

THE
INTERNATIONAL
HEALTH REGULATIONS
A Practical Guide

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FOREWORD

The International Sanitary Regulations of 1951 were enacted as a compromise, in order "to ensure the maximum security against the international spread of diseases with a minimum interference with world traffic". Experience has shown that this objective was often not attained during certain severe epidemics. Only an increase in the efficiency of national systems of epidemiological surveillance and prevention should enable it to be achieved, and it can be foreseen that active cooperation between the Member States will then be able to replace the mere observance of international rules.

Since 1951, requirements under the Regulations have been progressively reduced in response to the improvement of national public health services, the disappearance of certain diseases and the progress made in certain fields of knowledge but, though they are destined to lapse one day, the present Regulations remain the most acceptable means of trying to attain the objective referred to above. Perhaps, therefore, a useful purpose will be served by making them better known in order to facilitate their application, and at the same time explaining the resolutions on notification of "diseases under surveillance" adopted in 1969 by the World Health Assembly. That is the object of the present publication, which is intended as a practical guide and is concerned with the spirit rather than the letter. If it helps to ease the task of public health administrators and of all those responsible for implementing the Regulations, it will have attained its goal.

THE INTERNATIONAL HEALTH REGULATIONS

The purpose of the present study¹ is to present the International Health Regulations of 1969 amended in 1973 (former Regulations of 1951), together with resolutions WHA22.47 and WHA22.48 of the World Health Assembly, in the form of a practical guide for the use of public health administrators and all persons responsible for applying these Regulations. In line with this purpose, only certain essential provisions of the Regulations have been taken into account, and the reader must not expect to find here a complete exposition of the contents of the Regulations.

THE 1969 REGULATIONS (1951 Regulations as amended)

1. STUDY OF THE REGULATIONS

These Regulations cover *plague, cholera, yellow fever and smallpox*, now designated by the term "diseases subject to the Regulations", whereas prior to 1969 they were known as "quarantinable diseases". The study which follows takes account of the further amendments introduced by resolution WHA26.55 of the Twenty-sixth World Health Assembly, which adopted the additional Regulations of 1973.²

To begin with, three important features of the Regulations should be pointed out:

(a) They are binding on all Member States of WHO except South Africa, Australia and Singapore, some other States having also submitted reservations to these Regulations or rejected the Additional Regulations of 1973.³

¹ The subject dealt with is part of an annual teaching course given by the author at the National School of Public Health of France (Rennes).

² *Off. Rec. Wld Hlth Org.*, 1973, No. 209, pp. 29-30. The updating of the Regulations consequent upon the adoption of resolution WHA26.55 was done in: World Health Organization (1974) *International Health Regulations (1969) Second Annotated Edition*, Geneva.

³ See *International Health Regulations (1969) Second Annotated Edition*, Annexes I and II.

(b) They represent a compromise, for their purpose is to ensure the maximum possible protection against infection while causing only minimum interference with international traffic.

(c) They seek to ensure this protection by preventing infection from leaving the countries where it exists and by containing it upon arrival; the provisions of the Regulations are accordingly based on the transmission characteristics of the four diseases subject to the Regulations: direct person-to-person transmission in the case of *smallpox*, transmission by direct means or through faecal contamination of the environment (particularly water and food) in the case of *cholera*, transmission by mosquitos (especially *Aedes aegypti*) in the case of *yellow fever*, and in the case of *plague* rodent-flea-man transmission (for classical bubonic plague) or direct person-to-person transmission (for pulmonary plague).

The Regulations create, for those countries which have accepted them, obligations in three spheres which we shall consider in turn: notifications; health organization at frontiers, particularly in ports and airports; and measures authorized with regard to individuals' goods and means of transport.

1.1 NOTIFICATIONS (Articles 2-13)

1.1.1 When infection occurs, the process of exchange of notifications can be summarized as follows:

The Member State concerned notifies WHO of the infection → WHO communicates the information to all Member States → Member States decide on any special measures to be taken and notify these to WHO → WHO communicates to all Member States the information received concerning these measures.

WHO communicates the information through the *Weekly Epidemiological Record* (dispatched by air mail) and through the automatic telex reply service. It is required to publish, at least once a year, data on the epidemiological trends of the diseases subject to the Regulations, illustrated with maps showing the infected and free areas of the world. As regards notifications of measures concerning vaccination, which are published regularly in the *Weekly Epidemiological Record* (in addition, summary lists are distributed several times a year), they are also published every year by WHO in the booklet entitled *Vaccination Certificate Requirements for International Travel*, which gives up-to-date information on the requirements of all Member States.

Notifications concerning infection are of three kinds:

(a) Notification of the presence of infection: human cases, cases of infection in rodents (*plague*) or monkeys (*yellow fever*), or presence of virus in mosquitos (*yellow fever*).

(b) Notification of the infected area: an "area" is defined as an epidemiological entity whose boundaries are decided by the national health administration; it becomes infected when *locally infected* human cases of a disease subject to the Regulations are reported, or when the presence of the plague bacillus is detected in domestic or wild rodents (but in the latter case only in the vicinity of ports or airports), or else when the presence of yellow fever virus is detected in mosquitos or in monkeys (or other vertebrates); an area shall not therefore be considered as infected as a result of the importation of one or more human cases from a foreign country, or of the transfer of one or more human cases from another area in the same country, such cases not being due to local transmission of the infection.

(c) Notification of the source and conditions of spread of the infection, i.e. of the epidemiological context and in particular the environmental factors, together with the measures taken to combat that spread.

1.1.2 When the infection has disappeared, the process of exchange of notifications can be summarized as follows:

The Member State apprises WHO that the area concerned has again become free → WHO communicates the information to all Member States → the Member States withdraw any special measures they had taken and notify WHO of the fact → WHO disseminates the information concerning the withdrawal of such measures.

A health administration has the right to declare that an infected area has become free again:

(a) where human cases of *smallpox*, *plague* or *cholera* are concerned, when twice the incubation period has elapsed since the death, recovery or isolation of the last case;

(b) in the case of rodent *plague*, when three months have elapsed since the last sign of plague in wild rodents near ports or airports, or one month since the last sign in domestic rodents;

(c) in the case of *yellow fever*, when three months have elapsed since

the last sign in man, mosquitos or monkeys (or other vertebrates), or, in the case of yellow fever transmitted by *Aedes aegypti*, one month since the last sign in man, provided that the *Aedes aegypti* "house" index is lower than 1%.¹

1.2 HEALTH ORGANIZATION AT FRONTIERS, PARTICULARLY IN PORTS AND AIRPORTS (Articles 14-23)

1.2.1 The Regulations stipulate, broadly, two levels of organization for ports and airports:

- (a) The first level applies to all ports and airports, which must:
- have an organization capable of ensuring the wholesomeness of water and food to be consumed by travellers, and of providing for disposal of refuse and waste water;
 - be subjected to all necessary measures for keeping their installations free of rodents;
 - be free from *Aedes aegypti* and other mosquito vectors of diseases, which in the case of an airport entails regular application of antimosquito measures over a distance of at least 400 metres around its perimeter (defined as the line enclosing the buildings and the area used for parking of aircraft).

(b) The second level must be attained, according to the wording of the Regulations, by "as many of the ports and airports . . . as practicable", which must possess their own health organization for:

- coping with human cases among the travellers (bacteriological investigation, treatment, isolation, vaccination, disinfection, and disinsecting);
- collecting water and food samples for examination;
- keeping watch on and eradicating rodents and insects within the perimeter of the port or airport.

In addition, the Regulations provide that certain ports and airports must possess special facilities:

- in the case of ports, it is stipulated that a sufficient number of them must be able to issue deratting exemption certificates to ships; and among these, some must be equipped for deratting ships;

¹ This index is the ratio $\frac{\text{Number of houses where there are breeding places of the insect}}{\text{Number of houses examined}}$ expressed as a percentage.

- in the case of airports, there is a provision requiring the designation of airports possessing a direct transit area, where segregation of persons in transit is ensured; it shall be kept mosquito-proof if located in an area where mosquito vectors of diseases exist.

1.2.2 The Regulations provide that on railway lines, roads and waterways there must be posts equipped to apply the Regulations when epidemiological conditions so require, i.e. posts having their own health administration of the type described above for ports and airports of the "second level" of organization.

1.2.3 In accordance with the requirements of the Regulations, WHO publishes in a booklet entitled *Ports designated in application of the International Health Regulations* a list of ports approved for the issue of deratting exemption and deratting certificates.

1.3 HEALTH MEASURES AUTHORIZED (Articles 24-82)

There are three principles governing the application of such measures:

(a) They are maximum measures which must not be exceeded, but the requirements laid down by a health administration may be less than those maxima.

(b) They must be initiated forthwith, completed without delay, and immediately followed by the granting of free pratique; in other words, the old concept of "quarantine" is abolished for good.

(c) Free pratique cannot be refused for diseases other than the four subject to the Regulations; this is stipulated in Article 29 and, though that Article adds "except in case of an emergency constituting a grave danger to public health", the Committee on International Surveillance of Communicable Diseases has always given a very restrictive interpretation to this proviso.

1.3.1 Health measures authorized on departure

The purpose of such measures is to prevent infection from leaving a country where it exists. To this end, the Regulations contain the following provisions:

(a) In the case of travellers, the departure of any infected person or suspect¹ shall be prevented; in addition, a vaccination certificate may be required on departure from an area infected with *smallpox* or *yellow fever*² (for *cholera*, the vaccination certificate was abolished by the Additional Regulations of 1973³), and an international traveller leaving an area where there is an epidemic of *pulmonary plague* must be isolated for six days before departure if he is a suspect.

(b) As regards ships and aircraft, these must be free from rodents and from vectors of diseases subject to the Regulations; this entails the obligation to examine ships periodically and make sure that they are free from rodents, whereupon a deratting exemption certificate valid for six months is issued, as also to disinsect⁴ ships and aircraft on departure from an area where there are *Aedes* or other vectors of a disease subject to the Regulations.⁵

1.3.2 Health measures authorized during the voyage

When a ship passes through a country's territorial waters without stopping at any landing place, no measures can be applied to it.

When, however, the ship passes through a canal, the health administration is entitled to perform medical examination, i.e. inspection of the ship, preliminary examination of persons, and scrutiny of vaccination certificates.⁶ As a result of this medical examination, two possible situations may arise:

- the ship is healthy (i.e. neither infected nor suspected: see 1.3.3 (c) for the meaning of these terms): no measure can then be taken except stationing a guard on board to prevent any communication with the shore when the ship has come from an infected area or has a person from such an area on board (so long as the incubation period of the disease concerned has not passed since the ship sailed);

¹ "Suspect" means a person who is considered by the health authority as having been exposed to infection by a disease subject to the Regulations and is considered capable of spreading that disease.

² Vaccination against *yellow fever* can be done only by a vaccinating centre designated by the national health administration; centres so designated are therefore notified to WHO, which publishes a list of them in a booklet entitled *Yellow-Fever Vaccinating Centres for International Travel*.

³ *Off. Rec. Wld Hlth Org.*, 1973, No. 209, pp. 29-30.

⁴ Annex VI to the second annotated edition of the 1969 Regulations sets forth the specifications recommended by WHO for standard DDT dispensers and aerosols (together with other DDT-based aerosols), and stipulates that disinsecting shall be done by the so-called "blocks away" method, i.e. between the time the doors are closed and the moment of take-off, which represents an appreciable saving of time compared to the old method which consisted in applying the aerosols before the doors were closed.

Moreover, the Twenty-seventh World Health Assembly, by approving in its resolution WHA 27.45 the comments contained in the report of a working group of its Committee B appointed to study the eighteenth report of the Committee on International Surveillance of Communicable Diseases (*Off. Rec. Wld Hlth Org.*, 1974, No. 217, Annex 9), recommended that Member States of the Organization should immediately accept as valid disinsecting by the Dichlorvos * Vapour System for the Disinsecting of Aircraft (in-flight), as provided for in Article 90 of the Regulations.

* DDVP: 2,2 - dichlorovinyl dimethyl phosphate.

⁵ See also paragraph 1.4.3.

⁶ The precise definition of "medical examination" is given in Article 1 of the International Health Regulations.

- the ship is infected or suspected: the measures authorized are then similar to those which can be taken on arrival and which are considered below (see paragraph 1.3.3 (c)).

For a ship or aircraft that puts in or touches down, the measures authorized are also similar to those which can be taken on arrival, except as regards the persons on board a healthy ship or aircraft: no measure may be applied to them except medical examination, provided they do not leave the ship or the direct transit area of an airport. The Regulations do, however, provide for one exception: the possibility of isolating at an airport possessing segregation facilities a person in transit travelling on a healthy aircraft when that person (a) comes from an area infected with yellow fever, (b) is not in possession of a valid certificate of vaccination against that disease, and (c) is due to proceed to an airport not possessing the means for securing segregation in an area where the vector of yellow fever is present; the responsible health administrations of both airports must in such a case have concluded an agreement to that effect and have informed WHO, which must disseminate such information; the provisions concerning the duration of such isolation are the same as those mentioned below for persons on arrival.

In addition, persons in transit who disembark from a healthy aircraft and have to leave the airport of disembarkation in order to continue their voyage from another airport located nearby continue to enjoy the above-specified exemption from any measures, provided that their transfer takes place under control.

1.3.3 Health measures authorized on arrival

Before enumerating the maximum measures authorized on the arrival of a ship or aircraft, it should be made clear that a health authority cannot refuse it access to a port or airport; at the very most, if that port or airport is not equipped to take the necessary measures, the authority concerned can require the ship or aircraft to proceed to the nearest port or airport where the necessary facilities exist. A ship or aircraft can, however, refuse to submit to the measures a health authority wishes to apply to it; in that case, it is entitled to proceed to another territory, and it shall be permitted, while in quarantine, to take on fuel, water and stores so as to allow it to depart.

The measures taken on arrival must be simplified to the maximum extent. Thus free pratique must, as far as possible, be granted to ships by radio. If there is any information that justifies such action, the ship or aircraft may be subjected to medical examination and the measures that prove necessary may then be taken. Here again, those measures are based on the specific transmission characteristics of the different diseases, which means that, depending on the case, they are applied to

the human host, the animal reservoir, the vector or the environment. They concern:

(a) Cargo, goods, baggage and mail:

- for cargo other than live animals, no measures are authorized if it is in transit without transshipment;
- for goods other than live animals not belonging to the cargo, no measures are authorized if they are in transit without transshipment—with the exception of the possible removal of food and water where cholera is suspected (see 1.3.3 (c) below);
- for cargo and goods not covered in the above paragraphs, measures shall be taken only when they come from infected areas and when they may serve as a vehicle for the spread of a disease subject to the Regulations; the measures authorized are mentioned below under 1.3.3 (c);
- for baggage there are no measures authorized, except where it belongs to an infected or suspect passenger or contains infectious material or insect vectors of a disease subject to the Regulations;
- for mail, books, newspapers and postal parcels there are no measures authorized; the only exception is in the case of postal parcels if there is reason to think that they contain cholera-contaminated foodstuffs, infectious material,¹ or live insects or other animals capable of being a vector of human disease;
- for live animals, apart from disinsecting and deratting, no particulars are given on the measures authorized, and national requirements are therefore not governed by provisions of the International Health Regulations.

(b) Passengers:

For the application of the measures provided for, the Regulations fix the incubation period of *plague* at six days, that of *cholera* at five days, that of *yellow fever* at six days and that of *smallpox* at fourteen days.

The measures which can be applied to passengers concern:

- *cholera*: the vaccination requirement having been abolished, as mentioned above, by the Additional Regulations of 1973, the only measure authorized on arrival is stool examination where a passenger coming from an infected area displays suspect symptoms (the additional measures that can be applied to certain passengers when a case has occurred on board are indicated in 1.3.3 (c) below);
- *smallpox*: all travellers, whether or not coming from an infected area, may be required to produce a vaccination certificate

¹ The transport of microorganisms is governed by the regulations of the Convention of the Universal Postal Union in Berne; Article 119 of these regulations deals with packaging for perishable biological material.

(except those who show scars of smallpox giving sufficient evidence of protection):¹ if a traveller is not able to produce a valid certificate, the health administration can offer him vaccination, but he has the right to refuse it; if he refuses it, two possible situations should be considered:

- either the traveller has not come from an infected area: in this case, he may only be placed under "surveillance", i.e. required to keep in touch with the health authorities throughout the period during which he is liable to fall ill;
- or the traveller has come from an infected area: in this case, he can be isolated (also, in case of arrival from an infected area, he can be placed under surveillance even if he has accepted vaccination);
- *yellow fever*: production of a vaccination certificate may be required on arrival in an area where the mosquito vector of yellow fever exists if the traveller has come from an infected area, and he may be isolated if he does not have a valid certificate;
- *plague*: the Regulations contain no provision for requiring anti-plague vaccination; all that may be done is to place under surveillance, upon arrival from an infected area, a traveller who is suspect (see definition of this word in footnote under 1.3.1 (a) above); we have seen that, where a pulmonary plague suspect is concerned, he should have been isolated before his departure: if this has not been done, he can therefore be isolated upon arrival.

Surveillance or isolation is authorized until an incubation period starting from the day of departure has elapsed or until the vaccination certificate becomes valid, whichever is the shorter.

Except where the Regulations provide specifically for isolation, surveillance shall be preferred to isolation unless the health authority considers the risk of transmission of the infection by the traveller to be exceptionally serious.

(c) Ship or aircraft:

For *cholera*, the measures authorized will be applied if a case has occurred on board; for *smallpox*, *yellow fever* or *plague*, the measures authorized will be applied if the ship or aircraft is considered infected or suspected.

¹ The Twenty-seventh World Health Assembly, by approving in its resolution WHA27.45 the comments contained in the report of a working group of its Committee B appointed to study the eighteenth report of the Committee on International Surveillance of Communicable Diseases (*Off. Rec. Wild Hlth Org.*, 1974, No. 217, Annex 9), recommended that, in the interpretation of these provisions of the Regulations, "Member States give greater emphasis to the present epidemiological situation of smallpox", adding that "this approach should result in a valid vaccination certificate being required only from those travellers having been within the last fourteen days [*] in a territory in which there is an infected area" (p. 76).

* Incubation period fixed for the purposes of the Regulations.

It will be regarded as *infected*:

- if a human case of *smallpox*, *yellow fever* or *plague* has occurred on board during the voyage, except where it was a case of *plague* that occurred on board a ship during the first six days of the voyage: that would mean that the transmission of *plague* had not taken place on board and, in that case, the ship would only be suspected;
- if *plague*-infected rodents have been found on board.

It will be regarded as *suspected*:

- for *plague*, if a case has occurred on board a ship during the first six days of the voyage, or if abnormal mortality among rodents has been noted on board, or if there is a passenger on board who is suspect for *pulmonary plague* (i.e. who was exposed to pulmonary plague before his departure but did not undergo the isolation provided for in the Regulations);
- for *yellow fever*: in the case of an *aircraft*, if it has come from an airport situated in an infected area and if the health authority is not satisfied with a disinsecting carried out at the airport of departure and it finds live mosquitos on board; in the case of a *ship*, if it left an infected area less than thirty days ago and vector mosquitos are found on board, or if it left an infected area less than six days ago (in the latter case, irrespective of the presence or absence of mosquitos on board).

The measures applicable to a ship or aircraft in the above situations will comprise, according to the circumstances:

- removal of infected travellers, this being compulsory if required by the captain;
- surveillance or isolation of suspects (see definition of this word in footnote under 1.3.1 (a) above); for the decision whether to apply surveillance or isolation, the possible situations in the case of *smallpox*, *yellow fever* and *plague* are comparable to those described previously for passengers arriving from infected areas (see 1.3.3 (b) above); as regards *cholera*, the Regulations provide for surveillance or isolation of suspects only if a case has occurred on board; the requirement to prefer surveillance to isolation, where applicable, should always be borne in mind (see last paragraph of 1.3.3 (b) above); in determining the period of such isolation or surveillance, account will be taken of the date of last exposure to infection, and the date of vaccination if relevant;
- disinfection or disinsecting, including that of any baggage of infected persons or suspects, and deratting;
- removal, where applicable, of food (excluding cargo) and water

where *cholera* contamination is suspected; no measures may be applied to foodstuffs in the hold except on arrival at their destination, and only then may they be subjected to bacteriological examination.

(d) Train, road vehicle or container:¹

We will not go into details but merely say that the measures authorized are similar to those enumerated above for ships and aircraft, when, of course, they are applicable to those various means of transport.

1.4 OTHER MATTERS DEALT WITH IN THE REGULATIONS (Articles 83-101)

Articles 83-101 of the Regulations contain provisions which relate to the discharge of the obligations discussed in Sections 1.1, 1.2 and 1.3 above, and also to disease vectors and additional measures authorized for certain categories of international travellers. It is not proposed to discuss them in full, but only to mention the articles we consider to be of key importance.

1.4.1 Health documents

All the documents authorized are dealt with in appendices to the Regulations.

In the case of a ship or aircraft, only the following documents can be demanded:

- Maritime Declaration of Health; this may not necessarily be asked for;
- health part of the Aircraft General Declaration; this too may not necessarily be asked for;
- Deratting Certificate or Deratting Exemption Certificate; these are valid for six months.

For travellers, the documents that may be required are vaccination certificates. They have to conform to the models shown in appendices to the Regulations, as the yellow vaccination booklet supplied by WHO does; certificates issued by armed forces which use special forms are, however, accepted. A certificate must be signed by the vaccinator in his own hand. The Regulations stipulate that the health authority "should" take account of attestations that vaccination is contraindicated, which means that a traveller possessing such an attestation can have no

¹ Containers were introduced into the 1969 Regulations and mentioned separately from the various means of transport in consideration of the fact that they consist of sealed units which are transferred from a boat or an aircraft to a train or lorry, and that they constitute epidemiological entities; they have, incidentally, never caused any health problems up to now.

absolute guarantee as to the decision that will be taken when he produces it at a frontier.

The period of validity of the certificate of vaccination against *yellow fever* begins ten days after vaccination and lasts for ten years. That of the certificate of vaccination against *smallpox* lasts three years; it begins immediately in the case of a revaccination, but in the case of a primary vaccination it starts only after eight days, and then only if a successful reaction is read on the eighth day; in the absence of such a reaction on the eighth day, vaccination must be performed again and the certificate becomes valid immediately.¹

No other document can be required from travellers: for example, it is not admissible to make a traveller fill in, for health reasons, a questionnaire on where he has come from; if necessary he must be questioned orally.

1.4.2 Charges to be made

Vaccination on arrival and medical examination are free of charge for travellers. As regards other services rendered by a health administration to a traveller, or to a ship, an aircraft or any other means of transport, they must not be charged for at a rate exceeding the actual cost of the service performed, and that cost must be shown in an official tariff.

1.4.3 Disinsecting to eliminate disease vectors

Aircraft or ships must be disinfected upon leaving an area where transmission of *malaria* or other mosquito-borne disease is occurring, or where insecticide-resistant mosquito vectors of disease are present, or where a vector species is present that has been eradicated in the area where the airport or port of destination is located.²

1.4.4 Additional measures authorized for certain categories of international travellers

Migrants, nomads, seasonal workers or persons travelling to take part in periodic mass congregations³ may be subjected to additional measures to those described above, but the administration applying

¹ Vaccination results should be classified and interpreted as follows according to the WHO Expert Committee on Smallpox Eradication (Second Report):

"Following successful primary vaccination, a vesicle develops after 3-5 days; subsequently, the lesion becomes pustular, achieving its greatest size after 8 or 9 days. A scab is then formed, which separates at 14-21 days, leaving a typical vaccination scar.

"In successful revaccination, multiplication of vaccinia virus occurs. Revaccination is shown to have been successful if, on examination after about one week (6-8 days), there is a pustular lesion, or an area of definite induration or congestion surrounding a central lesion, which may be a scab or an ulcer. This is termed a "major reaction"; all other responses are termed "equivocal reactions". (Wild Hlth Org. techn. Rep. Ser., 1972, No. 493, p. 41.)

* This is the case, in particular, when a hypersensitivity reaction, similar to a major reaction, is apparent on the second or third day, even if it results in a scab which is still present on the eighth day.

² See also paragraph 1.3.1.

³ The Mecca Pilgrimage constitutes one of these congregations, though it is not mentioned by name in the Regulations.

those measures must apprise WHO of them; this will enable the Organization to inform the country of departure so that persons falling into these various categories may be warned.¹

1.4.5 Special arrangements between States

Arrangements between States concerning the application of the Regulations are authorized provided they are not in conflict with their provisions, but WHO must be informed of them; thus, for example, there exists an understanding between certain European countries allowing the health authorities at Rome Airport to carry out once and for all the formalities concerning travellers arriving in Europe on their way to other countries that are parties to this understanding.

1.4.6 Rejection of the Regulations or reservations thereto

Article 22 of the WHO Constitution² states that, for any regulations adopted by the World Health Assembly, rejection or reservations must be announced "within the period stated in the notice" of their adoption, from which it follows that *States are automatically bound by the Regulations in the absence of rejection or reservations.*

In accordance with this article, provision was made in the case of the 1969 Regulations for a period of nine months during which any State had the right to refuse those Regulations or to present reservations;³ the State had to notify the fact to the Director-General of WHO who, in the case of a reservation, had to have it examined by the World Health Assembly. This period of nine months ran from the notification by the Director-General to the various States of the adoption of the Regulations.

¹ Among the measures applied in pursuance of these provisions of the Regulations, the preventive medication administered at frontiers by certain Member States was commented on as follows in the seventeenth report of the Committee on International Surveillance of Communicable Diseases (*Off. Rec. Wild Hlth Org.*, 1973, No. 209, Annex 14, Part C):

"The Committee considered information placed before it on preventive medication.

"It considered that preventive medication would be justified for the categories of travellers referred to under Article 97 of the International Health Regulations, provided that the drug used was effective in preventing the spread of the disease when administered orally as a single acceptable dose without adverse effects, and did not cause bacterial resistance.

"Even when the above conditions were met, medical surveillance would be essential. For practical purposes, the only disease subject to the Regulations which needs to be considered is cholera.

"The Committee noted that a variety of drugs has been used, including tetracycline, chloramphenicol, erythromycin, streptomycin, kanamycin, furazolidone and sulfamethoxine. Studies to date have not indicated that any of these drugs meet the criteria set out above.

"Further studies under carefully controlled conditions are indicated before current drugs be used as preventive medication for travellers under the provisions of Article 97 [*].

"Groups of persons as designated in Article 97 are most difficult to maintain under medical surveillance, and, since this is essential, the Committee is of the opinion that the use of preventive medication would not be acceptable as an additional measure under Article 97 [*]."

* Article 91 in the second annotated edition.

² Reproduced in *Basic documents* of the World Health Organization (Twenty-fourth Edition, 1974).

³ The period was only three months for the Additional Regulations of 1973, which abolished most of the measures with respect to cholera.

In addition, the Regulations stipulate that, if a reservation is rejected by the World Health Assembly and not withdrawn by the State which presented it, the Regulations as a whole do not come into force for that State, which, however, remains bound by existing regulations to which it is already a party. Hence, when new or additional regulations are submitted to States for acceptance, they remain bound by the previous regulations to which they are parties in case of rejection of their reservations by the World Health Assembly.

Finally, the Regulations provide that when a new Member State is admitted to WHO, it has three months within which to notify rejection or reservations.

1.4.7 Disputes between States

Article 100 of the Regulations is a very important one setting forth the three consecutive possibilities provided for settling a dispute concerning the Regulations:

(a) The first possibility is settlement of the dispute by the WHO Director-General after it has been referred to him by the plaintiff State. Conciliation may be obtained by, for example, inviting the other party to rescind the excessive measures. It was obtained, in one specific case, through the organization of a joint programme of bacteriological research which led to cooperation between the two health administrations and enabled them not only to bring the dispute to an end but also to develop their scientific collaboration subsequently.

(b) The second possibility, if the first has not produced the desired result, is referral of the dispute by the Director-General, either on his own initiative or at the request of any State concerned, to the Committee on International Surveillance of Communicable Diseases. The Director-General convenes, if necessary, a special meeting of that Committee, at which the plaintiff administration and the opposing party are both entitled to be represented. This procedure was once resorted to in connexion with excessive measures which were paralysing the export of fruit from a country, causing it considerable economic loss; the two countries which were the subject of the complaint were prevailed on to rescind their measures.

(c) Finally, the third possibility, should the first two fail, is appeal by any State concerned to the International Court of Justice in the Hague. Though the health administrations of certain countries have occasionally contemplated resorting to this procedure, it has never been used since the 1951 Regulations came into force.

2. PROBLEMS POSED BY THE APPLICATION OF THE REGULATIONS¹

The application of the Regulations has entailed both technical and legal problems.

2.1 TECHNICAL PROBLEMS

The technical problems have been those involved in the development by Member States of a national system of epidemiological surveillance which would enable them to provide WHO with the notifications required with regard to the four diseases subject to the Regulations. WHO has tried to help them in this respect, through cooperation concerning (a) operational methodology, (b) strengthening of general health services, and (c) more specialized spheres such as development of public health laboratories, sending out special surveillance and containment teams (for *smallpox* and *yellow fever*), training of responsible officers (for *cholera*) or research and surveillance (for wild rodent *plague*). As the purpose of this exposition is not to deal with the epidemiological surveillance of the diseases subject to the Regulations, we shall not go into these technical problems in any further detail.

2.2 LEGAL PROBLEMS

There have been legal problems to deal with ever since the start of the application of the Regulations by health administrations. The Regulations were largely based on requirements and constraints, which ought theoretically to have compensated for the inadequacies of epidemiological surveillance. In fact, this aspect of the Regulations has not prevented the spread of certain infections across the world when epidemiological conditions have been favourable; a case in point is *cholera*. On the other hand, it is reasonable to suppose that, on the day when national systems of epidemiological surveillance and prevention, and also the eradication of smallpox, have attained a sufficiently advanced stage, the coercive provisions of the Regulations will no longer serve any purpose and will eventually lapse. Active cooperation among Member States will then be able to replace the mere observance of international rules. In the meantime, however, the Regulations must be maintained because they are still the best compromise for ensuring

¹ With reference to these problems and the future of the Regulations, see also: Gear, H. S. & Deutschman, Z. (1956) *Disease control and international travel*, Geneva, World Health Organization; Dorolle, P. (1969), Old plagues in the jet age, *WHO Chronicle*, 23, 103-111; Roelsgaard, E. (1974), Health regulations and international travel, *WHO Chronicle*, 28, 265-268.

maximum possible protection while causing only minimum interference with international traffic. Prudence is essential, for this traffic is increasing daily, and it is quite usual for major international voyages to take less time than the incubation periods of the diseases with which we are concerned.

In normal times, i.e. in the absence of major public health problems, the Regulations have worked acceptably and, in particular, notifications have been regularly received and disseminated by WHO. However, the Regulations are mainly intended for periods when major problems arise, and those have been the very times when their functioning has been unsatisfactory. It has been found, on the occasion of certain serious epidemics, that a vicious circle has developed, insufficiency of notifications giving rise to excessive measures and those excessive measures leading to insufficiency of notifications.

Why do notifications become insufficient at certain times? Three reasons may be cited:

(a) The first reason is the time needed for a health administration to identify the disease. It is regrettable that every doctor in a usually healthy country, when faced with symptoms (such as an eruption) which might suggest an exotic disease, should not think of questioning his patient about any recent travel or contact with a person who has travelled. It is also regrettable that not every country free from such diseases possesses the necessary facilities for rapid laboratory diagnosis whenever they are suspected.

(b) The second reason for inadequate notification of certain diseases is the concern for national honour felt by certain administrations, which persist in an attitude whose roots go back to the Middle Ages.

(c) The third reason is fear of excessive reactions by neighbours, which may cause considerable economic losses in trade and tourism. Instances of excessive and useless measures have been numerous in the history of the application of the Regulations since 1951. Apart from unjustified vaccination requirements, which have increased enormously during certain periods of crisis on the pretext of preventing the importation of a disease, we have seen frontiers closed both for travellers and for goods, and international transport by air, rail or road suspended; passengers have been subjected to every kind of victimization and forced by certain administrations to stay at frontier posts for indefinite periods in particularly rough conditions. Unfortunately such measures, while greatly handicapping the movement of travellers and international trade, have not prevented infection from spreading between countries.

In 1969 the Twenty-second World Health Assembly, considering that epidemiological surveillance at the international level constituted the best weapon for preventing infections from spreading from one country to another, felt it would be desirable to intensify its development and apply it not only to the "diseases subject to the Regulations" but also to five other diseases of international importance now called "diseases under surveillance": *louse-borne typhus*, *louse-borne relapsing fever*, *influenza*, *poliomyelitis*, and *malaria*. The first two, which had been covered by the International Sanitary Regulations of 1951, were removed in 1969 from the list of diseases subject to the Regulations because of their low prevalence in the world.

Resolution WHA22.47 requests health administrations to inform WHO by telegram or telex of any outbreak of *louse-borne typhus*, *louse-borne relapsing fever*, *influenza* or paralytic *poliomyelitis*, and to supplement those reports as soon as possible by information on morbidity, mortality, and the source and type of the disease.

Resolution WHA22.48 recommends to health administrations that they should report to WHO twice a year on the *malaria* situation in their countries, notifying:

- (i) areas in the maintenance phase, i.e. where eradication is considered as completed for the purposes of the WHO world-wide malaria eradication campaign;
- (ii) cases imported into those areas;
- (iii) areas with chloroquine-resistant strains of parasites; and
- (iv) international ports and airports free from malaria.

Both resolutions request WHO to disseminate the information received. It is stipulated that information on malaria should be published twice a year and that maps showing areas where there is a risk of malaria infection should be issued annually; for the other four diseases, current information should be published without delay and an epidemiological study should appear annually. As in the case of diseases subject to the Regulations, WHO arranges for dissemination of this information mainly through the *Weekly Epidemiological Record* and the automatic telex reply service (the latter being used exceptionally in this case).

Resolution WHA22.47 also requests WHO to publish a manual on international surveillance of certain communicable diseases. A number of chapters of this manual have already come out in the form of guides to surveillance in the WHO *Weekly Epidemiological Record*, and offprints of these guides have been distributed to all health administrations.

¹ Off. Rec. Wld Hlth Org., 1969, No. 176, pp. 23-24.

CONCLUSIONS

It has been seen that the attitude of Member States towards the Regulations ought to be governed by certain basic ideas which we should like to stress:

- the coercive approach should progressively give place to the organization of epidemiological surveillance for containing infection in countries where it exists or preventing its spread upon arrival in case of exportation, thus enabling active cooperation to develop between Member States; the less affluent countries, which do not possess the necessary means for organizing epidemiological surveillance, can call on WHO for assistance in achieving this goal;
 - so long as the development of national epidemiological surveillance systems is inadequate to prevent the international transmission of the diseases subject to the Regulations, this instrument must not be allowed to lapse; in spite of its deficiencies, it is still the best compromise for ensuring the maximum possible protection while causing only minimum interference with international traffic;
 - practically all the Member States of WHO participated in drawing up the Regulations; they should therefore respect the requirements and recommendations to which they have subscribed, particularly by sending the required notifications to WHO and refraining from excessive health measures at frontiers;
 - in the application of the Regulations, States have the means of ensuring that their rights are respected by invoking Article 100 in case of dispute.
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