved; monthly reporting has improved; completeness is now 96% and timeliness 82%. **The planned improvement has been achieved.**
2. *Increase in coverage.* In 1993, regional coverage for polio immunization was 83% and in 1994 it was 88%. It is expected that the coverage for 1995 will have exceeded 90%. **This objective has been achieved.**
3. *Improvement in international cooperation.* Operation MECACAR has led to the development of an effective anti-polio coalition bringing together political, public health and community based constituencies. **This objective has been achieved.**
4. *Certification process.* Although originally planned for 1995, the certification process is now under way with the first meeting imminent.

There had been more reports of poliomyelitis in the European Region between 1990 and 1994, partly as a result of improved surveillance and partly because of real increases as a result of vaccine shortages and programme difficulties. A decrease in cases was reported in 1995 along with a fall in the number of countries with endemic transmission (9); only 40 territories had endemic poliomyelitis in 1995. Although there appeared to be a significant seasonal increase in poliomyelitis reports in the summer of 1995, the cases occurred in countries outside the MECACAR coalition (mainly the Russian Federation although there were two cases in the Former Yugoslavia and one in Ukraine). Since Operation MECACAR, the main endemic territories are in Azerbaijan, the Russian Federation, Turkey and Turkmenistan.

Although there has been this gratifying decrease in cases of polio, surveillance indicators for AFP remain suboptimal. Overall rates of AFP are still too low; cases with AFP are not fully or only slowly investigated. However, progress is being made in laboratory surveillance, with all countries having access to laboratories which are in turn now linked to reference laboratories. There is scope, however, for further improvement in the laboratory network and too many cases are still classified as of unknown aetiology, in part because of inadequate case investigation.

The priority areas remain surveillance, achievement of interruption of transmission and strengthening of the laboratory network. To fulfil these priorities, the regional strategy encompasses a commitment to high coverage through routine services, NIDs in order to interrupt transmission, mopping-up in high risk areas, improved surveillance to define high risk areas, and meeting of criteria for certification. The operational plans to achieve the strategic objectives are directed towards interruption of transmission, improvement in surveillance (AFP, stool sampling, lab proficiency), and the development of the certification process.

Reviewing action to date, the Group congratulated the Regional Office on its achievement in the pursuance of polio eradication and endorsed the priorities, plans and strategies.

## CONCLUSIONS AND RECOMMENDATIONS

1. The EAG fully endorsed the plan of action for 1996–1997 and considered that, given progress to date, the objectives for achievement by the end of 1997 were realistic.
2. A questionnaire should be drawn up to investigate countries' progress towards the disease specific targets in the four key areas of outcome, coverage, surveillance and outbreak response. The questionnaire should be sent to chief medical officers (or their equivalents) so that health ministries are aware of the targets and their countries' progress towards them. A review of the questionnaire should be made available to the Regional Committee, hopefully in 1996, and at least by 1997, and subsequently be published.
3. In the light of PAHO experience and subsequent modification of case definitions, an amended case definition for poliomyelitis cases (confirmed, compatible or discarded) should be implemented as soon as possible and evaluated in parallel with the existing case definition (Annex 2).
4. In the promotion of AFP surveillance, the need and the criteria for inclusion and exclusion should be made credible to professional groups to ensure their full collaboration.

*Annex 1*

**PLAN OF WORK FOR THE EUROPEAN ADVISORY GROUP IN 1996-1997**

**First meeting:** 20-22 November 1996, Copenhagen

20-21 November: Meeting of measles experts

22 November: EAG

*Topics:* AFP and other forms of polio surveillance  
Choice of vaccines as eradication approaches

**Second meeting:** Dates and venue to be arranged

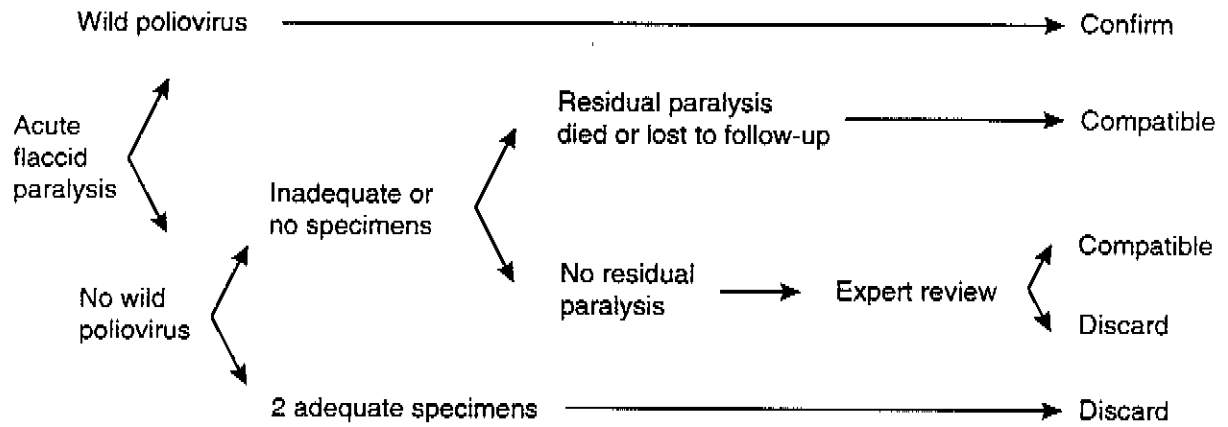
*Topics:* Discussion of EAG statements on: pertussis, varicella, Haemophilus influenzae type b, side effects and contraindications  
Discussion of expert meetings on hepatitis B and diphtheria  
Combination vaccines (representative from EVM to be invited)

**Third meeting:** Dates and venue to be arranged

*Topics:* Adult immunization, booster strategies

Annex 2

**VIROLOGICAL CLASSIFICATION OF ACUTE FLACCID PARALYSIS CASES**



*Annex 3*

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