

EUR/ICP/EPI 023

34704

Third Meeting of National Programme Managers
on the Expanded Programme on Immunization



WORLD HEALTH ORGANIZATION
Regional Office for Europe
COPENHAGEN

TARGET 5

Eliminating seven specific diseases

By the year 2000, there should be no indigenous measles, poliomyelitis, neonatal tetanus, congenital rubella, diphtheria, congenital syphilis or indigenous malaria in the Region.

Index:

NATIONAL HEALTH PROGRAMS
COMMUNICABLE DISEASE CONTROL
IMMUNIZATION
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Third Meeting of National Programme Managers
on the Expanded Programme on Immunization

Report on a WHO Meeting

St Vincent, Aosta, Italy
22-25 May 1990

Note

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Introduction

This third annual meeting in the series took place at the Congress Centre, Grand Hotel Billia, St Vincent, Italy, thanks mainly to the generous contribution and hospitality of the Government of the Aosta Valley Region. The Meeting was also supported by voluntary donations from SmithKline Biologicals (Italy) and the Institut Mérieux (France).

The participants (Annex 3) included 47 Programme Managers and representatives of 28 European Member States, 7 advisers and 3 support staff from the WHO Regional Office for Europe, and 9 observers from various organizations and institutions. National immunization Programme Managers from 4 Member States (Luxembourg, Monaco, Norway and San Marino) were unable to attend. Dr M.S. Tsechkovsky, Director, Systems of Health Care, WHO Regional Office for Europe, opened the meeting on behalf of Dr J.E. Asvall, Regional Director.

The Meeting was chaired by Dr I. Masar; Dr S. Squarcione served as Vice-Chairman, Dr N. Billo acted as Rapporteur and Dr B. Bytchenko was Secretary.

The main objectives of the Meeting were:

- to confirm the Regional Office's policies and strategies for achieving health for all regional target 5;
- to review further progress in polio eradication in the Region;
- to discuss experience in the use of measles/mumps/rubella (MMR) vaccines in national immunization programmes;
- to identify new antigens which could be included in immunization schedules;

- to make recommendations for improving the quality of work at national and regional level.

The Meeting endorsed the recommendations of the Fourth Meeting of the European Advisory Group on the Expanded Programme on Immunization (EAG/EPI), Paris, 13-15 February 1990 and of the Regional Office Meeting on the Control of Diphtheria in Europe, Geneva, 17-19 April 1990. (The latter was convened at the request of the former.) All working papers and background documents are listed in Annex 1.

Poliomyelitis eradication (progress of work)

The goal of global poliomyelitis eradication endorsed by the World Health Assembly (WHA) is defined as the cessation of indigenous transmission of wild poliovirus. This means that there should be no single case of clinical poliomyelitis associated with wild poliovirus and that there should be no wild polioviruses identified anywhere in the world after sampling from communities and environments.

Success of the WHO Global Programme

As the 1990s begin, the Expanded Programme on Immunization (EPI) has already achieved remarkable success. For the first time in history, world immunization coverage has surpassed the two thirds mark for a third dose of both polio and DTP vaccines for children reaching their first year of life. At these coverage levels, it is estimated that EPI currently prevents some 2.2 million deaths each year, as well as some 360 000 cases of paralytic poliomyelitis.

It is expected that within the next five years large areas of the world will become polio-free. Any remaining endemic areas will require intensive efforts to achieve global eradication by the year 2000.

European contribution

In 1989 only 133 cases of poliomyelitis were reported in the Region compared to 228 cases in 1988. This 1.8-fold reduction was due mainly to immunization campaigns in the USSR, Turkey and Israel. Twenty countries (62.5%) reported that they had had no cases of indigenous poliomyelitis from wild virus in 1989.

The reappearance of indigenous polio cases or cases of unknown etiology in some European states (Albania, Bulgaria, Yugoslavia) shows that there should be no complacency on the part of those involved in immunization programmes.

It was noted that 18 vaccine-associated cases were reported in 1988 and 11 in 1989.

Although almost 50% of the European population live in areas where no cases of polio caused by wild virus have been reported, eradication will only be achieved by continuing efforts on the part of all Member States to maintain high immunization coverage with potent vaccines.

Recommendations for elimination

1. Coverage has reached levels of 90% or more in most of the European countries. Where low coverage is found, the contributing factors should be determined and the situation corrected accordingly. However, high coverage alone does not guarantee the absence of indigenous poliomyelitis. Programme Managers should ensure that the vaccines used (OPV or IPV) comply with WHO requirements for vaccine quality, and that vaccines are kept in good conditions and at the right temperature. If serological surveillance reveals inadequate levels of immunity, appropriate measures should be taken to redress these deficiencies. When poliomyelitis cases, especially indigenous cases, have become extremely rare, public awareness of this need for high coverage may wane.

Programme Managers should strive to improve and then sustain high levels of immunization.

Although the situation is now much improved in the Region, vaccination or revaccination for those travelling into endemic areas should nevertheless still be advised if their national certificate of vaccination is invalid.

2. Disease surveillance is crucial in assessing the effects of vaccination. Most of the countries have poliomyelitis surveillance systems which do not necessarily incorporate flaccid paralysis and Guillain-Barré syndrome (GBS) in children under 15 as possible indications of poliomyelitis. It is suggested that physicians in the Region should be reminded that flaccid paralysis and GBS may be possible signs of polio.

Countries should ensure that all suspected cases of polio are thoroughly investigated, with every effort made to obtain virus isolation as early as possible after the disease manifestation. Isolates should be sent for virological analysis to a national or WHO reference laboratory.

All suspected cases should be reported promptly at district and national level to allow appropriate containment measures to be taken. Zero reporting, i.e. absence of cases, is recommended. Each country should report confirmed cases immediately to the WHO Regional Office. The Regional Office will continue to issue annual questionnaires on poliomyelitis to Programme Managers. These must be completed accurately and returned.

The importance was emphasized of surveillance of wild viruses in the environment. However, the ideal number and location of samples to be collected and the isolation methodology remain to be determined. It is suggested that this problem be considered soon by an expert group (virologists, epidemiologists) organized by the WHO Global EPI.

3. Every case of poliomyelitis should be classified according to WHO's recommendations on the basis of the characteristics of the poliovirus isolated from that case, that is:

- indigenous (wild poliovirus)
- imported (wild poliovirus)
- vaccine-associated, or
- unknown/other.

A case of polio should be considered as vaccine-associated if isolates are of the vaccine virus-like strain, and if no other etiological agent can be identified as the cause of the disease. Several WHO reference laboratories exist where identified strains can be confirmed and further characterized. It is suggested that cases with no virus isolation (only clinical and/or serological diagnosis) should be classified as unknown unless they can be linked epidemiologically to other cases occurring in a contemporaneous outbreak or by close contact with recently vaccinated individuals.

Criteria for declaring a country free from indigenous poliomyelitis

1. To prove that a country is free from indigenous poliomyelitis it must be shown that no confirmed poliomyelitis cases other than imported or vaccine-associated cases have been detected in the last three years.
2. It must also be shown that:
 - a well conceived plan of action for poliomyelitis elimination has been implemented, with reliable surveillance;
 - all cases which fulfil the WHO definition for suspected poliomyelitis (any case of acute flaccid paralysis, including GBS in children under 15, for

which no other cause can be immediately identified) have been and continue to be fully investigated (clinically, epidemiologically and virologically);

- an efficient laboratory-supported surveillance system exists, ensuring that each case of confirmed poliomyelitis is assessed and classified by experts as being imported or vaccine-associated, generally on the basis of intratypic differentiation of the causative polioviruses;
- a minimum immunization coverage rate of 90% (completed polio immunization courses) has been achieved in all target groups and in all districts, using potent and properly stored vaccines;
- maintenance of adequate immunity levels has been demonstrated in all population groups. Immunization should be sustained until worldwide poliomyelitis eradication is achieved.

Measles/mumps/rubella (new control strategies)

The introduction of MMR vaccine in some countries has increased coverage considerably. However, it was stressed that introduction of MMR vaccine should be carefully planned and not decided upon according to the availability of this vaccine alone.

The main goal of the strategy is the eradication of congenital rubella syndrome (CRS). A prerequisite for engaging in immunization against measles, mumps and rubella is the ability to achieve high coverage by the second year in infancy. Unless this can be assured, there is a risk that there will be an increase in cases of CRS in the future; this can only be prevented by ensuring that all females reaching childbearing age are immune to rubella. Every effort should therefore be made to achieve the highest levels of coverage as quickly as possible, along with rubella immunization of susceptible

women or girls at every opportunity. Appropriate monitoring systems for rubella infection must be in place.

When policies are hindered by financial constraints, or lack of access to MMR vaccine, selective rubella strategies, aimed at adolescent and other susceptible girls or women, will have a considerable impact on CRS although elimination is unlikely. The greatest benefit, in the shortest time, will follow the combination of infant and adolescent immunization.

In those countries where measles and rubella vaccines have been used with high immunization coverage and strategies aimed at preventing rubella infection of pregnant women, cases of measles, rubella and CRS have dropped considerably.

There is a lack of measles, mumps, and rubella vaccines in eastern countries of the Region for technological reasons and due to financial constraints.

Recommendations for further reduction of these diseases

1. Taking into account the big political and social changes which some eastern European countries have undergone, improvements and availability of viral vaccines cannot be expected without external help. Assistance from western European countries including financial support and transfer of technology is urgently needed. This should be brought to the attention of the Regional Committee of WHO.
2. WHO case definitions and appropriate surveillance systems for all the diseases preventable through immunization should be used, especially in the near-elimination phase.
3. Special emphasis should be put on rubella and CRS surveillance by:

- implementing active surveillance of CRS;
 - monitoring rubella-associated termination of pregnancies;
 - investigating deafness in childhood;
 - investigating rubella-associated infections in pregnancy.
4. Existing WHO material on outbreak investigation and containment measures for measles should be used to prevent similar situations in European Member States.
5. Clear criteria for elimination of indigenous measles should be formulated by the WHO Regional EPI.
6. The recommendation made by the EPI Managers at the 1989 meeting in Istanbul and of the 1990 EAG meeting in Paris, to consider a suitable two-dose strategy to protect non-immune children from measles, mumps and rubella, was endorsed.

Diphtheria

The participants endorsed the recommendations of the WHO Meeting on the Control of Diphtheria in Europe, Geneva, 17-19 April 1990. Countries where diphtheria still occurs are advised to review the situation and make appropriate modifications to their programme. The revaccination of adults should be considered wherever gaps in immunity are detected. Low-dose adult diphtheria vaccine (d) can be given with tetanus (T) vaccine as a combined Td vaccine, but the optimum timing of doses following primary vaccination should be further investigated using coordinated and standardized serosurveillance studies in some European countries.

Recommendations on surveillance and control

Countries should ensure that:

- health workers and the general public are made increasingly aware of possible diphtheria occurrence;
- at least one laboratory at provincial level knows how to routinely identify *C. diphtheriae*;
- a WHO working group is established to produce two manuals for field workers to help eliminate diphtheria: one manual would deal with surveillance and control of diphtheria; the other would outline procedures for the routine isolation and identification of *C. diphtheriae* and would specify procedures for measuring diphtheria immunity adjusted to the WHO reference antitoxin preparation;
- a new standard definition of confirmed diphtheria cases, as recommended by the WHO Meeting on the Control of Diphtheria in Europe, Geneva, 17-18 April 1990, is adopted by all Member States;
- a network of national reference laboratories is established in Europe to improve the exchange of information on diphtheria.

Neonatal tetanus (call for better surveillance)

The WHA has advanced the target for elimination of neonatal tetanus (NNT) to the year 1995. The situation in the Region was reviewed. The 1990 target for NNT elimination set by the national Managers will not be achieved, primarily due to cases of NNT occurring in a few countries. It is realized that intensive planning (including development of an NNT elimination plan of action and a review of the tetanus toxoid vaccine currently in use) and implementation of the strategies of the global plan of action, adapted to the situation of

each country, will be required to achieve NNT elimination. Every country should have an active surveillance system for NNT.

Haemophilus influenzae type b infection

Data presented on the implementation of *Haemophilus influenzae* type b (Hib) vaccination in Finland (and recently in Iceland) showed clear evidence that conjugated Hib vaccines are a suitable and safe preparation for the prevention of invasive Hib infection.

The recommendation of the EAG was endorsed and countries were encouraged to assess the epidemiology of *Haemophilus influenzae* type b infections in order to consider the introduction of the vaccine. It is felt that Hib vaccination can be successfully integrated into national immunization programmes.

Influenza (prevention of excessive mortality)

Programme Managers were informed of the impact of recent influenza epidemics on general morbidity and mortality, especially in the elderly. They recognized that influenza was an important health problem. Various influenza vaccines are available and used in most countries of the Region, often however with a low coverage in those subgroups of the population which are in most need of protection against influenza. WHO has recently started collaborative studies to validate vaccine efficacy in different population groups.

Meanwhile, it is recommended that Member States estimate the impact of influenza on their populations, to develop a solid basis for decision-making concerning the use of efficient influenza vaccines to prevent excessive mortality.

Cold chain (use of cold-chain monitors)

Positive proof of safe cold-chain and reliable stock management is a prerequisite for effective immunization programmes. Those countries which have not yet assessed the quality of their cold-chain and stock management should report progress at the next meeting of EPI national Programme Managers.

The use of cold-chain monitors and EPIC software provides an inexpensive and effective means of assessing the quality of the cold chain.

If a country cannot positively demonstrate that the postal service is able to ensure safe conditions for vaccines, the postal service should not be used for vaccine distribution.

Monitoring of the cold chain should be continued in a way that ensures its quality is maintained. Absence of disease alone is not an indication of cold-chain quality.

General recommendations

1. To facilitate coordination of work at regional level, each country is requested to draw up a document entitled "National Programme on Immunization" (for an example of the contents, see Annex 2).
2. All medical personnel responsible for vaccinations, policy-makers and especially the general public should be made aware of the importance of following the recommended vaccination schedules to reduce the incidence of diseases and avoid postvaccine complications.
3. Surveillance systems for side-effects and adverse events following immunization should be implemented in every country in order to keep health workers and the general public fully informed of the benefits and low risks of vaccination.

4. It is recommended that studies on immunogenicity be performed to assess the quality of vaccines used, and that serosurveillance be implemented to determine immunity in different age groups.

Annex 1

WORKING PAPERS AND BACKGROUND DOCUMENTATION^a

- ICP/EPI 023/6 Vaccination against measles, mumps and rubella in Sweden aiming at elimination of all three diseases, by Margareta Böttiger and Brith Christensen
- ICP/EPI 023/7 Social, economic and psychological impacts of childhood diseases, by Professor B. Velimirovic
- ICP/EPI 023/8 The role of health education in preventing EPI diseases, by Mr J. Huntington
- ICP/EPI 023/9 Improving immunization coverage - the only way to achieve EURO Target 5 HFA 2000, by Dr I. Masar
- ICP/EPI 023/10 Immunization coverage of Italian children, by Dr Donato Greco
- ICP/EPI 023/11 Expanded Programme on Immunization in the European Region. Progress report, by Dr B. Bytchenko and Dr R.P. Prokhorskas
- ICP/EPI 023/12 Polio vaccine coverage as a performance indicator, by Dr D. Salisbury
- ICP/EPI 023/13 Elimination of the congenital rubella syndrome, by Dr D. Salisbury
- ICP/EPI 023/14 Progress of WHO Expanded Programme on Immunization, by Dr R. Kim-Farley
- ICP/EPI 023/15 Current global situation on poliomyelitis, by Dr N. Ward

^a Copies available from the Communicable Diseases unit, Regional Office for Europe, World Health Organization, 8 Scherfigsvej, DK-2100 Copenhagen O, Denmark

- ICP/EPI 023/16 The results of realization of poliomyelitis eradication programme in the USSR, by Dr M. Narkevich
- ICP/EPI 023/17 Evaluation report of poliomyelitis eradication programme in Turkey, by Dr N. Emiroglu and Dr M.A. Biliker
- ICP/EPI 023/18 Surveillance of poliomyelitis in the phase of elimination in France, by Dr Colette Roure
- ICP/EPI 023/19 Maintaining immunization coverage against polio in the Netherlands, by Dr H.P. Verbrugge
- ICP/EPI 023/22 Sentinel surveillance and experience with MMR campaign in Switzerland, by Dr N. Billo
- ICP/EPI 023/23 European experience in elimination of diphtheria, by Dr I. Masar
- ICP/EPI 023/24 Strategies for elimination of neonatal tetanus, by Dr R. Kim-Farley
- ICP/EPI 023/25 Whole cell pertussis vaccines in national immunization programmes, by Dr Raisa Chuprinina
- ICP/EPI 023/26 Control of *Haemophilus influenzae type b* and *Neisseria meningitidis* A&C infections in Nordic countries, by Dr J. Eskola
- ICP/EPI 023/27 Adult immunization: an overview, by Dr H. Zoffmann
- ICP/EPI 023/28 Immunization of tourists and other travellers, by Dr W. Passini
- ICP/EPI 023/29 Influenza: activity in the 1989/90 epidemiological season and WHO control policy, by Dr Y. Ghendon
- ICP/EPI 023/30 European cold-chain studies, by Mr A. Battersby
- ICP/EPI 023/31 Prospective vaccines for national immunization programmes, by Dr D.I. Magrath

- ICP/EPI 023/32 Training in immunization and EPI technical briefings, by Dr A.I. Savinykh
- ICP/EPI 023/33 Management information systems: progress in the development of user-friendly software, Dr R. Kim-Farley
- ICP/EPI 023/34 Monitoring of side effects and adverse events following immunization, by Dr S. Dittmann
- ICP/EPI 023/35 Meeting on the Control of Diphtheria in Europe, Geneva, 17-19 April 1990, report by Dr Waltraud Thilo
- ICP/EPI 001/m01 Immunization policies in Europe (Summary report), Karlovy Vary, 10-12 December 1984
- ICP/EPI 018 Expanded Programme on Immunization, report of the first meeting, Budapest, 26-28 April 1988
- ICP/EPI 020 European Advisory Group on the Expanded Programme on Immunization, report on the third meeting, Rome, 24-27 January 1989
- ICP/EPI 021 Expanded Programme on Immunization, report of the second meeting, Istanbul, 23-26 May, 1989
- ICP/EPI 022 European Advisory Group on the Expanded Programme on Immunization, report of the fourth meeting, Paris, 13-15 February 1990
- ICP/EPI 024 Meeting on the Control of Diphtheria in Europe, report, Geneva, 17-19 April 1990
- EUR/RC35/8 Expanded Programme on Immunization and related activities in Europe - progress report
- EUR/RC39/9 + Conf.Doc./7 Rev.1 Eradication of poliomyelitis
- EUR/RC39/R5 Eradication of poliomyelitis - resolution
- EPI/GAG/89 Global Advisory Group on Expanded Programme on Immunization, report of the 12th meeting, Tokyo, 16-20 October 1989
- Diphtheria activities at the Cantacuzino Institute, Romania, 1.1.89-31.12.89

Annex 2

CONTENTS OF A NATIONAL PROGRAMME ON IMMUNIZATION (NIP)

1. Introduction
2. Diseases (incidence, geopolitical distribution, trend, population affected)
3. Vaccines used in NIP
 - BCG
 - DTP
 - OPV
 - TOVP
 - DTP + polio
 - measles (mono or combined)
 - mumps (mono or combined)
 - rubella (mono or combined)
 - MMR
 - hepatitis B
 - *Haemophilus influenzae* b (Hib)
 - meningococcal vaccines (A + C)
 - other prospective vaccines
4. Calendar of immunization (schedule)
5. Priority areas of NIP (Fig. 1)
6. Control strategies
 - child immunization
 - adult immunization

- containment of outbreaks
- immunization of tourists and other travellers

7. Contraindications

8. Immunization policies

- WHO targets (HFA 2000)
- National targets and objectives

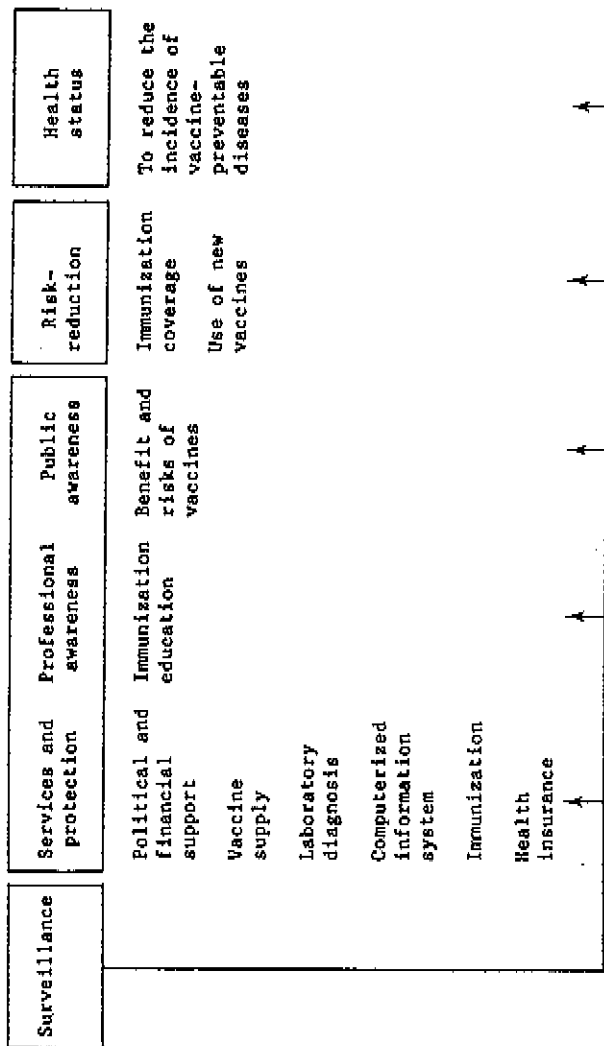
9. Programme structure and development

- cost-benefit analysis
- human resources for health
- resources (total: national
international
private)
- delivery system
- private-sector involvement
- cold chain
- information system
- planning (plan of action)
- training
- implementation
- programme promotion (communication)
- social mobilization (professional and
public awareness)
- surveillance (see Fig. 1)
- laboratory support: vaccine quality
control
surveys
serology
bacteriology
virology
- evaluation: incidence of target diseases
immunization
coverage

10. Research and development

- new and improved vaccines
- vaccine quality control methods (references)
- rational calendar for immunization
- methods of surveillance
- clinical and laboratory diagnosis of diseases
- measurement of immunization coverage
- evaluation of cold-chain system
- contraindications
- postvaccinal complication (adverse events)
- protective level and stability of immunity
- cost-benefit analysis
- methods of programme promotion

Fig. 1. Priority areas in the NIP



To reduce the incidence of vaccine-preventable diseases

Immunization coverage
Use of new vaccines

Annex 3

PARTICIPANTS

Temporary Advisers

- Dr Michael Alkan
Head, Infectious Diseases Institute, Soroka Medical
Centre and Ben Gurion University, Beer-Sheva, Israel
- Dr Roxana Apetrei
Département de la médecine préventive, Ministère de
la Santé de la République socialiste de Roumanie,
Bucharest, Romania
- Dr Donatella Ballada
Chief, Infectious Diseases Department, Ministry of
Health, Rome, Italy
- Dr Luc Berhgmans
Médecin-inspecteur, Service de l'hygiène et de la
prévention, Inspection générale de la médecine
préventive, Brussels, Belgium
- Dr Nils Billo
Section de l'épidémiologie médicale, Office fédéral
de la santé publique, Berne, Switzerland (Rapporteur)
- Professor Margareta Böttiger
National Epidemiologist, National Bacteriological
Laboratory, Stockholm, Sweden
- Dr John M. Cachia
Professional Medical Officer II, Community Care
Services, Valletta, Malta

- Dr Rosa Cano
Chief of Surveillance of Communicable Diseases,
Centro Nacional de Epidemiología, Madrid, Spain
- Dr Maria Celsa Ferreira Afonso de Carvalho
Chief, Division of Maternal and Child Health,
Directorate-General for Primary Health Care, Lisbon,
Portugal
- Dr R. Chuprinina
Tarasevic Institute, Moscow, USSR
- Dr Andrei Combiescu
Director, Cantacuzino Institute, Bucharest, Romania
- Professor Sieghart Dittmann
Director, Zentralinstitut für Hygiene, Mikrobiologie
und Epidemiologie der DDR, Berlin, Germany
- Dr Nedret Emiroglu
Communicable Diseases Department, Primary Health
Care, Ministry of Health, Ankara, Turkey
- Dr Juhani Eskola
Head, Infectious Disease Unit, National Public
Health Institute, Helsinki, Finland
- Dr Gérard J.J. Felten
Medecin-inspecteur, Chef de service, Service de
l'hygiène et de la prévention, Inspection générale
de la médecine préventive, Brussels, Belgium
- Dr Ewa Maria Gonera
National Institute of Hygiene, Warsaw, Poland
- Ministerialrat Dr Heinz Gran
Bayerisches Staatsministerium des Inneren,
Gesundheitsabteilung, Munich, Germany

- Dr Michele Grandolfo
Epidemiology and Statistics Laboratory, National
Institute of Health, Rome Nomentano, Italy
- Dr Donato Greco
Director, WHO collaborating centre for health and
disease surveillance, Istituto Superiore di Sanità,
Rome Nomentano, Italy
- Dr Johannes F. Hallauer
Referatsleiter Hygiene und Seuchenhygiene,
Bundesministerium für Jugend, Familie, Frauen und
Gesundheit, Bonn, Germany
- Dr John A. Huntington
Consultant (Immunization), Health Education
Authority, London, United Kingdom
- Mrs Jolanda Koci
Microbiologist, Head of Production Department,
Institute of Hygiene, Tirana, Albania
- Professor J. Kostrzewski
National Institute of Health, Warsaw, Poland
- Dr Alenka Kraigher
Director, Institute of Hygiene, Epidemiology and
Laboratory Diagnosis, Ljubljana, Yugoslavia
- Dr Sigrid Ley
Deutsches Grünes Kreuz, Marburg, Germany
- Dr Ivan Masar
Director, Public Health Service, Ministry of Health
and Social Affairs of the Slovak Republic,
Bratislava, Czechoslovakia (Chairman)
- Dr Wolfgang Meinrenken
Kinderarzt, Bremen, Germany

- Dr Olafur Olafsson
Director General of Health, Reykjavik, Iceland
- Dr T. O'Dwyer
Deputy Chief Medical Officer, Department of Health,
Dublin, Ireland
- Dr T. Papadimitriou
Bacteriologist, Public Health Division, Ministry of
Health, Welfare and Social Security, Athens, Greece
- Dr Walter Pasini
Head, WHO collaborating centre for tourist health
and tourist medicine, Rimini, Italy
- Dr Stanislava Petrova Popova
Senior Officer, Ministry of Public Health and Social
Welfare, Sofia, Bulgaria
- Dr C.A. Postema
Medical Officer of Health for Infectious Diseases,
Department of the Chief Medical Officer of Health,
Rijswijk, Netherlands
- Dr Colette Rouze
Conseiller technique, Bureau des maladies
transmissibles IC, Ministère de la solidarité, de la
santé et de la protection sociale, Paris, France
- Dr Hans C. Rümke
Head, Medical Centre Immunizations, National
Institute of Public Health and Environmental
Protection, Bilthoven, Netherlands
- Dr M. Akif Saatcioglu
Deputy General Director, Primary Health Care,
Ministry of Health, Ankara, Turkey

- Dr David M. Salisbury
Senior Medical Officer, Department of Health,
London, United Kingdom
- Dr W. Schmidt
Berufsverband des Kinderärzte Deutschlands e.V.,
Cologne, Germany
- Dr Salvatore Squarcione
Chief Medical Officer, Ministry of Health, Rome,
Italy (Vice-Chairman)
- Dr André Stroobant
Chef de travaux, Institut d'hygiene et
d'épidemiologie, Brussels, Belgium
- Dr B. Swennen
Assistante, Université de Bruxelles en charge du
programme ROR, Inspection générale de la médecine
préventive, Brussels, Belgium
- Professor Waltraud Thilo
Zentralinstitut für Hygiene, Mikrobiologie und
Epidemiologie der DDR (ZIHME), Berlin, Germany
- Dr O.A. Thores
Scottish Home and Health Department, Edinburgh,
United Kingdom
- Dr Adam Vass
Head of Department for Hygiene and Epidemiology,
Ministry of Social Affairs and Health of the
Hungarian Republic, Budapest, Hungary
- Professor B. Velimirovic
Director, Institute of Social Medicine, University
of Graz, Austria

Dr Gustav Walter
Chief, Epidemiology Department, Ministry of Health
and Social Affairs of the Czech Republic, Prague,
Czechoslovakia

Dr Henrik Zoffmann
Department of Epidemiology, State Serum Institute,
Copenhagen, Denmark

Dr Patrick Zuber
Office fédéral de la santé publique, Berne,
Switzerland

Representatives of Other Organizations

International Children's Centre

Dr Daniel Levy-Bruhl
Service des maladies transmissibles et vaccinations,
Paris, France

Observers

Dr Angelo Laniece
Chief Medical Officer, Valle d'Aosta Autonomous
Region, Aosta, Italy

Dr Corrado Lupo
Director, Public Relations, SmithKline & French
S.p.A., Milan, Italy

Dr Marco Oppizio
Project Manager, Anti/HBV vaccine project,
SmithKline & French S.p.A., Milan, Italy

- Dr John Roberts
Institut Mérieux, Maidenhead, United Kingdom
- Mr Augusto Rollandin
President, Valle d'Aosta Autonomous Region, Aosta,
Italy
- Dr Dirk E. Teuwen
Director, Medical Affairs, SmithKline Biologicals,
Rixensart, Belgium
- Dr Miroslava Vasinova
Representative of Aosta Valley Region, Aosta, Italy
- Dr Giuliano da Villa
Counsellor of the Minister of Health on Problems
regarding Health and Preventive Medicine, Ministry
of Health, Rome, Italy

World Health Organization

Regional Office for Europe

- Dr Boris D. Bytchenko
Regional Officer, Communicable Diseases unit
(Secretary)
- Mrs Loreta Colatosti
Programme Assistant, Communicable Diseases unit
- Mrs Elena Nivaro
Secretary, Communicable Diseases unit
- Dr George Oblapenko
Medical Officer, Poliomyelitis Programme
- Dr Remy P. Prokhorskas
Statistician

Mrs Liz Shrapnel
Secretary, Poliomyelitis Programme

Dr Mark S. Tsechkovski
Director, Systems of Health Care

Headquarters

Mr Antony Battersby
Consultant, EPI

Dr Y. Ghendon
Medical Officer, CDS/MIM

Dr M. Kane
Medical Officer, CDS/MIM

Dr Robert Kim-Farley
Director, EPI

Dr D.I. Magrath
Chief Medical Officer, DMP/BLG

Dr Alexandre I. Savinykh
Medical Officer, EPI

Dr Nick Ward
Medical Officer, EPI