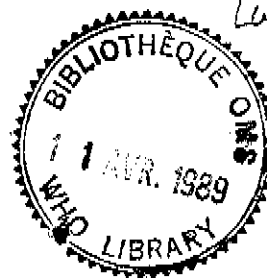




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REPORT ON

WHO WORKSHOP ON EMERGENCY PREPAREDNESS, RESPONSE AND PREVENTION
 WITH EMPHASIS ON CONTROL OF VIRAL HAEMORRHAGIC FEVER
 OUTBREAKS IN WEST AFRICA

Bamako (Mali), 4-9 July 1988

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INTRODUCTION

A WHO Workshop on Emergency Preparedness, Response and Prevention with Emphasis on Control of Viral Haemorrhagic Fever Outbreaks in West Africa was held in Bamako (Mali) from 4 to 9 July 1988. The Workshop was attended by representatives of 14 Member States of Sub-Region I of the African Region, by 10 temporary advisers, and by representatives of UNICEF, UNDP, FAO, 10 nongovernmental organizations and 2 bilateral cooperation agencies (Annex 1).

Mr Namory Traoré, Director of the Office of the Minister of Health of Mali, welcomed the participants on behalf of the Government of Mali. Dr D. Barakamfitye, Director of Subregional Office I, opened the meeting on behalf of the Regional Director. He outlined the Workshop's objectives, and thanked the Italian and French cooperation agencies for their contributions.

Dr J. Brière de l'Isle, Director of Health of Mali, was appointed chairman, Dr A. Nasidi and Dr J.P. Digoutte were elected vice-chairmen, and Dr K. Siamevi and Dr L. Carrino were appointed rapporteurs.

The subject of the Workshop was the strengthening or establishment of emergency preparedness, response and prevention in West Africa, for:

- all disasters liable to occur in the area (chief among which are drought and its consequence, famine), and
- in particular, outbreaks of viral haemorrhagic fevers, one of the major epidemic risks in this part of Africa, as demonstrated by the recent epidemics of yellow fever in Nigeria (1986-87), and Mali (1987) and by the outbreak of Rift Valley fever in Mauritania (1987).

Two sets of objectives had been defined in advance. One set concerned disasters in general, the other concerned outbreaks of viral haemorrhagic fevers (Annex 2). The Workshop was held in French and English, with simultaneous interpretation. The Workshop's programme consisted of prepared presentations followed by discussions in plenary sessions, after which working groups were set up to solve specific problems.

Working documents were distributed at the start of and during the Workshop. A list of documents is contained in Annex 3.

The reports of the Working Groups are reproduced in Annex 4 (Session 1, Groups 1, 2, 3 and 4), Annex 5 (Session 2, Groups 1 and 2) and Annex 6 (Session 3, Groups 1 and 2).

A motion objecting to the dumping of toxic wastes in Africa was proposed by the representatives of Nigeria and adopted by the majority of the representatives of Member States participating in the Workshop (Annex 7).

RECOMMENDATIONS

The final recommendations of the Workshop comprise:

1. General recommendations.
2. Recommendations concerning emergency preparedness and response at the national, intermediate and local levels.

3. Recommendations concerning preparedness and response in respect of outbreaks of haemorrhagic fevers, and the organization of preventive measures.

List of recommendations

1. General recommendations

- 1.1 Promote preparedness for emergency situations in various Member countries through planning at national, intermediate and local levels, based on an adequate network of information and early warning.
- 1.2 Promote cooperation and coordination between international agencies and countries in implementing joint programmes for control of epidemics.
- 1.3 Take necessary measures to ensure that international assistance is strictly in accordance with the requirements as assessed by the national committee for emergency situations with the assistance of WHO and other United Nations agencies, in order to avoid possible duplication and inadequacy of some external assistance.
- 1.4 Strengthen the links between disaster control plans and the national development programme.
- 1.5 Organize the basic training, further training and supervision of staff on various aspects of preparedness and management of emergency situations.
- 1.6 Promote WHO assistance to countries in preparedness and management of emergency situations and more particularly in planning, staff training and supervision, coordination of external assistance, operation support, technical assistance, exchange of information and mobilization of external funds, in collaboration with other international agencies.
- 1.7 Promote cooperation between countries in training and exchange of information for the control of emergency situations.
- 1.8 Ensure greater involvement in the control of emergency situations by universities and by African international institutions such as the Organization of African Unity (OAU), the Economic Community of West African States (ECOWAS), the Organization for Coordination and Cooperation in the Control of Major Endemic Diseases (OCCGE), the West African Health Community (WAHC), the Inter-State Committee on Drought control in the Sahel (CILSS) and the Accord National de Défense (ANAD).
- 1.9 Facilitate the follow-up of this workshop by organizing national seminars before the next regional workshop. The next workshop could be held in Nigeria in 1989. This proposal is based on the recent experience of that country with epidemics of viral haemorrhagic fevers.

2. Recommendations concerning emergency preparedness and response at national, intermediate and local levels

- 2.1 Surveillance and information

- 2.1.1 Prepare maps of areas at risk of disaster, highlighting areas at high risk.

2.1.2 Design specific surveillance strategies including clear instructions appropriate to local conditions.

2.2 Organization

2.2.1 Establish an inventory of resources available at national and regional levels in terms of specialized institutions, experts, facilities for assessment and rapid intervention.

2.2.2 Encourage and facilitate pilot experiments (case studies) of local planning (at district level) in relation to various emergency situations corresponding to the risks in the area. These experiments will aim at testing the operation of disaster control system with special reference to connections between local, intermediate and national levels. WHO would support these studies, their evaluation and dissemination of results.

2.2.3 Set up a standing multidisciplinary and intersectorial national committee for preparedness and management of emergency situations based on the network of existing political and administrative agencies at intermediate and local levels. Allocate funds for preparedness and response activities to be carried out by the committee.

2.3 Action plan

2.3.1 Inform and educate the population about disaster risks, rapid intervention methods, early warning signs, in order to promote the involvement of the entire community in emergency preparedness and response.

2.3.2 Promote training for the staff of health services and other technical services concerned by organizing seminars at national and local levels and drafting clear instructions that may serve as a basis for an operational manual and other training materials.

2.3.3 Prepare an action plan that will contain specific actions for each emergency situation that is likely to occur.

2.3.4 Establish a mechanism for the mobilization of local, regional, national and international resources.

2.3.5 Strengthen the communication networks to ensure an adequate warning and intervention system.

2.3.6 Set up a system for rapid assessment of damages and needs by national experts, based on information provided by community representatives, by local experts and by government and nongovernmental agencies.

2.3.7 Take steps to ensure that emergency relief reaches those people who really need it.

2.3.8 Ensure that the officially approved action plan is widely disseminated nationally and internationally.

2.4 International cooperation

- 2.4.1 Encourage countries to use the facilities available at the WHO regional center for emergency preparedness and response in Addis Ababa for staff training, emergency planning and disaster response.
- 2.4.2 Promote the coordination of bilateral, multilateral and nongovernmental aid, especially in mobilizing resources for emergency situations. Place this coordination under the responsibility of the national committee with support from WHO and other institutions concerned.
- 2.4.3 Encourage and strengthen the participation of the WHO Representative in the coordination of activities and exchange of information.

3. Recommendations concerning preparedness and response to viral haemorrhagic fever (VHF) outbreaks; prevention activities

3.1 Surveillance and information

- 3.1.1 Identify the risk factors for VHF outbreaks and prepare a regional map of areas at risk.
- 3.1.2 Formulate specific strategies of surveillance and early warning for viral haemorrhagic fevers at various levels: local, intermediate and national.

3.2 Organization

- 3.2.1 Facilitate biological diagnosis by the creation or strengthening of national and regional laboratories.
- 3.2.2 Ensure that appropriate equipment is available for collection and rapid transportation of blood and liver specimens for diagnostic purposes under optimally safe conditions, with the support of WHO.
- 3.2.3 Create a standing multisectoral committee for outbreak control which will be responsible to the Ministry of Health and will work in collaboration with the committee for emergency response.
- 3.2.4 Formulate or strengthen the VHF control programme within the department responsible for the control of communicable diseases of man and animals.
- 3.2.5 Reinforce the health manpower training programme in VHF control.
- 3.2.6 Prepare an inventory of regional and external resources in the form of specialized laboratories and institutions, expertise, and rapid assessment and intervention facilities. Plan and coordinate the mobilization of these resources.
- 3.2.7 Make provision for setting up emergency stocks and funds required for the initial assessment and response activities.

3.3 Action plan

- 3.3.1 Introduce yellow fever vaccination into EPI, giving priority to high-risk areas and using strategies appropriate to the magnitude of outbreak risk.

- 3.3.2 Promote vector control when it is justified, particularly local environmental health activities to eliminate breeding sites of A. aegypti.
- 3.3.3 Formulate an action plan to ensure effective response to various VHF outbreaks.
- 3.3.4 Develop a system for rapid assessment of outbreak risks and corresponding needs based on epidemiological, virological and entomological surveys; these same facilities should be used in the event of an epidemic in order to determine its extent.
- 3.4 International cooperation
 - 3.4.1 Promote the exchange of epidemiological information among countries of the subregion, especially in the form of an epidemiological bulletin, with support from existing institutions and WHO.
 - 3.4.2 Organize a regional epidemiological surveillance network which includes clinical, entomological, serological and virological surveys.
 - 3.4.3 Identify and strengthen the regional centres for VHF vaccine production and quality control in accordance with international quality standards.
 - 3.4.4 Inform countries of the various institutions in the subregion competent to help in VHF control.
 - 3.4.5 Make the political and administrative authorities of the subregion aware of the magnitude and severity of the VHF problem.
 - 3.4.6 Encourage WHO/AFRO to intensify research and initiatives for the control of Rift Valley Fever and other VHFs and to distribute documentation on what to do in the event of haemorrhagic fever to all countries of the subregion.
 - 3.4.7 Strengthen regional cooperation and coordination in the field of entomological and epidemiological research on viral haemorrhagic fevers and strengthen the vector control institutions existing in the Region.
 - 3.4.8 Encourage WHO to collaborate with Member countries in the training of entomologists, biologists and epidemiologists in the Region.

PROSPECTS FOR THE DEVELOPMENT OF EMERGENCY PREPAREDNESS AND RESPONSE ACTIVITIES IN AFRICA

The participants stressed the importance of following up the Workshop, which should be seen as the first step in the development of preparedness and response activities for emergencies in Africa, among which epidemics occupy an important place.

Operational national structures coordinated with international aid should be set up in 1988-89, and at the same time actions plans should be prepared and national staff at various levels should be trained. National and regional workshops should be organized during this period. WHO should contribute to these activities, particularly through the Regional Office for Africa, the recently created Addis Ababa Centre for Emergency Preparedness and

response, and the WHO Collaborating Centres. Case studies based on past experience of epidemics and other disasters could be used as back-up for workshops and training courses.

In order to improve emergency preparedness, it would be helpful to conduct an evaluation as soon as possible of the risks of natural disasters, including epidemics, that threaten the countries of Africa, according to geographical situation. WHO should prepare a practical guide on the detection, management and prevention of outbreaks of viral haemorrhagic fevers, liable to occur in Africa, for the use of health personnel at different levels.

With the view to prepare for the next Subregional WHO Workshop on Emergency Preparedness and Response, a questionnaire was distributed to the representatives of Member States. The results of this survey are given in Annex 8.

The representatives of Nigeria suggested that their country, recently affected by a number of yellow fever outbreaks, should host the next subregional meeting on preparedness and response for emergencies, including viral haemorrhagic fever outbreaks.

ANNEXE 1/ANNEX 1

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ANNEX 2

OBJECTIVES

1. General

- 1.1 To review emergency preparedness systems and response procedures within the context of emergencies in West Africa.
- 1.2 To identify needs for and ways of improving epidemiological surveillance, information and communication for emergency response.
- 1.3 To develop strategies for community involvement.
- 1.4 To initiate planning and programming for emergency preparedness/epidemic control of each of the participating Member States.
- 1.5 To improve coordination of epidemic information and communication between the governments, WHO and the international community.

2. Specific, regarding the control of VHF outbreaks

- 2.1 To define practical aspects (technical and managerial) in health care delivery systems in the detection and confirmation of VHF outbreaks (early warning systems).
- 2.2 To design specific plans of action and logistics for rapid containment of some VHF outbreaks, such as yellow and Rift Valley fevers.
- 2.3 To strengthen surveillance and to plan and implement long-term prevention procedures, such as routine yellow fever immunization integrated into EPI.
- 2.4 To exchange country experiences and plans for epidemic management.

ANNEX 3

WORKING DOCUMENTS

Presentations distributed

Dr O. Elo : Principles of emergency preparedness and response.

Dr L. Carrino : Preparation for emergency situations, primary health care and plans at local level.

Dr M. Key: Epidemics as examples of emergencies.

Dr A. Nasidi et al. : Yellow fever control: The Nigerian experience.

M. R. Cordellier: Assessment of the risks of yellow fever in West Africa: forecasting the likelihood of epidemics.

Dr J.-P. Digoutte: Assessment of the risk of Rift Valley fever and other viral haemorrhagic fevers in West Africa.

Dr J. M. Meegan: Current vaccine availability for yellow fever and Rift Valley fever.

Dr A. Strobant : Health planning and management for epidemic outbreaks. A case study for yellow fever epidemic in Mali, September-November 1987.

Dr S. Calvani : The role of African institutions for emergency preparedness and response. Principles and proposals for cooperation with W.H.O.

2. Background material distributed

Emergency health management after natural disaster. Pan American Health Organization: Scientific Publication No. 407 (1981).

Emergency vector control after natural disaster. Pan American Health Organization: Scientific Publication No. 419 (1982).

Epidemiologic Surveillance after Natural Disaster. Pan American Health Organization: Scientific Publication No. 420 (1982).

Environmental health management after natural disasters. Pan American Health Organization: Scientific Publication No. 430 (1982).

Health Services Organization in the Event of Disaster. Pan American Health Organization: Scientific Publication No. 443 (1983).

Arthropod-borne and rodent-borne viral diseases. WHO: Technical Report Series No. 719 (1985).

Rift Valley fever: an emerging human and animal problem. WHO: Offset Publication No. 63 (1982).

Prevention and control of yellow fever in Africa. OMS (1986).

Materials recommended

Emergency Preparedness and Response Programme. WHO (1988).

Technical guide for the diagnosis, prevention and control of Rift Valley fever in man and animals. WHO, Regional Office for the Eastern Mediterranean, Technical Publication No. 8 (1983).

Viral haemorrhagic fevers. WHO: Technical Report Series No. 721 (1985).

Public Health action in emergencies caused by epidemics. Prepared by P. Brès, WHO, Geneva (1986).

ANNEX 4

REPORTS OF WORKING GROUPS
SESSION 1, GROUPS 1 AND 2

Viral haemorrhagic fever outbreaks in West Africa:
early warning systems, and emergency assessment and action plans

1. Early warning systems

1.1. General principles of an efficient early warning system. Ideally, outbreaks would be detected by a system of routine epidemiological surveillance. Epidemiological data on morbidity and mortality would be routinely collected and transmitted from the peripheral health centres to a central centre for analysis. In some circumstances, active surveillance for suspected cases must augment routine surveillance.

1.2 Problems with early warning systems in West Africa. Working groups of conferees identified the below listed problems commonly found in many nations of the region:

1. Lack of functioning surveillance systems in some countries.
2. Poor management of existing surveillance systems including peripheral and community sources of information.
3. Lack of efficient communication/notification systems.
4. Poor clinical recognition/definition of disease at peripheral level.
5. Poor training in recognizing factors warning of an outbreak and suggesting emergency surveillance.
6. Lack of multi-disciplinary approach to surveillance.
7. Lack of efficient reporting back to the peripheral workers.

1.3 Suggested areas of concentration to improve the early warning systems in West Africa. The Working Groups thought the below listed areas were the most feasible areas in which to concentrate efforts.

1.3.1 National recognition of importance of epidemiological surveillance and consequent establishment of (or strengthening of existing) early warning system.

1.3.2 Better management of existing systems:

- (a) careful definition of personnel involved and their responsibilities;
- (b) improved two-way communication between the peripheral and more central levels;
- (c) better organization, use, and dissemination of currently available weekly reports;
- (d) use of computer analysis where data and equipment are available;
- (e) expanded use of telegraph, telephone and other means of communication;

- 1.3.3 Information and training of involved personnel.
- 1.3.4 Better awareness of potential threats and knowledge of environmental changes which might increase potential risk.
- 1.3.5 Establishment of a definition of haemorrhagic fever cases and training of personnel to recognize potential cases:
 - (a) Suspect case. Defined as acute fever with either jaundice or gastrointestinal haemorrhage. These cases are usually seen at the periphery of the health care system and might be recognized by a variety of paramedical or non-health care members of the community, including traditional healers.
 - (b) Probable case. Defined as a suspect case with at least two of the following signs: severe myalgias and headache, conjunctivitis, purpuric rash, shock, proteinuria, death, potential contact with epidemic situation. These cases will be diagnosed by health personnel at the district level.
 - (c) Confirmed case. Defined as a suspect or probable case with either: virus isolation from blood or liver; presence of specific IgM in titer high enough to indicate recent infection; or, in the case of yellow fever, characteristic histopathological lesions in a liver sample. These cases can only be diagnosed in appropriate laboratory facilities.
- 1.3.6 Expansion of communication between national agencies and establishment of multidisciplinary teams for surveillance of zoonotic diseases.
- 1.3.7 Increased communication on regional and international levels to exchange information when an outbreak appears imminent.

2. Rapid assessment and action plans

- 2.1 General principles of rapid assessment and action. At peripheral and district levels, attempts are made to confirm all preliminary clinical and epidemiological observations, obtain appropriate diagnostic samples, and transmit all samples and information to central levels. An advisory committee or epidemic team will expedite laboratory confirmation, analyze data to establish epidemiological facts, establish the etiological agent and means of transmission, and start emergency control plans. The action plan should include: studies to establish the extent of the outbreak and population/groups at risk; establishment of appropriate quarantine or source reduction plans; development of a plan for efficient allocation of resources; organization of patient management and treatment plans; education of health and non-health officials; and development of a plan to obtain needed vaccine, drugs and material.
- 2.2 Problems with rapid assessment and action plans in West Africa. Working groups of conferees identified the below listed problems commonly found in many nations in the region:

1. Lack of well organized emergency action plan.
2. Poor communication systems, and systems for transport of specimens.
3. Lack of training for appropriate sample collection.
4. Limited national laboratory facilities for confirmation of diagnosis.
5. Lack of knowledge of appropriate patient management.
6. Lack of efficient reporting back to the peripheral workers.
7. Poor management of existing assessment systems.

2.3 Suggested areas of concentration to improve the rapid assessment systems in West Africa. The Working Groups thought the below listed areas were the most feasible areas in which to concentrate efforts:

- 2.3.1 Increased national recognition of the importance of rapid assessment and emergency preparedness plans and consequent establishment of (or strengthening of existing) systems.
- 2.3.2 Better management of existing systems:
 - (a) careful definition of personnel involved and their responsibilities;
 - (b) incorporation of personnel with varied disciplines on the advisory team;
 - (c) improved two-way communication between the peripheral and more central levels;
 - (d) Expanded use of telegraph, telephone, and other means of communication.
- 2.3.3 Increased training of existing staff to include a better awareness of potential epidemic/epizootic diseases, and potential risk areas and populations.
- 2.3.4 Management of patients should include: avoidance of evacuation; treatment of patients in the outbreak area; isolation of the patient; careful maintenance of bed-netting procedures; limited contact with the patient; and, care to prevent contamination during autopsies but no special measures needed with corpses.
- 2.3.5 Improved education on: sample collection, safe packaging which maintains appropriate temperature, and efficient transport to a reference laboratory.
 - (a) In general, specimens collected should always include a sample of whole blood collected without anticoagulant for virus isolation or antibody detection.
 - (b) For yellow fever, an attempt should be made to collect a liver specimen at death. This should be kept in Bouin 180 solution or in 10% formalin, and sent to the nearest competent laboratory for histopathological examination.

REPORTS OF WORKING GROUPS
SESSION 1, GROUP 3

Yellow fever outbreaks: Epidemic and post-epidemic response,
rapid containment measures, surveillance and long-term prevention.
Technical and logistical aspects

Yellow fever is a continuing threat to the West Africa Sub-Region. Consequently, the Group recommends the below listed actions.

1. Disease outbreak early warning/surveillance system

- 1.1 Continued training for all personnel is recommended. Particularly, courses should include: how to identify a yellow fever case, how to report these cases, how to collect specimens, how to package and send specimens for confirmation, and how to treat symptoms of yellow fever.
- 1.2 The timing of refresher training should coincide with increased seasonal risk of disease.
- 1.3 All levels of health care education should have yellow fever training in their curriculum.
- 1.4 Long-term, routine epidemiological surveillance should include: the establishment of a sentinel health centre network; surveillance including entomological and virological findings; and reinforcement of diagnostic capabilities at the national level.
- 1.5 Better integration of local surveillance into a subregional surveillance structure. This structure would also monitor international circulation of yellow fever.

2. Disease outbreak rapid assessment and control measures

2.1 Vector surveillance and control

- 2.1.1 Health education should include as a main objective the destroying of breeding sites of the domestic mosquito vectors. Individuals and groups involved in waterstorage and urban sanitation should be targeted for increased education.
- 2.1.2 Health centres should have permanent programmes to eliminate mosquitoes.
- 2.1.3 During outbreaks, chemical control of Aedes aegypti is recommended.
- 2.1.4 Increased training of medical entomologists specialized in vector control is needed. Their responsibility would be programmes for the long-term eradication of breeding sites of A. aegypti

2.2 Patient treatment and management

- 2.2.1 Any suspect patient should be housed under mosquito netting. Hospital areas housing suspect cases should be treated to eliminate mosquitoes.
- 2.2.2 All blood should be carefully drawn preferably with vacuum tubes and disposable needles.
- 2.2.3 Drugs needed for symptom treatment should be stockpiled at a central location and made available to peripheral clinics.
- 2.2.4 The evacuation of patients should be made only in case of extreme emergency and only provided that the patient is isolated under a mosquito net and transported to a disinfected health centre.
- 2.2.5 Furthermore, it is recommended that each country prepare a list of essential materials. An emergency stock could be kept in an international agency for immediate delivery.

2.3 Immunization

- 2.3.1 Immunization remains the major strategy in case of an outbreak. It should cover all the threatened populations without exception.
- 2.3.2 It is recommended to introduce yellow fever immunization into EPI in high risk areas identified on current epidemiological data. Yellow fever vaccine can be injected at 9 months of age, simultaneously with the measles vaccine.

2.4 Research - Information

- 2.4.1 It is recommended to rapidly initiate epidemiological studies in areas where data are insufficient.
- 2.4.2 It is recommended to utilize means to disseminate information that is appropriate to the target groups. Modern media could be used in the cities. The means used elsewhere should be at the level of the population with due respect to the customs and sociocultural structures.

REPORT OF WORKING GROUPS
SESSION 1, GROUP 4

Rift Valley Fever outbreaks: Epidemic and post-epidemic response,
rapid containment measures, surveillance and long-term prevention.
Technical and logistical aspects

All the participants recognize that Rift Valley fever (RVF) disease is a potential problem of significance in the West Africa Sub-region. Many countries in the Sub-region have evidence that RVF occurs, while others do not. Although most aspects of the epidemiology of RVF in countries of the Sub-region remain unknown, most countries are considered likely to be enzootic-endemic for RVF.

Consequently, the group recommends the below listed immediate action.

1. Disease outbreak, early warning/surveillance systems

- 1.1 To improve recognition of the disease, a clinical description of the disease in man and animals, its modes of transmission and preventive measures should be communicated to veterinary, medical, public health and community health workers at all levels. A simplified version of the document should also be disseminated to identified rural populations at risk.
- 1.2 There must be a high suspicion of RVF if there is a febrile disease outbreak in man, associated with abortions and hepatitis and deaths in young ruminant animals.
- 1.3. In enzootic-endemic countries, surveillance should be based on the monitoring of abortions and mortalities in young ruminants. Sentinel herds should be established to identify high risk areas, and longitudinal entomological and virological studies should be carried out.
- 1.4 Baseline serological data should be collected in countries in West Africa in which RVF has not yet been identified. The importance of the habitats bordering dams, irrigation projects and different ecological zones, should be evaluated with regard to the RVF epidemiology.

2. Disease outbreak rapid assessment and control measures

- 2.1 Vector surveillance and control. Vector control is not applicable under the present circumstances because the vectors of RVF disease are not yet known.
- 2.2 Patient treatment and management. There is at present no specific treatment for RVF, except for some antiviral products and immunoglobulins, that are still under investigation. RVF patients should therefore be placed under bed nets and given supportive treatment. Good nursing practice has been found to protect personnel from hospital infection.

- 2.3 Immunization of animals. Mass vaccination of ruminants is the only effective measure for reducing virus amplification in an infected area. The use of inactivated vaccine is not feasible in West Africa, therefore attenuated strains should be used as much as possible, but only as a means to contain an outbreak.
- 2.4 Training and education
 - 2.4.1 The two WHO publications on RVF should be used as reference sources for the document. The WHO publications are:
 - (a) WHO Offset Publication No. 63 - Rift Valley Fever: an emerging human and animal problem (1982).
 - (b) WHO/EMRO Technical publication No. 8: Technical guide for the diagnosis, prevention and control of Rift Valley Fever in man and animals.
 - 2.4.2 Specific efforts should be made to train national laboratory personnel in RVF diagnosis and serology, and in entomological investigations. The assistance of international agencies should be sought in this regard.
- 2.5 Laboratory confirmation of outbreak
 - 2.5.1 As a matter of priority, each country should attempt to establish its own diagnostic laboratory which should be adequately equipped to meet WHO safety standards for working with highly hazardous viruses. Pending such a national achievement, regional laboratories should be developed and/or strengthened.
 - 2.5.2 Confirmation of the tentative diagnosis must be made by virus isolation or serology by sending appropriate samples to WHO Collaborating Centres for Arbovirus, such as in Dakar (Senegal).
- 2.6 Establishment and actions of advisory/action task force
 - 2.6.1 On suspicion of a RVF outbreak, a task force should be set up to investigate the outbreak in the field. This should be done before laboratory confirmation is available. The task force should be multidisciplinary in composition and include veterinarians, physicians, epidemiologists, virologists and entomologists.
 - 2.6.2 The task force should attempt to define the limit of the infected area and the extent of the outbreak.
 - 2.6.3 Movement of animals within the infected area should be restricted, while slaughter of sick animals in this area should be stopped.
 - 2.6.4 Cooperation in the detection of human and animal diseases, and collaboration in restricting animal movements by residents of the infected area should be encouraged and compensated for.

ANNEX 5

REPORT OF WORKING GROUPS
SESSION 2

Programme

1. Coordination between international agencies including multilateral and bilateral groups.
2. The role of NGOs: means of coping with health emergencies.
3. The role of African Institutions for Emergency Preparedness and Response.

Report of the Working Groups

1. Coordination: Recognizing that the lack of coordination of operations of multiple agencies involved in disaster relief has had an adverse effect on the provision of disaster relief in the Africa Region, the Groups make the below listed recommendations:
 - 1.1. A national committee should be set up in each country to coordinate the activities of all the agencies engaged in disaster relief within its frontiers. The role of the committee is:
 - (a) to formulate a plan of action related to disaster risks of the country;
 - (b) to organize and coordinate the relief efforts and to oversee the distribution of resources;
 - (c) to define activities and responsibilities of each department in a period of disaster;
 - (d) to plan for a strategical stock for immediate intervention;
 - (e) to supervise staff training at all levels.
 - 1.2. The role of the WHO Regional Centre for Emergency Preparedness based in Addis Ababa, would be that of an information centre, a coordination agency and a training body.
2. The role of NGOs
 - 2.1. The operations of the NGOs in the provision of emergency and disaster relief are very important, and must be carried out within the framework of the National relief programme. Their activities are essential, especially because of their flexibility, and the speed with which they can be deployed. Their activities also can be important for the purpose of long-term planning and development.

- 2.2. Each country should therefore formalize guidelines for the operation of all agencies engaged in the provision of disaster relief, and communicate them to the WHO Regional Centre for Emergency Preparedness and Response in Addis Ababa for collaboration. WHO Representatives in Member States should play an important role in this field.
3. African Institutions: Having noted that the African Institutions are not being fully utilized to prepare their countries to make an effective response to emergency and disaster, the Group established the below listed recommendations:
 - 3.1. Every effort must be made to make full use of them. These Institutions include universities, which should endeavour to prepare their students to cope effectively with emergencies, as well as organizations such as OAU, OCCGE, ECOWAS and the West African Health Community.

The WHO Regional and Sub-Regional Offices have a vital role to inform these organisations of the part they are expected to play in emergency preparedness and response.
 - 3.2. The role of the Ministries of Information in the dissemination of information, and the role of Ministries of Interior as facilitators need to be emphasized. The Armed Forces could play a very useful role in emergency and disaster response within their own countries.

ANNEX 6

REPORT OF WORKING GROUPS
SESSION 3

Programme

Using viral haemorrhagic fevers as an example:

1. Requirements for outbreaks preparedness.
2. Managerial response to outbreaks at national and local levels, including coordination, monitoring and evaluation.

Report of the Working Groups

1. Requirements for outbreak preparedness

1.1 Creation or reactivation of an epidemiological surveillance structure with the following duties :

- (a) identify the potential risk for every country;
- (b) determine risk areas;
- (c) determine target groups;
- (d) propose a control strategy;
- (e) formulate or promote early warning systems at the community level;
- (f) plan serological or entomological surveys necessary for assessing an emergency situation.

1.2. Creation or reactivation of a national multisectorial committee for epidemics whose members will vary according to the country.

This committee would have:

- (a) to plan measures to be taken in case of an outbreak: management of number of patients, immunization campaign, vector control, etc...;
- (b) to assess related needs;
- (c) to implement in advance the necessary facilities and resources, at peripheral, provincial, regional, national and international levels: laboratories, experts, stocks of drugs, vaccines, insecticides, materials.

This structure should be decentralized and coordinated with local and provincial committees capable to rapidly intervene in emergency situations.

- 1.3 Implementation or development of permanent training, refresher courses and supervision of the staff at all levels. Production and distribution of practical guidelines on epidemic preparedness and response would provide a useful support to those activities.

2. Managerial response to an outbreak

- 2.1 The national multisectorial committee will be mobilized in an emergency under the responsibility of the Ministry of Health. This committee should secure the collaboration of experts in the field of the current outbreak, and the participation of national and international organizations, including WHO, as well as bilateral agencies and nongovernmental organizations, which could be involved in providing aid.
- 2.2 This committee will have the following duties:
 - (a) to assess the requirements at all levels to face an emergency situation;
 - (b) to mobilize the national resources and those from the international cooperation;
 - (c) to coordinate the help provided, and containment measures;
 - (d) to inform the decision-makers, the health personnel and the general public of the situation and of the measures to be taken;
 - (e) to promote subregional and international cooperation as well as an international exchange of information;
 - (f) to monitor activities, to follow the evolution of the outbreak and to permanently evaluate the situation.

ANNEX 7

MOTION ON TOXIC WASTE DUMPING

At the WHO Workshop on Emergency Preparedness, Response and Prevention with Emphasis on Control of Viral Haemorrhagic Fever Outbreaks in West Africa, held in Bamako (Mali) from 4 to 9 July 1988,

The participants,

Noting that devastating disease epidemics have ravaged the countries of the West African Subregion and the unpreparedness and inability of the affected countries to cope with the catastrophes;

Observing the reports of the dumping of toxic chemical and nuclear wastes in some West African countries;

Recognizing the potential short and long-term danger posed by the dumping of toxic wastes on the disaster ravaged populations of West Africa; and

Aware that relevant information and technology for detoxifying the toxic wastes are currently unavailable;

RECOMMEND THAT

1. Political leaders in the Subregion, as representatives of their people, should not mortgage the future existence of their countries for short-term monetary gains by accepting either short or long-term dumping of toxic wastes in their territories;
2. International organizations such as the IAEA, the WHO International Programme on Chemical Safety (IPCS), should urgently compile and disseminate as widely as possible available information on the dangers of toxic wastes;
3. Individuals in each country of the Subregion, with relevant knowledge of toxic wastes, should endeavour to educate their people on the dangers of toxic wastes and influence the attitude and decision of their governments on toxic waste dumping;
4. Producers of toxic wastes should in all circumstances be guided by strict moral and humanitarian considerations in the dumping of toxic wastes either in their own country or in other countries;
5. Governments of the West African Subregion should give the highest priority to the acquisition of available technology for trapping the abundant solar energy as the alternative to nuclear or other forms of energy for their needs.

ANNEX 8

REPLIES TO A QUESTIONNAIRE ON THE PREPARATION FOR ANOTHER WHO SEMINAR
ON EMERGENCY PREPAREDNESS AND RESPONSE, AS A FOLLOW-UP TO THE
BAMAKO WORKSHOP, AND BASED ON PILOT STUDIES CARRIED OUT IN
THE PARTICIPATING COUNTRIES

The delegation of 13 Member States, among the 14 participating countries, answered the questionnaire: Benin, Burkina-Faso, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mali, Mauritania, Nigeria, Sierra Leone and Togo.

First question:

"Indicate one or several local communities where pilot-projects could be set up for the preparation of a WHO seminar on the prevention and management of emergency situations"

The participants have mentioned 34 projects in progress or to be promoted:

BENIN	Provinces of Borgou, Atacora, Atlantique and Mono
BURKINA FASO	Provinces of Kadiogo (Ouagadougou), Yatenga (Ouahigouya), Seno (Dori)
GAMBIA	Upper-River Division (Eastern Region)
GHANA	Districts of Kintampo, Ashanti-Akim, Wassa-Fiase-Mpohor, Bawla, Hohoe, Nzema, Dangbe and Ghana Armed Forces Medical Service
GUINEA	Région de Haute-Guinée, Préfecture de Gaoual (Koumbia)
GUINEA-BISSAU	Health Centres of Deambu (Quinhamel) and Dirlu
IVORY COAST	Préfecture de Bouaké
LIBERIA	Monrovia, Nimba, Sinoe, Cafe Mount
MALI	Kolokani, Koutiala, Niono, Diré, Douentza
MAURITANIA	Départements de Keur Macène and Tintane
NIGERIA	Niger State (Mariga), Benue Nct (Oju), Oyo (Ogbomosho), Cross River (Ogoja)
SIERRA LEONE	Districts of Bo, Kenema and Bombali
TOGO	Sanitary Sub-Division of Zio

Second question:

"In the context of a local plan for emergency situations, what themes should be developed by these pilot studies?"

Among the 11 proposed subjects, mostly eight have been mentioned and ranked as follows:

1. Health and sanitation education (12/13)
2. Methodology of risk awareness (11/13)
3. Community participation (11/13)
4. Training of volunteers (11/13)
5. Provision of medicines and medical supplies (9/13)
6. Health equipment and appropriate technologies and logistics (8/13)
7. Treatment of medical and surgical emergencies (7/13)
8. Displaced persons (7/13)

Third question:

"What would be the results of these projects?"

The participants have expressed their preference for:

1. Samples of material for community education (12/13)
2. A manual for the use of local health personnel (11/13)
3. An audiovisual document for public information or for staff training (8/13)
4. An activity report (6/13)

Fourth question

In what way should WHO collaborate in the preparation of the seminar?"

The participants have expressed their preference for:

1. Provision of technical literature, books, manuals (12/13)
2. Technical assistance by experts (11/13)
3. Organization of the exchange of data between pilot projects (10/13)
4. Funding (support of facilitators, etc.) (6/13)

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