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REGIONAL PLAN IN RESPONSE TO EMERGING AND RE-EMERGING DISEASES

CONTENTS

INTRODUCTION

With its success in overcoming the devastating epidemics that have characterized previous centuries and the first half of the 20th century and with socioeconomic development and scientific advances in the prevention and control of many diseases, the field of medicine has become dominated by health care concerns other than epidemics of communicable diseases. As a result, the profile of public health services and epidemiological surveillance has gradually changed and it now depicts the following picture in most countries of the Region:

- Health care systems look at public health as being of secondary importance. Most national health care systems are more treatment-driven than prevention-oriented.
- In many countries health care systems are more reactive than proactive and more complacent than anticipatory and vigilant.
- There is evident depletion of technical expertise in many fields of disease prevention and control.
- Public health laboratories are poorly equipped but, more important, not adequately staffed. As well, data available through public health laboratories such as those on antimicrobial resistance of bacteria are not used in national efforts to monitor resistance and hence not shared internationally.
- Many health care workers, particularly peripheral health workers, are unfamiliar with the concept of surveillance. This is principally because this topic is not adequately covered in undergraduate education. There is also lack of encouragement for front-line health care workers and private physicians to become involved in surveillance.
- Information on incidence of infectious diseases is limited to only a few health care establishments—communicable diseases clinics and hospitals—which are most often concerned only with a limited number of infectious diseases. Information from private physicians and other national resources, such as university hospitals and health care services for special groups, such as schoolchildren and military populations, is not collected, a fact that means significant underreporting.
- There is inadequate collaboration and coordination of efforts with other national sectors such as those concerned with animal health. The general public is not adequately involved in surveillance or in disease control. This is closely related to the fact that some national authorities hide information about these diseases from the public. The media are not given the opportunity to get involved by the authorities, and so they resort to various sources of information, which are not always accurate or scientifically correct.
- There is a shortage of properly designed and published epidemiological studies that could elucidate factors behind the occurrence of diseases and the interaction between various elements contributing to their occurrence. These studies are unfortunately not always encouraged by national authorities, even if resources are available for their conduct.
- National capabilities to respond to the epidemiological situation are weak or lacking.

The above situation, reflecting a neglect of public health infrastructure, especially in relation to surveillance, laboratory services and prevention and control of epidemics, needs urgent attention at all levels.

THE REGIONAL PLAN

This regional plan should be looked at in the context of WHO's global plan for combating emerging and re-emerging diseases and should also relate to efforts carried out by other WHO Regions; more important, the plan calls for bilateral support between neighbouring countries. National authorities will be the main players, supported by WHO at all levels.

The plan has five main elements:

- Development and strengthening of national disease surveillance systems capable of a thorough understanding of the trends of disease occurrence and also capable of detecting any emerging or re-emerging communicable diseases.
- Development and strengthening of national human resources in various aspects of surveillance and disease control.
- Development and strengthening of the relevant resources and activities needed for proper surveillance, particularly laboratory support and vector and reservoir control services.
- Development of national plans to respond to the possibility of the emergence of infectious diseases and the occurrence of epidemics.
- Monitoring and evaluation.

DETAILED PLAN AND ACTIVITIES

1. Development of national disease surveillance

1.1 A list of priority diseases for surveillance should be developed. The list should be limited to diseases for which a report will result in action. The list should not be restricted to diseases of present national importance but should include those of regional importance and also those of global significance.

In this regard, it is essential to continue to give due attention to infectious diseases that have been brought under control and avoid complacency in order to guard against their re-emergence.

Surveillance should be maintained whether the disease in question is causing an emergency or not—that is, even in the absence of an epidemic. This is sometimes difficult, particularly when surveillance demands significant human and financial resources. In such cases, it is important to create awareness among decision-makers that suspending these efforts may have serious consequences. There are many

examples from within and outside the Region where cessation of surveillance activities has resulted in serious spread of disease with significant consequences.

The occurrence of natural disasters, such as earthquakes or floods, and man-made disasters, including wars, should be monitored for the possible re-emergence of diseases, for which surveillance should be initiated or intensified.

1.2 Countries should move beyond the traditional system of infectious disease surveillance to a more active broad-based surveillance system involving all possible sources of data, with the effective involvement of the private sector; in other words, a provider-based surveillance system. In order to achieve the latter, national health authorities should work with the private sector to develop mechanisms that ensure the private sector is a regular source of disease surveillance information.

1.3 For each of the infectious diseases that poses a significant threat of epidemic, guidelines for surveillance, epidemic preparedness and response should be developed or updated and widely disseminated. Case definition should be clearly spelled out in these guidelines in order to avoid misinterpretation and to achieve universal comparability of information. Such guidelines should be prepared in such a way that each level of the health care services is clear about what it should do.

Many such guidelines are already available from WHO and other agencies, and others will be developed. However, such guidelines may need to be modified or translated to suit local needs and available resources.

National authorities should bring these guidelines to the attention of health care workers, particularly at times when the appearance of the disease in question is anticipated.

1.4 Preliminary analysis of the data should be made at the peripheral and district levels so that immediate action can be taken as required. Peripheral health care workers have to be trained in the preparation of maps and graphs and in the calculation of essential statistics.

1.5 Epidemiological information should be disseminated as widely as possible, first and foremost at the national level. It should be provided to all interested parties, from the sources of information to the decision-makers. Appropriate information should be given to the public and the media. Data should also be shared with neighbouring countries and WHO for regional and global dissemination.

National monthly epidemiological bulletins are one way to disseminate this information. As well, regional epidemiological bulletins or newsletters should be promoted. In addition to epidemiological information, these bulletins should cover information on drug resistance.

1.6 WHO/EMRO will review and strengthen the role of the regional WHO collaborating centres in supporting surveillance. This will include:

- assessing the capabilities of existing and potential collaborating centres in identifying disease agents of epidemics and in extending advisory and training services necessary for the investigation and control of epidemics;
- preparing a plan with these centres to strengthen their role in responding to epidemics of communicable diseases;
- arranging for closer consultations and contact between the regional centres and also with global centres; and
- involving these centres in as many activities as possible relevant to their field of designation.

1.7 Countries should promote and support applied research on diseases with the potential to cause epidemics either regionally or nationally in order to better understand their epidemiology and discover the best approaches for surveillance.

Among the important fields of applied research are:

- drug prescribing practices and their role in the development of drug resistance;
- behavioural research;
- the economic impact of infectious diseases; and
- the impact of infectious diseases on development.

2. Development and strengthening of national human resources

2.1 Health authorities should work with national teaching and training institutes, especially faculties of medicine, institutes of nursing and paramedics and also schools of public health to ensure inclusion of surveillance and epidemiological techniques in the training curricula of both undergraduates and postgraduates. The material already in use should be updated to reflect new scientific information and national priorities.

2.2 Training courses for in-service training on surveillance and epidemic preparedness and response should be conducted.

2.3 A system of continuous in-service education should be developed through which state-of-the-art clinical presentation diagnostic procedures and methods of prevention and control of emerging diseases are brought to the attention of health professionals.

WHO has a special role to play in this regard, particularly in the organization of regional training courses for trainers and in the preparation of training modules for training courses.

These courses should also be used to identify and keep a roster of trained human resources to call upon when needed.

3. Development and strengthening of resources needed for surveillance

3.1 Public health laboratory services

Public health laboratory services have a critical role to play in the surveillance of communicable diseases. For proper surveillance:

- Each country should have the capability to diagnose commonly occurring communicable diseases in their territories or at least reach a preliminary diagnosis.
- For complex laboratory procedures or for confirmation of a laboratory diagnosis, national laboratories should have access to a regional reference laboratory.
- Public health laboratories should be able to test the sensitivity of the microbiological agents to antimicrobials, particularly in the light of the significant spread of microbial resistance to many of the antimicrobials that used to be very effective against them.
- A programme of quality assurance in microbiology laboratories should be initiated/strengthened.
- Public health laboratories must have the necessary resources to undertake their duties. These resources include trained human resources and the necessary equipment and supplies. It is essential that there be a regular supply of diagnostic reagents and also of technical information on modern/improved diagnostic procedures.
- Guidelines for the collection, packaging, labelling and transport of specimens should be widely distributed with instructions that they be strictly followed, as most samples and specimens collected are biohazardous.

3.2 Vector surveillance and control

Another important support service to overall surveillance is surveillance of disease vectors. This important service should be maintained and strengthened. It is also important to ensure that the insecticides in use for vector control are effective by testing the sensitivity of prevailing vectors to insecticides in use.

3.3 Environmental monitoring

It is essential to develop environmental monitoring, which could forewarn the authorities about the spread of the causative agents of diseases such as cholera and poliomyelitis.

4. Development of national plans to respond to the possibility of emergence of infectious diseases and to the occurrence of epidemics

4.1 National authorities should be able to anticipate the possibility of epidemics in order to put in place proper prevention and control measures. This can be achieved through regular analysis of surveillance data about the disease in question and the relevant epidemiological determinants (time, environmental changes, periodicity, etc.). As well, information about the occurrence of the disease in neighbouring countries is very important in this anticipation process.

4.2 An inventory of national resources should be developed and continuously updated. Such an inventory could be under the aegis of the ministry of health or other institutions such as universities, specialized centres or military services.

Such resources should include:

- persons qualified in epidemiology, diagnosis and clinical management of specific diseases;
- laboratory support services; and
- other logistical resources such as communications, transport, etc. National authorities could call on WHO for information about the availability of such resources within the region or in specialized centres in other parts of the world.

4.3 Health authorities should maintain a strategic stock of supplies and equipment that would be urgently required in case of epidemics, particularly those that frequently occur. Maintaining such stocks has proved to be of vital importance, especially in response to the early phases of epidemics.

Through intercountry collaboration and regional efforts, it might be possible to have some such emergency supplies stockpiled in one of the countries of the region for the benefit of all countries, or arrangements might be made with appropriate companies for immediate delivery of supplies at very short notice, e.g. for vaccines.

4.4 The occurrence of a suspected epidemic, or even when an epidemic is anticipated, should trigger the immediate formation of a multidisciplinary action group to review the situation and advise on action required. This group should define policies on case definition, preventive action and control measures. It should follow up the situation until the epidemic is over through regular meetings.

In some countries, there are national committees for the control of communicable diseases. These committees will be expected to take the above responsibility. Their membership may be supplemented by experts on the disease in question.

4.5 In view of the important role that can be played by the public and by the media, it is essential that the national authorities provide information to the media in the form of press releases reflecting an accurate picture of the situation. Press releases should also address the role of the public in surveillance and in prevention and control.

4.6 The occurrence of an epidemic should trigger national long-term plans for prevention and control of the disease in question. It is important to secure the necessary cooperation from national authorities outside the ministry of health who could assist in the prevention and control of disease, such as those responsible for water supply or sewage disposal.

5. Monitoring and evaluation

It is essential to monitor continuously outbreaks of communicable disease and responses to them and to follow up where necessary, at both national and regional levels. Indicators should be developed to measure the implementation of the national plan and to assess its impact.