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**International Coordinating Group (ICG) on Vaccine Provision  
for Epidemic Meningitis Control. Summary Report of the  
Second Meeting. Geneva, Switzerland, 23-24 June 1997**

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**Annexes:**

1. Agenda
2. List of Participants
3. Response to epidemic meningitis in Africa, 1997  
Report by WHO to the International Coordinating Group

## 1. Introduction

The second meeting of the International Coordinating Group (ICG) was held at WHO Headquarters in Geneva on 23 and 24 June 1997. The meeting was chaired by Dr M. H. Wahdan, Assistant Regional Director, EMRO. Dr N. Begg, EMC, served as rapporteur. The agenda and participants are shown in the annexes.

Dr Wahdan welcomed new participants, especially the representatives from countries of the meningitis belt and briefly described the background to the establishment of the ICG. Dr D. L. Heymann, Director EMC, emphasized that the ICG was set up to facilitate a working partnership between four lead agencies (International Federation of the Red Cross and Red Crescent Societies (IFRC), Médecins sans Frontières (MSF), United Nations Children's Fund (UNICEF), World Health Organization (WHO), WHO Collaborating Centres and other technical partners, development agencies, representatives of industry and country representatives. Mr P. Evans representing Dr J.-W. Lee, Director GPV, also welcomed the participants.

Details of the response of the ICG to epidemic meningitis in Africa in 1997 are contained in an interim report prepared by WHO (Annex 3). This report was subsequently updated and finalized as a joint report by IFRC, MSF, UNICEF and WHO.

## 2. Reports from countries in the meningitis belt and WHO Regional Offices

The level of meningitis reported in the 1997 epidemic season was considerably lower than in 1996. As at 1 June 1997, 60,010 cases had been reported to WHO from African countries, compared to 153,655 cases in 1996. Togo was the first country to declare an epidemic in 1997, followed by Ghana, Burkina Faso, Mali and the Republic of the Gambia. No cases were officially reported from Nigeria, although unofficial sources indicate that the level of disease was very low in comparison to 1996. Country-specific details are shown in Table 1 of Annex 3.

In Africa, epidemics were detected more rapidly and were of shorter duration in 1997 compared to 1996. In addition, case fatality rates were lower, reflecting improved case management as epidemics progressed. In the Eastern Mediterranean Region, there was no abnormal occurrence of meningitis during 1997. An epidemic had been anticipated in Sudan, although none occurred.

During the discussion, three important issues emerged. Firstly, many countries expressed concern over the use of the WHO recommended threshold of 15 cases per 100,000 population in two consecutive weeks as a trigger to initiate vaccination programmes. By the time this threshold has been crossed, the epidemic is well established, and control measures can only have a limited impact. The threshold had been established originally using data from one country (Burkina Faso) and may not be applicable to other countries. Secondly, there is a need to define a "population at risk" when conducting vaccination campaigns. Finally, would preventive immunization in high risk areas be a more effective strategy than the current one? The ICG agreed to request WHO to hold a technical consultation on these issues.

In general, however, countries were positive about the conduct of campaigns in 1997. Communications with WHO were greatly improved, delays in ordering and

shipping vaccine had been reduced and there was now a contingency stock of vaccine in most countries. Data collection had improved at the health facility level, enabling more rapid detection and reporting of epidemics. Some countries have now established a budget for epidemic control.

### **3. ICG activities in 1997**

An executive Subgroup was established to implement the criteria for vaccine distribution that had been agreed at the first ICG meeting in January 1997. This group consulted frequently (usually by e-mail) throughout the epidemic season. A joint appeal was launched between the four lead agencies of the ICG, which has succeeded in raising over US\$4 million. Fourteen requests for vaccine were received from seven countries and vaccine was provided to five countries (4 million doses). Autodestruct syringes and antibiotics were also provided.

Half the requests for vaccine were processed within two days. The most common cause of delay was lack of epidemiological data provided by the requesting country. There are currently 7 million doses held in stock which will be available for the 1998 season and there is a balance of approximately US\$600,000 in the emergency fund.

The meeting was strongly supportive of the role of the ICG. It was agreed that the following achievements had resulted from this joint effort:

- C all urgent vaccine needs were met
- C rational use was made of available vaccine
- C the best price for the vaccine was obtained
- C vaccine wastage was avoided
- C safe injections were assured
- C better planning at country level was carried out
- C a preparedness fund for 1998 was set up
- C better surveillance and preparation for epidemics in countries at risk were initiated

There is, however, scope for improvement. At the country level, not all agencies are aware of the existence of ICG and this has led to some confusion. It is the responsibility of partner agencies to ensure that the role of ICG is widely disseminated and promoted. The criteria for distribution of vaccine were restrictive and rigidly applied because of the expected shortage of vaccine. There may be scope for review and possibly relaxation of these criteria in 1998. Delays could be further reduced by improved local coordination. There is a need to monitor procurement outside the ICG and for countries to report on implementation of vaccine plans.

### **4. Projected Needs for 1998**

#### **4.1 African Region**

The population at risk in the meningitis belt is approximately 92 million. The worst scenario is that all countries would experience an epidemic in 1998. In this scenario, 46.7 million doses would be needed, with a 10% contingency stock (4.67 million doses). The true need will, however, be well below this figure, as it is unlikely that all countries will experience an epidemic and countries are unable to deliver all the required vaccine

during an epidemic. For example, in 1997, 20 million doses were needed, although only 10 million were actually distributed.

There is currently an estimated stock of 7 million doses held in four countries: Mali, Niger, Nigeria and Togo. Additional vaccine would be required for other countries if they experienced an epidemic.

The ICG requested that WHO undertakes more detailed forecasting of vaccine needs for 1998 before the next meeting.

#### **4.2 Eastern Mediterranean Region**

Predictions for the Eastern Mediterranean Region are more accurate, as a number of countries (Egypt, Islamic Republic of Iran, Saudi Arabia, Sudan) now undertake routine preventive vaccination. Preventive vaccination is being offered to children in nurseries and at school entry, military recruits, refugees, prisoners and pilgrims. The projected need for 1998 is 13 million doses, of which 10 million are for preventive vaccination and 3 million are for emergency response.

### **5. Reports from Vaccine Manufacturers**

Since the beginning of 1997, Pasteur Merieux Connaught has produced 15 million doses and sold 16.8 million doses, of which 3.9 million were provided to WHO, 2.5 million to UNICEF and 1.8 million to NGOs. The remainder was sold directly to countries or to other customers. There is currently a stock of 15-16 million doses. SmithKline Beecham has supplied 3.8 million doses in Africa in 1997, of which 1.9 million were provided to WHO and UNICEF. The Institute of Immunology in Zagreb has sold 170,000 doses (to Pakistan and Ghana).

Meningococcal vaccine has a shelf life of 3-4 years (depending on the manufacturer). Bulk polysaccharide and unlabelled vaccine vials have an unlimited shelf life. The reaction time to provide packed labelled vaccine is 2-3 months from bulk polysaccharide and 3-6 weeks from unlabelled vials.

SmithKline Beecham indicated that monovalent group A polysaccharide vaccine is available and registered and that sufficient quantities could be produced if adequately forecast; the cost would be similar to that of the current A/C product.

### **6. Reports from Autodestruct Syringe Manufacturers**

Becton Dickinson has supplied UNICEF since 1992 and considers its production capacity to be more than adequate to meet the current worldwide demand for routine and emergency immunization campaigns. Capacity expansion capability also exists. Bader and Partner also supply UNICEF and can currently produce 2.5 million syringes a month (although this could be increased). They have a stock of 4 million syringes. UNICEF do not sell syringes through UNICEF. They have a stock of 10 million syringes.

### **7. Funding Arrangements**

Through the establishment of an emergency fund in late 1996, it was possible to purchase 10 million doses of vaccine for the 1997 epidemic season. The requests received from the different African countries came with purchase authorizations, i.e. countries provided the money for their vaccine requests. The situation with injection equipment was different. Countries did not make provision for autodestruct syringes, needles and disposal boxes.

There is now a need to secure funding for a replenishable emergency meningitis vaccine stock. This system would have several advantages:

- C immediate availability of the vaccine and injection materials from stock
- C flexibility for the suppliers in accepting emergency orders
- C flexibility for the countries in need, since funds are not always immediately available
- C economy for the users of the ICG stock: lowest possible price for both vaccines and injection materials
- C safety of the stock kept on the manufacturer's premises at no extra cost

The stock would be available for all ICG members through WHO, independently of their method of compensation, be it in cash, or in kind. Once a request received a positive decision of ICG, WHO would place the order in the name of the agency originating the request. Payment for the vaccine could be arranged either through submission of a bill or by replenishing the ICG stock with an identical amount of vaccine taken/received through WHO.

## **8. Priorities for operational research**

A meeting was held in Annecy, France, in February 1997 to discuss and prioritize proposals for operational research in control of epidemic meningitis. Three groupings of proposals were considered:

- I. Development of regional surveillance database
  - a. analysis of threshold models to predict outbreaks
  - b. provide data for prevention effectiveness analysis
  - c. evaluate if data from one season predicts epidemics during the next season
- II. Field evaluations during meningitis epidemics
  - a. evaluation of risk factors for mortality in patients not seen in health centres compared with patients seen inside health centres
  - b. operational costs of vaccination compared to treatment
  - c. evaluation of impact of mass vaccination on EPI programmes
  - d. evaluation of safety of mass immunization programmes
  - e. assessment of the relationship between knowledge of the threshold and course of the epidemic
  - f. assessment of logistics necessary for vaccination
  - g. evaluation of recent meningitis outbreaks (e.g. Togo)

### III. Vaccine studies

- a. “stepped-wedge” implementation of conjugate vaccine in one or more countries either in children alone or in children with mass vaccination of the entire population
- b. evaluation of ongoing routine vaccination with polysaccharide vaccine

Countries that have conducted immunization campaigns should be encouraged to undertake field evaluations of vaccine efficacy. WHO has convened a working group to develop a proposal for a field study of a monovalent group A polysaccharide vaccine in Africa.

## 9. Review of the role of ICG and its executive subgroup

The current terms of reference of the ICG are to:

- C review the meningitis situation
- C review new information on cost-effectiveness of meningitis vaccine strategies and vaccination policies
- C update country estimates of vaccine need for emergency stock and project global aggregate and timing of demand
- C review/determine vaccine and autodestruct syringe production capacity
- C determine the amount of vaccine to be kept for emergency preparedness stock
- C jointly coordinate the procurement and distribution of vaccine and autodestruct syringes
- C establish/regularly review criteria for vaccine distribution
- C establish an executive sub-group which will consider vaccine distribution, taking into account country vaccine need
- C review national reports on vaccine use
- C identify short, medium and long-term financial strategies to provide the availability of sufficient vaccine
- C provide advocacy with international community and development agencies

After discussion, it was agreed that most of the activities of ICG are still valid, although some functions should change. There is no longer a need to assess vaccine production capacity, although there is a continued monitoring role. Drugs and injection equipment should be specified in the terms of reference. The role in assessing and responding to vaccine requests should be redefined. Vaccine supplies are more plentiful now than in 1996, thus it should be possible to redefine the criteria for vaccine distribution. Finally, it is important to ensure that the ICG fulfills an advocacy role at the country level as well as at global level.

For the future, it may be appropriate for the ICG to have a remit which extends outside the meningitis belt, as well as to other vaccines used for epidemic control such as yellow fever.

The role of the executive sub-group was also reviewed. In general, it had achieved most of its objectives and should continue. Some of its activities could be improved, in particular the monitoring of vaccine distribution outside the ICG.

## 10. Conclusions and recommendations

The meeting endorsed the international initiative to secure supplies of meningitis vaccine in 1997 and considered that the ICG had been successful in meeting its objectives.

The supply situation for meningitis vaccine has greatly improved compared to 1996. This is due to the activities of the ICG in raising funds and coordinating vaccine requests. In addition, the epidemic in 1997 was smaller than anticipated.

The following recommendations were made:

- C The ICG and its executive group continue to perform a valuable, valid function and should be maintained, although the terms of reference ICG need to be modified to reflect a more flexible approach.
- C There is a need to promote the role of the ICG more widely, particularly at the country level. The four lead agencies of ICG are particularly well placed to undertake this advocacy role through their national representatives.
- C The WHO strategy based on the currently recommended threshold, is too rigid. The definition of an epidemic should be reviewed by a technical group.
- C The criteria for the release of vaccine by the ICG in the 1998 season should be reviewed in the light of the increased availability of vaccine.
- C WHO should consider options for preventive vaccination strategies.
- C WHO should undertake more detailed forecasting of vaccine needs for 1998, in advance of the next ICG meeting.
- C Countries should be requested to provide detailed reports on vaccination activities at the end of the meningitis season.
- C Surveillance needs to be further strengthened to ensure more rapid detection of epidemics in 1998.
- C The Secretariat is requested to prepare a paper addressing vaccine supply problems in other epidemic diseases such as yellow fever.
- C The next meeting of the ICG will be held in Geneva on 8-9 December 1997.

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